



**Guidelines for the Prevention and Management of Seasonal Influenza in Licensed Nursing Homes
in New Brunswick**

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Glossary

Anti-viral Medication: Medication capable of preventing or treating viral infection.

Health Care Worker (HCW): includes all physicians, volunteers, spiritual care providers, students, contracted staff, and facility employees.

Immunocompromised: having the immune response attenuated by administration of immunosuppressive drugs, by irradiation, by malnutrition, or by certain disease processes such as the viral infection that produces the acquired immunodeficiency syndrome (AIDS)*.

Incubation Period: The time interval between initial contact with an infectious agent and the first appearance of symptoms associated with the infection.

Influenza: Influenza (or “the flu”) is caused by infection with influenza viruses. It mainly affects the respiratory system (nasal passages, sinuses, middle ear, throat and lungs), but it can also cause problems with the heart and other parts of the body, especially in people with health problems.

Influenza-Like-Illness (ILI): Acute onset of respiratory illness with *fever and cough* and with one or more of the following:

- Sore throat
- Arthralgia (joint pain)
- Myalgia (muscle pain) or
- Prostration (severe fatigue) which could be due to the influenza virus.

Licensed nursing home: As defined in the ‘Nursing Homes Act’ means a residential facility operated, whether for profit or not, for the purpose of supervisory, personal or nursing care for seven or more persons who are not related by blood or marriage to the operator of the home and who by reason of age, infirmity or mental or physical disability are not fully able to care for themselves but does not include an institution operated under the *Mental Health Act*, the *Hospital Services Act*, the *Hospital Act* or the *Family Services Act*,

Institution: A nursing home as defined in the Nursing Homes Act.

Influenza Investigation: An influenza investigation is initiated when there are two or more cases of influenza-like illness associated with the facility, within a 7 day period—residents and/or health care workers. When this situation occurs, it should trigger both laboratory testing and enhanced institutional control measures.

Influenza Outbreak: An influenza outbreak should be declared in residential institutions when two or more cases of influenza-like illness occur within a seven-day period, including at least one laboratory confirmed case.

Notification to Public Health: “Notification” is generally defined as the act of informing / reporting to Public Health jurisdiction(s) of a case, contact, or cluster/outbreak in order to facilitate public health action. A notification may result in BOTH a public health action AND a surveillance related activity. There may be different Public Health action at both the Regional and Provincial public health for non-outbreak and outbreak scenarios.

Primary care provider: Facility physician, family physician, general practitioner, or nurse practitioner.

*Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition. © 2003 by Saunders, an imprint of Elsevier, Inc.

Surveillance: Surveillance is the ongoing systematic collection, collation, analysis and interpretation of data. It also involves dissemination of information to those who need to know in order for appropriate action to be taken. Surveillance is an essential component of any effective infection control program.

Surveillance Case Definition: Criteria used to define confirmed, probable and suspect cases of a disease in question for the purposes of surveillance alone. The criteria are based on epidemiological; and/or clinical and/or laboratory factors. Case definitions can be also devised for specific outbreaks. Where appropriate, surveillance case definitions can be also used in the context of public health or facility for an intervention, notification or other action.

Acronyms

ABHR	Alcohol based hand rub
AGMP	Aerosol Generating Medical Procedures
BIPAP	Bi-level Positive Airway pressure
CDC	Communicable Disease Control
CPAP	Continuous positive Airway Pressure
DGLDUHC	Dr. George-L-Dumont University Hospital Center
DH	Department of Health
HCAI	Health Care Acquired Infection
HCW	Health care worker
ILI	Influenza-Like-Illness
LTC	Long Term Care
NACI	National Advisory Committee on Immunization
NBPDP	New Brunswick Prescription Drug Program
NML	National Microbiology Laboratory
NP	Nurse Practitioner
OCMOH	Office of the Chief Medical Officer of Health
OMT	Outbreak Management Team
PCP	Primary Care Provider
PCR	Polymerase chain reaction
PCRA	Point of Care Risk Assessment
PEP	Post-Exposure Prophylaxis
PHAC	Public Health Agency of Canada
PH	Public Health
PPE	Personal Protective Equipment
RHA	Regional Health Authority
RMOH	Regional Medical Officer of Health
SD	Social Development

1. Introduction

Respiratory outbreaks occur in nursing homes throughout the year but are more common from the fall to early spring. Outbreaks of this nature can lead to substantial morbidity and mortality for at risk populations.

Prevention, early detection and implementation of control measures are vital to effective management of such situations, while maintaining an awareness of the social and psychological needs of the residents. The balance of comfort and safety is particularly delicate in long term care facilities where the care environment is also the resident's home. The extent of restrictions affecting residents should reflect an ongoing situational risk assessment, including consideration of the evidence of the restriction's effectiveness and ease of implementation.

Implementation of measures should be considered critically, ensuring that they are neither dismissed too easily based solely on difficulty, nor implemented too eagerly and readily, based solely on ease. Preference should be given to measures that best meet all patient care needs holistically and limit their freedom only to the level truly required by circumstances.

1.1. Purpose

This document is not intended to be a policy but rather a document to guide regional and local policy. This is not a standalone document and users are advised to refer to other documents such as: the NACI statement on influenza vaccine, PHAC infection control practices, policy documents of the Department of Social Development and other applicable documents.

1.2. Roles and Responsibilities related to the prevention and management of seasonal influenza in nursing homes

Department of Social Development

The role of the Department of Social Development is 1) License the nursing homes and 2) develop guidelines and standards and follow up to ensure they are implemented as per the Nursing Homes Act¹.

Nursing Home Operator or Administrator

The nursing home develops policies and procedures for the prevention and management of influenza outbreaks by:

1. Developing practices for seasonal immunization of residents and staff and the use of antivirals (this includes an education plan for staff);
2. Encouraging and supporting immunization of staff and maintaining a line list of those immunized;
3. Ensuring that appropriate infection control practices and policies are in place;
4. Developing a staffing contingency plan;
5. Developing a system to monitor symptoms of ILI in residents and staff. This includes having procedures in place for timely collection of specimens;
6. Ensuring that the nursing home complies with weekly ILI reporting requested by RHA Public Health. See Appendix M
7. Developing and activating an outbreak response plan and review process (including contact details for Public Health);

¹ Nursing Homes Act:

https://www2.gnb.ca/content/gnb/en/services/services_renderer.9615.html

8. Responsible for coordination of influenza outbreak response and implementation of prevention and outbreak measures;
9. Reporting to RHA Public Health as soon as possible and within 24 hours when an influenza outbreak is suspected and/or declared.

Facility Medical Advisor/House Physician/Primary Care Provider

The medical staff of the nursing home are responsible for assessing suspect cases of influenza, ordering appropriate medical tests, and prescribing or providing influenza treatment. They may also participate in the declaration of an influenza outbreak and sit on the outbreak management team. When anti-viral prophylaxis for LTCF residents is considered, medical staff will consult with the RMOH and prescribe if appropriate.

Regional Medical Officer of Health (RMOH)

The RMOH supports ongoing surveillance of influenza in their region and provides expertise in communicable disease control. The RMOH may make orders to control communicable diseases such as influenza as per the legislative authority under the *Public Health Act (PHA)* and they *provide* advice and authorization for antiviral **prophylaxis** in outbreaks. The RMOH is not responsible to prescribe or provide treatment as this rests with the attending primary care provider.

Regional Health Authorities (RHA)

The RHA shall provide for the delivery of health services² in the region for which it is established. Communicable disease control is a component of the public health services within the respective RHA. In collaboration with the RMOH, the RHA Public Health team is responsible for communicable disease prevention and control including surveillance. When outbreaks arise, the RHA Public Health team will advise the facilities to ensure appropriate disease prevention and control measures have been implemented.

Office of the Chief Medical Officer of Health (OCMOH)

The OCMOH is responsible to plan, fund and monitor public health programs and provide some service delivery, provincial level surveillance, and federal-provincial-territorial collaboration.

² Per the Regional Health Authorities Act, health services are hospital services, addiction services, mental health services, public health services, extra-mural services and community health services.

2. Influenza, Influenza-Like-Illness (ILI) and Outbreak definitions

2.1. Influenza

Influenza (or “the flu”) is caused by infection with influenza viruses. It mainly affects the throat and lungs, but it can also cause problems with the heart and other parts of the body, especially in people with chronic health problems. Influenza viruses are seasonal and cause outbreaks each winter in Canada. Every few decades, a new type of influenza virus will emerge, causing a severe and widespread epidemic (or pandemic). There are two types of influenza viruses that cause outbreaks each year: Influenza A and B.

Signs and symptoms

Symptoms of influenza usually occur one to three days after infection, and they may include sudden onset of fever; a headache; muscle and joint pain; sore throat; cough; runny or stuffy nose; and severe fatigue. In residents 65 years and older, fever may not be prominent.

Most people recover within a week. Compared with many other infections (such as the common cold), influenza tends to cause more severe symptoms and complications. Complications can include pneumonia, heart failure, worsening of other illnesses or death.

Diagnosis of influenza is confirmed with a laboratory test. When no laboratory diagnosis is available (yet), please refer to the Influenza-Like-Illness definition in 2.2.

Transmission

The influenza virus is easily spread by coughing, sneezing, talking and by contact with contaminated hands and surfaces.

Incubation period

The typical incubation period for influenza is 1-4 days (average: 2 days).

Period of Communicability

Infected people are contagious about one day before symptoms start until three to five days after. It may be prolonged for older people or people who are immunosuppressed. More information on laboratory testing guidelines can be found in section 3.

2.2. Influenza-Like-Illness (ILI)

ILI in the general population is defined as:

Acute onset of respiratory illness with *fever and cough* and with one or more of the following:

- Sore throat
- Arthralgia (joint pain)
- Myalgia (muscle pain) or
- Prostration (severe fatigue) which could be due to the influenza virus.

Considerations in applying the ILI definition in nursing home residents:

- **Fever may not be prominent.** Fever is defined as:
 - a) a single oral temperature of more than 37.8°C **OR**
 - b) repeated oral temperature of more than 37.2° C **OR**
 - c) repeated rectal temperatures of more than 37.5 ° C **OR**

d) a single temperature of more than 1.1° C over baseline from any site³.

- Cough can be defined as a new or worsening cough that is not related to pre-existing conditions.
- All symptoms must be new or acutely worse. Many residents have chronic symptoms, such as cough, that are not associated with infection. However, a change in the resident's status is an important indication that an infection may be developing.
- Non infectious causes of signs and symptoms should always be considered before a diagnosis of infection is made.
- Identification of infection should not be based on a single piece of evidence. Microbiologic and radiologic findings should be used only to confirm clinical evidence of infection. Similarly, clinical diagnosis should be accompanied by compatible signs and symptoms of infection.
- Closed care settings, such as nursing homes, allow for easier transmission of illness because of: -
 - Shared accommodation or living space;
 - Shared bathrooms;
 - Shared food preparation, food or eating arrangements;
 - Shared care-givers;
 - Shared equipment;
 - Shared food, water and air;
 - Residents may have altered health status that makes them more vulnerable to infections or complications of infection.

2.3. Outbreak definitions and triggers for action

An outbreak should be suspected anytime that illness exceeds the normal baseline distribution in a given area, at a given time. There is a difference between an outbreak definition for Public Health Surveillance purposes and criteria for initiating an influenza investigation within the nursing home.

Trigger for influenza investigation in nursing homes

The trigger for further investigation within the nursing home needs to be sensitive enough to start precautionary and prevention measures to help contain a potential outbreak. Initiate an influenza investigation whenever there are two cases of influenza like illness in the facility (residents or healthcare workers) within 7 days. When this situation occurs, it should trigger both laboratory testing and enhanced institutional control measures.

Any suspected outbreak should be responded to immediately, with a high index of suspicion during influenza season, and reported to RHA Public Health.

Influenza Outbreak

An influenza outbreak should be declared when two or more cases of influenza-like illness occur in the nursing home within a seven day period, **including at least one laboratory confirmed case.**

Reporting to Public Health

RHA Public Health should be notified if the nursing home has initiated an influenza investigation, in order that they can facilitate and be on the alert for the results of laboratory testing that will determine the presence of an outbreak. They can also provide consultative advice on enhanced control measures. If an outbreak is confirmed in the facility reporting to public health is required as soon as possible and within 24 hours. Refer to Appendix M for more detail.

³ High K, Bradley SF, Gravenstein S, et al. Clinical practice guidelines for the evaluation of fever and infection in older adult residents of long term care facilities. *Clinical Infectious Diseases*. 2009;48:149-171.

3. Laboratory testing

Influenza testing is done by real-time PCR at the Dr. Georges-L-Dumont University Hospital Center (DGLDUHC) microbiology laboratory. The laboratory is equipped to perform regular diagnostic tests for all common influenza types and subtypes. All isolates that can't be typed by those tests are referred to the National Microbiology Laboratory (NML) in Winnipeg for further testing.

Please contact your regional laboratory if you have any questions concerning handling and shipping of the specimen.

Provisions for influenza diagnostic testing should be in place before the onset of the influenza season each year.

When to test

- A protocol for testing residents with ILI to confirm the presence of influenza should be established.
- Diagnostic samples should be taken from symptomatic residents as soon as influenza has been recognized in the community and/or when investigating potential influenza outbreaks. Samples should be collected only from residents whose symptoms have started less than 48 hours ago, preferably those with the most prominent symptoms.

Who tests?

- The attending primary care provider must order influenza testing.
- A laboratory requisition must accompany each test
- The requisition must contain as much information as possible including:
 - Name of the nursing home;
 - Whether or not the nursing home is investigating / experiencing an outbreak;
 - Influenza vaccine history of resident;
 - Anti-viral history of resident;

How are residents tested?

Collection kits

- Viral collection kits contain special swabs and transport media for sample collection. Each kit contains a swab and a tube filled with a viral transport medium (red capped tube with pink viral transport medium). Swabs/kits are distributed to nursing homes at the beginning of the flu season and can also be obtained by either phoning your regional microbiology laboratory or the microbiology laboratory of DGLDUHC. The inoculated transport medium is essential and must not be discarded.
- **In case of a potential outbreak: It is important to notify your local lab at the time of specimen collection that you are investigating a potential outbreak and thus require influenza test results to be reported to both the nursing home and RHA Public Health as soon as results become available, whether negative or positive.**

Specimen

Nasopharyngeal specimens are the recommended type of sample for influenza (see appendix G for the procedure).

Storage

The specimen must be stored in a refrigerator (please do not freeze the specimen nor keep it at room temperature) until it is sent to your hospital laboratory along with a microbiology requisition form.

Distribution to the lab

Send the specimen to your regional laboratory which will handle the referral to the DGLDUHC microbiology laboratory.

Why test?

Testing is important to confirm the diagnosis and to start infection control measures and public health measures to stop further transmission.

Obtaining test results

Positive influenza cases will be reported to RHA Public Health by the laboratory as well as to the nursing home/ care provider that ordered the test, in a time sensitive manner when a potential outbreak is being investigated. This is in addition to the requirement for nursing homes to report to public health.

When to stop testing?

A maximum of 6 samples per outbreak per institution will be accepted for processing. Once an influenza outbreak is identified in a facility further cases of ILI can be assumed to be influenza.

4. Prevention of outbreaks

4.1. Immunization

General recommendations

- Nursing homes should have an immunization policy for influenza and pneumococcal disease, as well as for other vaccine-preventable diseases. These policies should address residents, staff and all persons carrying on activities within the home.
- Nursing homes should ensure that their immunization policies are updated and communicated to all concerned each year.
- Before the influenza season begins, nursing homes should review and revise their procedures, based on current information available and communicate these to staff.
- Annual immunization for seasonal influenza is strongly recommended for all HCWS (both direct and indirect caregivers) who are potentially capable of transmitting influenza,
- Documented evidence of immunization for all staff and residents is necessary. Policies and or procedures addressing seasonal influenza immunization as well as antiviral treatment and/or prophylaxis in the event of an outbreak should be available.
- **Continue to offer the opportunity for immunization to both residents and HCWs for the duration of influenza season**

Why immunize?

The best protection against *influenza* is getting the annual influenza immunization and practising basic hygiene. The influenza vaccine causes the immune system to develop protection (antibodies) against the strains of the virus in the vaccine. The antibodies help prevent infection or reduce the severity of the illness.

Who to immunize?

NACI⁴ recommends that immunization priority for seasonal influenza vaccine should be given to those persons at high risk of influenza-related complications, those capable of transmitting influenza to individuals at high risk of complications, and those who provide essential community services. Included amongst these groups are:

- People of any age who are residents of nursing homes, since they often have one or more chronic medical conditions and live in an institutional setting that may facilitate the spread of influenza and other respiratory diseases.
- People ≥ 65 years of age. Admissions to hospitals attributable to influenza in this age group are estimated at 125 to 228 per 100,000 healthy persons, and death rates increase with age⁵.
- Health care and other care providers in facilities and community settings. This group includes regular visitors, emergency response workers, those who have contact with residents of continuing care facilities or residences, those who provide home care for persons in high-risk groups, and students of related health care services.

Publicly funded influenza vaccine is available for New Brunswick residents that meet the eligibility criteria⁶. Nursing homes may offer influenza vaccine free of charge to staff, refer to the policy in your nursing home.

⁴ For the most current statement go to the NACI website : <https://www.canada.ca/en/public-health/services/publications/vaccines-immunization/canadian-immunization-guide-statement-seasonal-influenza-vaccine-2019-2020.html>

⁵ NACL statement

⁶ Influenza information: <http://www2.qnb.ca/content/qnb/en/corporate/promo/flu.html>

When to immunize

The influenza season in New Brunswick typically begins in November and lasts into April and sometimes beyond. Therefore, it is important to begin influenza vaccination prior to the beginning of the season and to continue to offer vaccine up until end April unless local epidemiology suggests otherwise. Contact RHA PH for consultation if needed. Immunity after influenza immunization on average lasts 4-6 months.

If the resident is admitted after the nursing homes fall immunization program and before the influenza season is over – usually April – vaccination should be offered, unless the resident has already received the current season's vaccine.

- Prior to or upon admission, each resident should be assessed regarding their immunization status.
- If the immunization status of a resident is unknown the resident should be considered unvaccinated, and vaccine should be offered.

How to record immunization

- The immunization record of the resident should be retained in a readily accessible part of their health record.
- If a resident is not immunized the reason should be recorded (e.g. refusal, allergy).
- Upon transfer, the resident's recent immunization status should be shared with the receiving facility.
- The nursing home will maintain a confidential record of immunization of staff. If immunization for staff is not provided within the nursing home, staff shall provide proof of immunization annually at the start of influenza season (October/ November) or otherwise be considered unimmunized.
- If immunization is provided through the nursing home, a copy of the record shall be provided to the staff member.

How to promote immunization

- Education or promotion: Implement organized efforts to raise awareness and/or increase knowledge about influenza and influenza immunization. Examples could include: holding educational sessions, providing materials, and having events promoting vaccine such as offering incentives. Address vaccine hesitance concerns as directly as possible with evidence-based information.
- Improved access to vaccine: Develop strategies to allow for easier access to immunization. For health care workers this could include activities such as having mobile vaccine carts, peer-to-peer vaccination, and holding additional or extended vaccine clinics.
- Measurement and feedback: Provide a mechanism to track immunization rates of health care workers and disseminate results. Examples include regular monitoring of coverage rates and reporting of these rates to administrators and health care workers.
- Role models: Promote activities that involve leaders and/or senior staff to encourage immunization. For example, choose immunization advocates and champions, obtain public support from leaders, and provide visible immunization of senior staff.

Storage/ administration of the vaccine

Information for immunization providers can be found here:

<https://www2.gnb.ca/content/dam/gnb/Departments/h-s/pdf/en/CDC/vaccines/seasonal-influenza-vaccine-information-for-immunization-providers-2019-2020.pdf>

More information on immunization can be found in Appendix L.

4.2. Hand and Respiratory Hygiene

Hand Hygiene

Hand hygiene remains one of the most important means to prevent and control communicable disease, and should be performed frequently by residents, staff, visitors, and volunteers. Nursing homes should adhere to the recommendations in the PHAC “Hand Hygiene Practices in Health Care” guideline.

Hand washing is an effective way to reduce microbial contamination of hands and should be part of the daily routine of residents, staff and visitors. Soap and water should always be used if hands are visibly soiled and after personal toileting. Use of an alcohol based hand rub between 60-90% ethyl alcohol (70% or greater is best against non-enveloped viruses such as norovirus) is also appropriate, and is the method of choice for health care settings. Other types of waterless products may contain either no alcohol or alcohol in concentrations of less than 60% - there is no efficacy data on these products and they should not be used for hand hygiene in nursing homes.

- Ensure that residents have easy access to appropriate hand hygiene facilities following toileting and before meals or food preparation.
- Include education and assistance of residents with hand hygiene as part of care plan.
- Ensure alcohol based hand rub is available and maintained at the point of care.
- Ensure alcohol based hand rub is located and maintained at entrances to the facility.
- Soap and water are required if hands are visibly soiled and after personal toileting.
- Post signage directing all persons entering the building to clean their hands.
- Educate HCWs on the 4 critical moments for hand hygiene and review on a regular basis during influenza season.
- See Appendix A for directions for HCWs and Appendix B for residents and visitors regarding hand hygiene.

Respiratory Hygiene

Respiratory hygiene should be encouraged for residents who have signs and symptoms of ILI.

Respiratory hygiene includes

- Containing respiratory secretions by using tissues to cover the mouth and nose during coughing/sneezing, with prompt disposal into a no touch waste receptacle.
- Covering the mouth and nose during coughing/sneezing against a sleeve/shoulder if tissues are not available.
- Wearing a face mask covering the nose and mouth when coughing/sneezing when possible.
- Turning the head away from others when coughing/sneezing.
- Maintaining a spatial separation of 2 metres between residents symptomatic with ILI and others.
- Nursing homes should provide tissues and masks for respiratory hygiene as well as instructions in how and where to dispose of them and the importance of hand hygiene after handling this material.

4.3. Monitoring and Education

Residents

- A point of care risk assessment (Appendix C) approach should be used prior to all interactions with residents.
- Monitor all residents *daily* for the onset of ILI. See section 2.2 for the definition of ILI. An algorithm for decision making is attached as Appendix D.
- Immediately implement Droplet Contact Precautions (Appendix F) for any resident with influenza suspected and/or confirmed and any resident with ILI.

Droplet Contact Precautions for influenza remain in place until:

- 24 hours after symptom resolution following 72 hours of anti-influenza medication
- OR**
- 7 days after symptom onset
- OR**
- After 7 days assessment by the primary care provider rules out infectiousness in the resident who is immunocompromised.
- When influenza is ruled out Droplet Contact Precautions for ILI remain in place until an infectious etiology is ruled out.
- See Laboratory Testing in Section 3 for testing guidelines. Directions on collecting nasopharyngeal swabs are in Appendix G.
- Review antiviral needs with the primary care provider -See Appendix I.
- Ensure residents have the necessary education and supplies to permit compliance with hand and respiratory hygiene.
- Provide written and/or verbal education and reinforcement to residents regarding hand hygiene, respiratory hygiene, signs and symptoms of influenza, and restrictions associated with influenza.
- Post signage outside the ill resident's room indicating the required precautions- may wish to consider requesting all visitors report to nursing staff for instruction.
- Environmental cleaning (see 4.5.) of the ill resident's room: clean and disinfect room twice a day with special attention to all horizontal and frequently touched surfaces for the duration of illness.
- Monitor all resident contacts of the ill resident twice daily for signs/symptoms of ILI for 5 days (1 day longer than an incubation period) after the last contact with the ill resident. Contacts are those persons who had unprotected contact within 2 meters (6 feet) of an ill resident during the infectious period.
- Conduct an influenza investigation and consider implementing Outbreak Measures when 2 or more residents/healthcare workers develop ILI (associated with the facility) within 7 days - see Section 5 for Outbreak Measures.
- Notify RHA Public Health of ILI activity on a weekly basis and immediately of any influenza investigations/outbreaks

Health Care Workers

- Educate all HCWs in the facility to self assess daily for signs and symptoms of ILI.
- Exclude all HCW's with suspect and/ or confirmed influenza from the facility until no longer infectious, usually 5 days after symptom onset.
- If a symptomatic staff member feels well enough to return to work, they can return to work permitted they are assigned to care for sick residents until symptom free.
- Support staff in the reporting of symptoms and in exclusion from the workplace.
- Should HCWs develop symptoms while at work they should immediately exclude themselves from the resident environment, don a surgical face mask, clean their hands, and notify their supervisor.
- Ensure HCWs are in compliance with Routine Practices including Respiratory Hygiene.

Visitors/ family members

- Provide education to and encourage all visitors to get immunized for influenza
- During influenza season, post signage at the entrance of the facility strongly discouraging visits by adults and children who have or recently had ILI symptoms (within 5 days in adults and 10 days in children following the onset of ILI symptoms).
- Consider discouraging visits from those who have been recently exposed to influenza (i.e. flu activity within the family home).

- Provide education to family/visitors regarding hand hygiene, respiratory hygiene, signs and symptoms of influenza, restrictions associated with influenza and immunization for influenza.
- Visitors are strongly encouraged to practise thorough and effective hand hygiene on arrival in the home and after visiting with the resident
- Visitors should understand and appropriately use the same personal protective equipment (PPE) as HCWs when visiting an ill resident.

4.4. Maintenance of Resident Care Equipment

Ensure all staff responsible for utilizing resident care equipment is adhering to required cleaning and disinfection practices (details can be found on the Public Health Agency of Canada's website):

- All shared equipment is cleaned and disinfected before reuse by another resident.
- Appropriate cleaning techniques are used.
- Appropriate disinfection solutions are used.
- Ensure correct disinfectant concentration per manufacturer's directions.
- Ensure correct wet contact times.
- Electronic games, toys/games, personal effects are not to be shared
- All care equipment (e.g., thermometers, blood pressure cuff, commodes, etc.) used with an ILI resident should be dedicated to that resident.
- Single person/resident devices are discarded after use with one resident (may be more than one use).
- Single use devices are discarded in a waste receptacle after a single use on one resident.

4.5. Environmental Cleaning

Hospital-grade cleaning and disinfecting agents (low level disinfection) are sufficient for environmental cleaning in the context of influenza.

Ensure all staff responsible for the environment adhere to required cleaning and disinfection practices—details can be found on the Public Health Agency of Canada's website⁷:

- Appropriate cleaning techniques.
- Appropriate disinfection techniques.
- Correct disinfectant concentration.
- Correct wet contact times.
- Ensure terminal cleaning of resident's room following discharge, transfer, or discontinuation of the Droplet Contact Precautions.

4.6. Laundry/Waste Management

Routine Practices are sufficient.

⁷<http://www.phac-aspc.gc.ca/amr-ram/ipcbp-pepci/index-eng.php>

5. Outbreak Management

5.1. Policy Guidelines

It is recommended that all nursing homes in the province of New Brunswick plan for the prevention and management of influenza outbreaks in their facilities. Points to consider:

- Develop practices for seasonal immunization of residents and staff and the use of antivirals.
- Ensure there is rapid access to a local pharmacy with antiviral medication stocks.
- During flu season and outbreaks there may be higher staff demands (increased care of ill residents, enforcing exclusions, educating, monitoring control measures, reporting) as well as possible staff shortages due to absenteeism; to prevent this staff should be immunized against seasonal influenza annually and where possible, contingency plans put in place for the increased demand.
- The nursing home is responsible to declare and lead the coordination of the outbreak. The nursing home outbreak management team lead should be decided upon *prior* to the outbreak.
- RHA Public Health is available to advise facilities on outbreak control measures and works closely with the RMOH to monitor the situation in this regard.
- The RMOH may make orders to control communicable diseases such as influenza as per the legislative authority under the *Public Health Act (PHA)*
- Staff need to be trained in outbreak detection, management and specimen collection.
- Confirm the arrangements for the collection and submission of specimens for laboratory analysis, and communication of the results with your local laboratory.

5.2. Establishment of an Outbreak

Collect information on cases

- Collect the surveillance data about residents/staff that are ill with respiratory symptoms as indicated on the template in Appendix J.
- The line listing provides for rapid assessment of the extent and nature of a suspected outbreak.
- It may be expanded to include other relevant data beyond what is recommended on this form as the investigation proceeds.

Establish the diagnosis

- Arrange for testing to establish diagnosis.
- Clarify which residents should be tested and establish which residents should not be tested. I.e. nasopharyngeal swabs for respiratory outbreaks should only be taken from residents with acute symptoms (onset within the preceding 24 or 48 hours) and preferably from a resident with the most classical clinical presentation of the illness suspected.
- Notify the laboratory that the specimens are related to an influenza outbreak investigation.

Notify Public Health

RHA Public Health must be notified of an influenza outbreak, as soon as possible and within 24 hours, (see appendix M) and may be consulted for outbreak measures. In an outbreak situation the facility will report to RHA Public Health the following:

- an updated line listing (see Appendix J)
- name of the primary contact person for the facility along with the person's phone number and/or other contact information.
- the initial control measures that have been instituted.
- any further progression of the "potential influenza outbreak investigation"; additional cases or laboratory confirmations that will confirm an outbreak.

Notify other stakeholders

In addition to notifying the RHA Public Health about the outbreak, notification may include some or all of the following:

- Administrator,
- Board of Directors,
- Primary care provider for the nursing home,
- RHA laboratory services,
- Director of food services,
- Director of housekeeping,
- Pharmacist,
- Staff members,
- Community volunteers (clergy, others),
- Attending physicians,
- Other health care providers, e.g. physiotherapists,
- Acute care hospitals for information on transfers (infection control professionals, admitting, emergency),
- Families of ill residents or families of all residents in the home.

Assemble the Outbreak Management team

Specific core functions and associated activities should be identified, and responsibilities assigned to coordinate the investigation and control the outbreak.

Depending on the size of the facility some members will fill more than one role. The following participants can potentially be involved in the outbreak team. The need and purpose of participants will need to be assessed at the time of the outbreak.

- Administrative Director
- Clinical Director
- Primary Care Provider(s) for the Nursing Home
- Infection Prevention and Control Designate
- Resident Care Lead
- Housekeeping Lead
- Food Services Lead
- Facility Maintenance Lead
- Secretarial Support
- Pharmacy Liaison
- Regional Nursing Home Services Liaison
- RHA Public Health

5.3. Measures to Contain the Outbreak

Case management

A case definition is a set of criteria that is used to decide whether an individual will be considered a case for the purpose of the investigation. Case definitions developed for surveillance can provide a base for outbreak case definitions. Case definitions should be restricted by person, place and time and can include clinical criteria (signs, symptoms, laboratory test results and diagnosis), time (onset date and dates during which exposure is possible), place (where exposure was thought to have taken place), person (age, sex and other relevant characteristic), symptoms.

- Start case finding to identify cases and contacts that will benefit from treatment and prophylaxis, to determine the source of the outbreak, the population at risk, to estimate the size of the outbreak, and to identify outliers who may give important clues about the source.
- Conduct case and contact interviews. Actively look for new cases and interview contacts to determine if they fit the case definition. Review charts and or records (eg medical record, food).

- Collect samples from persons showing clinical symptoms if needed for diagnostic purposes. Once an outbreak is established, testing may not be required for all cases See Section 3.
- Implement Contact Droplet precautions, see Appendix F.

Contact Management

Close contacts of persons with ILI or influenza are those who had unprotected contact within 2 metres of the ill person during the infectious period.

Monitor close contacts per Section 4.3 to determine if they develop symptoms and assess whether measures should be implemented.

Immunization

- Offer immunization to all unvaccinated residents, and staff members for whom there are no contraindications.
- All unvaccinated volunteers and visitors should be directed to their health care providers for vaccination.
- It takes approximately two weeks for the vaccine to become effective.
- During the 2 weeks for vaccine to become effective HCWs should wear a face mask and use an appropriate anti-viral as per Appendix I.
- HCWs who are not immunized should wear a face mask and use an appropriate anti-viral as per Appendix I.

Prophylaxis

Two anti-viral drugs, Tamiflu and Relenza (oseltamivir, zanamivir) are licensed in Canada for the treatment of influenza in adults. Tamiflu is also licensed for prophylaxis. These antiviral drugs are effective against both influenza A and B. Tamiflu (Oseltamivir) is the recommended anti-viral of choice for influenza A & B treatment and prophylaxis.

Oseltamivir (Tamiflu®) and zanamivir (Relenza®) are available as special authorization benefits for NBPDP beneficiaries who are residents of long-term care (LTC) facilities

- Review with appropriate primary care providers and/or agencies the use of and physician orders for antiviral prophylaxis for residents and HCWs
- Confirm the availability of anti-viral medications for treatment of cases and/or prophylaxis of well residents and non-immunized staff.
- Prioritize the use of anti-virals if the supply is limited
- In the event of a respiratory outbreak in a nursing home, the PCP will consult with the RMOH. The RMOH will assess the situation and make recommendations on antiviral use. If antivirals are recommended by the RMOH, publicly funded antivirals will be made available for residents as per Appendix I.

See Appendix I for more information on antiviral use.

Cohorting

- Residents suspected or confirmed to have influenza should be cared for in single rooms if possible.
- Perform a risk assessment to determine resident placement and/ or suitability for cohorting when single rooms are limited.
- Consider cohorting residents and staff to the affected unit/wing to ensure there is no contact with the staff/residents in the unaffected units/wings.
- If possible, further cohort staff, so one group cares for the ILI residents and a second cohort cares for the non-ILI residents on the affected unit/wing.
- If it is necessary for staff who are still in an infectious period (and feel well enough) to return to work, cohort them with residents who are either ill with and/or recovered from influenza.

- If cohorting is not possible in a shared room, privacy curtains should be drawn between beds. When possible there should be a minimum of two meters between the beds.
- Residents who have recovered from influenza can be cohorted with either group.
- Post infection control signage at the room entrance indicating droplet and contact precautions are required upon entry of the room.
- When cohorting each resident must be isolated separately. Hand hygiene and a change of gown and gloves is required between contact with each resident and/or a resident's environment.

Environmental cleaning

- All horizontal and frequently touched surfaces (dining chairs, hand rails, bed rails, bedside tables, wheelchairs, walkers, etc.) should be cleaned and disinfected twice per day and when soiled for the duration of the outbreak.
- Ensure terminal cleaning of resident's room following discharge, transfer, or discontinuation of the Droplet Contact Precautions.

Staffing

- Confirm the implementation of the exclusion policy, review and implement any staffing contingency plan.
- Encourage all HCWs to inform other employers regarding contact with a facility with an influenza outbreak.

Admissions, Re-admissions, and Transfers

- Admissions to an affected unit/wing during an outbreak in the nursing home are not recommended.
- Movement/ transport of residents with suspected or confirmed influenza should be restricted to essential medical reasons.
- If transport is necessary, transport services and personnel in the receiving area should be advised of the required precautions for the resident being transported.
- Residents with influenza who must leave their room for essential medical reasons should adhere to respiratory and hand hygiene and wear a mask.
- Should it be necessary to readmit residents who have not had influenza during the outbreak the following factors apply:
 - The influenza outbreak is under control.
 - The resident's attending physician is in agreement based on the current health status of the resident.
 - The returning resident is either immunized or receiving anti-viral medication. ▪ Appropriate accommodation is available.
 - Staffing is appropriate to meet the needs of returning resident.
 - The resident or substitute decision-maker has given an informed consent.
- A resident may be re-admitted if they have already met the definition for influenza; for example, the resident was transferred to hospital with influenza and is now ready to return.
- Transfers from a facility experiencing an influenza outbreak to another facility are not recommended.
- Should a resident require transfer to hospital, notify the receiving hospital and the ambulance services that the facility is experiencing an influenza outbreak.

Exclusion

At the discretion of the outbreak management team consider the following:

- Residents with ILI or influenza should be restricted to their room(s) until: 24 hours after symptom resolution following 72 hours of anti-influenza medication

OR

- 7 days after symptom onset

OR

- If the resident is immunocompromised the period of communicability is increased.

Consult with the primary care provider prior to discontinuing precautions

- Participation in group activities should be restricted while the resident is symptomatic.
- Serve In-room meals to symptomatic residents.

Communal /Social Activities

At the discretion of the outbreak management team, based on benefit-risk assessment consider the following:

- Cancel or re-schedule some or all social/group activities as needed e.g. outbreak unit/floor or entire institution.
- Restrict all well residents of outbreak area to their rooms as much as possible if the risk of contracting disease in communal areas is greater than the emotional/social benefit of being in those areas.
- Minimize activities to essential activities only. Such essential activities should be defined in advance of the outbreak and consider the full spectrum of resident care needs (physical, mental, psychological).
- Serve in-room meals to residents of the outbreak affected unit/floor. As the outbreak progresses this measure can be re-evaluated by the outbreak management team. For example, it may become appropriate to serve recovered residents in the dining area.

While containment of an outbreak is certainly important, one should always try and keep in mind and balance containment measures with the mental/emotional wellbeing of residents who often have limited ability to adapt to potentially stressful change in their 'home' environment and their everyday routine.

Visitors

In addition to measures listed in section 4.3:

- Reiterate the value of influenza immunization
- Post signage outside the facility indicating the facility is experiencing an influenza outbreak.
- Visitors should visit the residents in their rooms and exit the facility immediately following the visit.
- For their own protection, visitors who are **not vaccinated** for influenza should be strongly discouraged to visit or they should wear a mask.
- Outbreak control and/or operational issues may require the nursing home to consider reducing visitors to the facility however this should be balanced with the emotional needs and rights of the residents

5.4. Communications

- Confirm how and when daily communications will take place between the nursing home and the outbreak team members including Public Health. Ensure that contact telephone numbers are available at all times.
- Prepare internal communications for resident, family and staff groups. Determine if education sessions are required for staff members and confirm who will conduct them.
- Prepare a communication plan, including media release as necessary with RMOH and RHA Public Health.
- Notify other stakeholders as needed.

5.5. Declaring an Outbreak Over

- Prior to declaring an outbreak over, the nursing home must not have experienced any new facility associated cases of influenza (in residents or staff) which meet the case definition for 8 days. The

outbreak management team will consult with RHA Public Health and the RMOH to determine if the outbreak is over.

- Once the outbreak has been declared over, all individuals and institutions notified of the outbreak at the beginning of the investigation are to be notified that the outbreak is over.
- Write a report with recommendations. The nursing home and RHA Public Health will collaborate on the report, if Public Health was involved in the outbreak.
- Effective communication and collaboration among a team is required. Following the conclusion of the outbreak investigation, evaluate overall process: - Identify what worked well and areas for improvement.
 - Make recommendations regarding possible future investigations
 - Evaluate the cause of the outbreak, surveillance and detection of the outbreak, preparedness for the outbreak, management of the outbreak, and control measures.

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Appendix A: Hand Hygiene for Health Care Workers (HCWs)

Hand hygiene is the single most effective measure to prevent the transmission of Health Care Associated Infections (HCAI). It has been documented that HCAs kill 8,000-12,000 Canadians every year. Good hand hygiene saves lives and reduces the strain on our healthcare system.

Hands must be cleaned at the point of care and it is crucial that hand hygiene is performed at these 4 critical times:

1. Before initial resident/resident environment contact.
2. Before aseptic procedure.
3. After body fluid exposure risk.
4. After resident/resident environment contact.

Personal hand hygiene should also be performed:

- Before assisting residents with feeding
- Before and after preparing food
- After using the toilet
- After blowing your nose, coughing or sneezing

If there is visible soiling, hands should be washed with soap and water.

Follow these simple instructions when washing your hands with soap and water:

1. Wet hands with warm water.
2. Apply soap and rub for 15 - 20 seconds – all surfaces including front and back of hands, between fingers, around nails (especially cuticles), thumbs and wrists.
3. Rinse well.
4. Dry with a paper towel.
5. Turn off faucet without re-contaminating hands, for example, use towel to turn off taps.

Follow these simple instructions when using an alcohol-based hand rub:

1. Apply a measured pump of the product (enough of the product to cover all surfaces of the hand) into your open palm.
2. Rub into hands covering all surfaces including front and back of hands, between fingers, around nails (especially cuticles), thumbs and wrists.
3. Rub until dry.

Hands must be fully dry before touching the resident or the environment/equipment for the alcohol-based hand rub to be effective and to eliminate the extremely rare risk of flammability in the presence of an oxygen-enriched environment.

Appendix B: Hand Hygiene for Residents and Visitors

Hand washing is the single best way to prevent spread of infection. It is estimated that 80% of common infections such as the cold and flu are spread by unwashed hands. Good hand washing technique is easy to learn.

If there is visible soiling, hands should be washed with soap and water.

Follow these simple instructions when washing your hands with plain soap and water:

1. Wet hands with warm water.
2. Apply soap and rub for 15 - 20 seconds – all surfaces including front and back of hands, between fingers, around nails (especially cuticles), thumbs and wrists.
3. Rinse well.
4. Dry with a paper towel.
5. Turn off faucet without re contaminating hands, for example, use towel to turn off taps.

Follow these simple instructions when using an alcohol based hand rub:

1. Apply a measured pump of the product (enough of the product to cover all surfaces of the hand) into your open palm.
2. Rub into hands covering all surfaces including front and back of hands, between fingers, around nails (especially cuticles), thumbs and wrists.
3. Rub until dry.
4. If using an alcohol based hand rub, remember alcohol is flammable

When to clean your hands:

- Before meals
- Before feeding children, including breastfeeding
- Before and after preparing food
- Before and after visiting our residents
- Before and after visiting with people who are sick
- After using the toilet
- After changing diapers or helping someone toileting
- After blowing your nose, coughing or sneezing
- After playing with shared toys
- After handling animals or their waste

Appendix C: Point of Care Risk Assessment Tool for Seasonal Influenza

Prior to any resident interaction, all healthcare workers (HCWs) have a responsibility to always assess the infectious risk posed to themselves and to other residents, visitors, and HCWs. This risk assessment is based on professional judgment about the clinical situation and up-to-date information on how the specific healthcare organization has designed and implemented engineering and administrative controls, along with the availability and use of Personal Protective Equipment (PPE). Point of Care Risk Assessment (PCRA) is an activity performed by the HCW **before every resident interaction**, to:

1. Evaluate the likelihood of exposure to Seasonal Influenza,
 - **from a specific interaction** (e.g., performing/assisting with aerosol generating medical procedures, other clinical procedures/interaction, non-clinical interaction (i.e., admitting, teaching resident/family), transporting residents, direct face-to-face interaction with residents, etc.),
 - **with a specific resident** (e.g., infants/young children, residents not capable of self care/ hand hygiene have poor-compliance with respiratory hygiene, copious respiratory secretions, frequent cough/sneeze, early stage of influenza illness, etc.),
 - **in a specific environment** (e.g., single rooms, shared rooms/washrooms, hallway, influenza assessment areas, emergency departments, public areas, therapeutic departments, diagnostic imaging departments, housekeeping, etc.),
 - **under available conditions** (e.g., air exchanges in a large waiting area or in an airborne infection isolation room, resident waiting areas);

AND

2. Choose the **appropriate actions/PPE** needed to minimize the risk of resident, HCW/other staff, visitor, contractor, etc. exposure to seasonal influenza /suspect ILI case.

PCRA is not a new concept, but one that is already performed regularly by professional HCWs many times a day for their safety and the safety of residents and others in the healthcare environment. For example, when a HCW assesses a resident and situation to determine the possibility of blood or body fluid exposure or chooses appropriate PPE to care for a resident with an infectious disease, these actions are both activities of a PCRA.

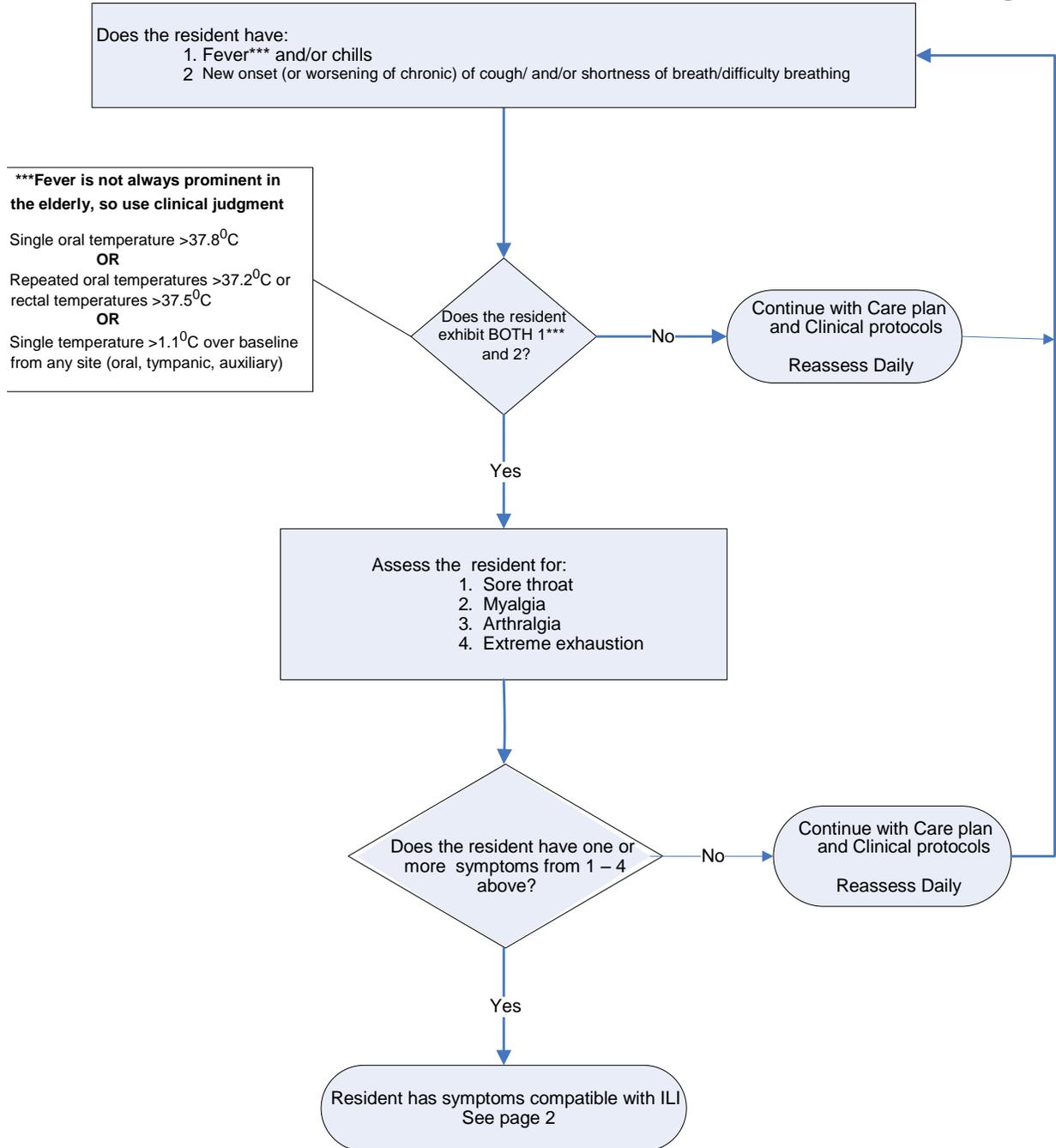
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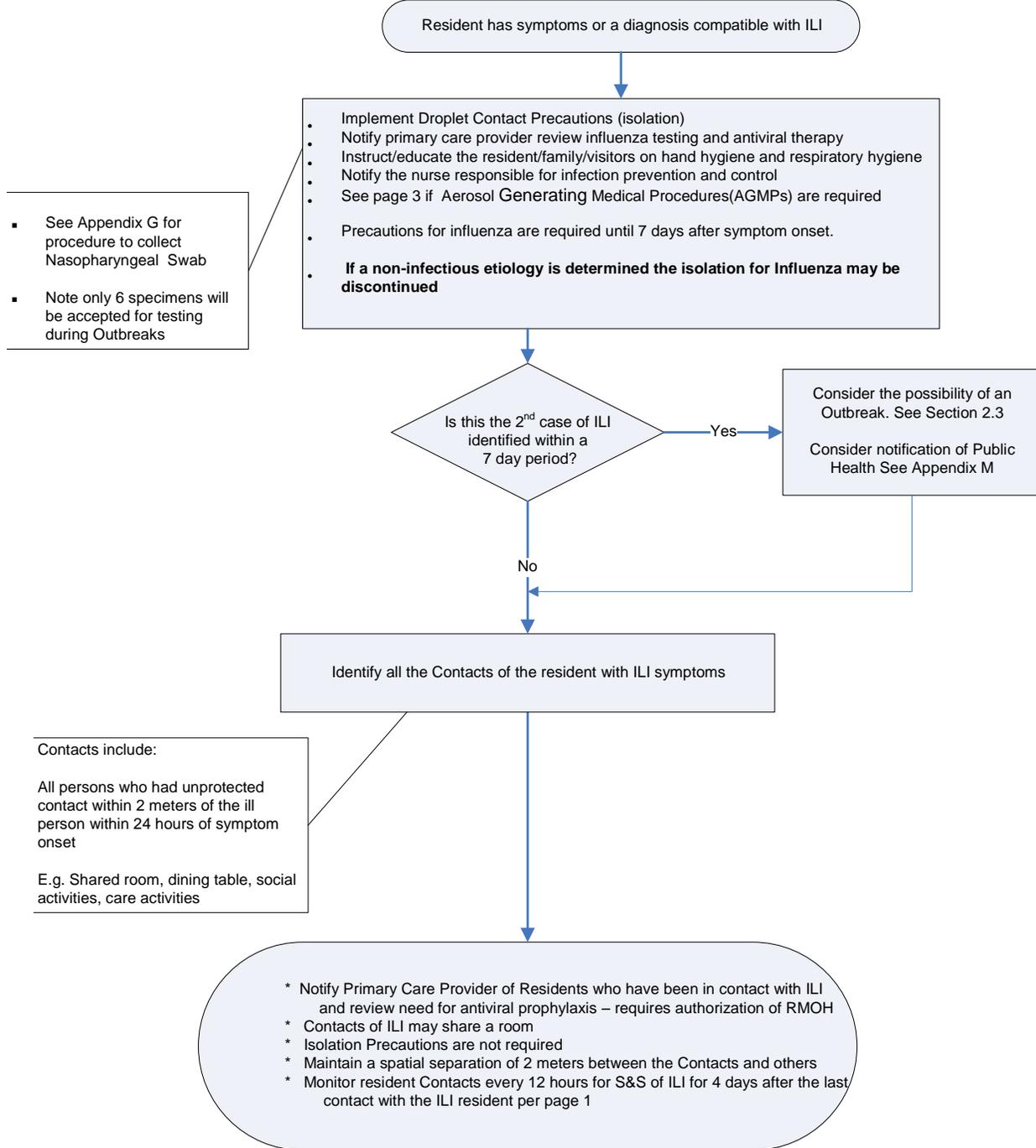
Appendix D: Resident & Contact Assessment and Infection Control Actions

Daily Resident Assessment for Influenza-Like-Illness (ILI) Algorithm

Page 1

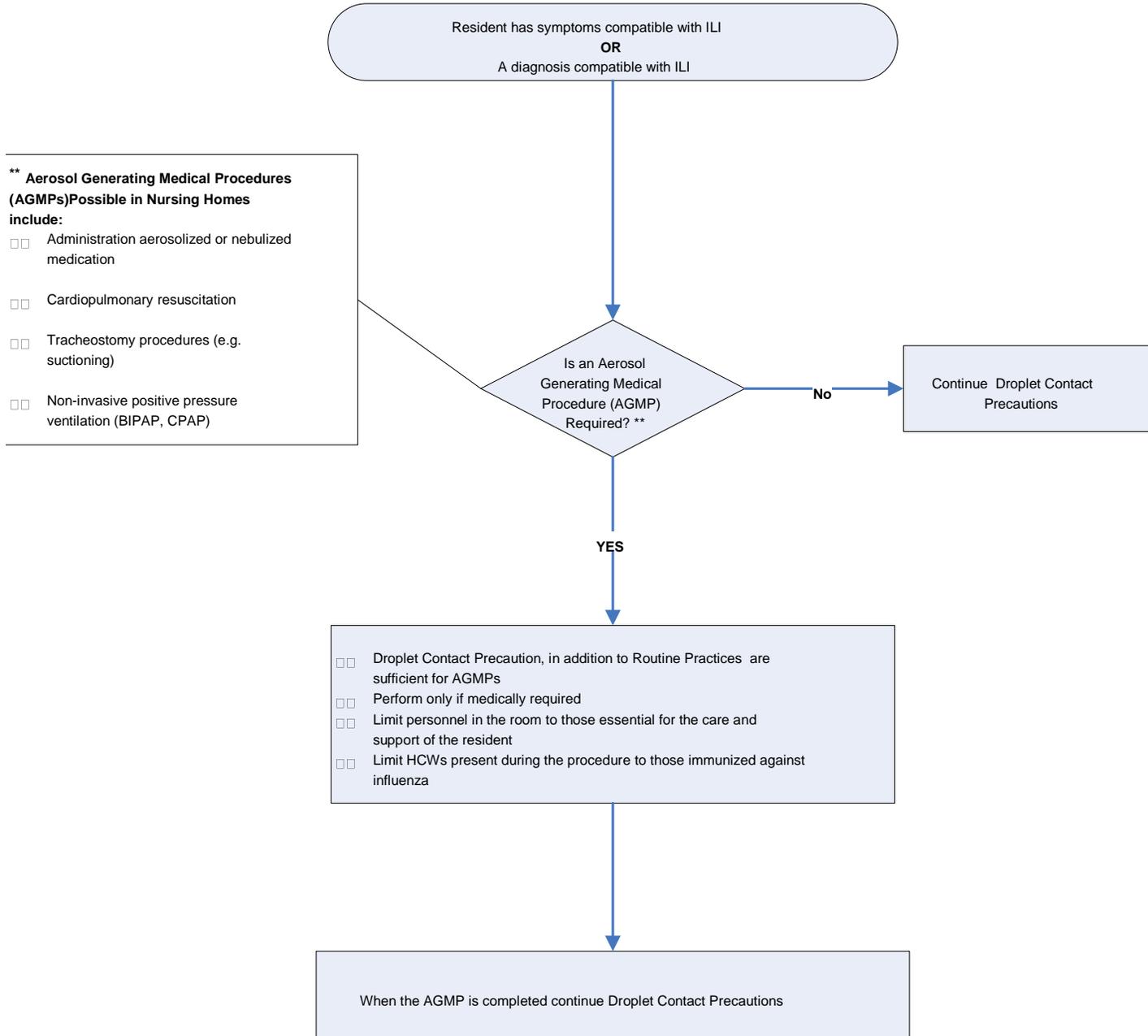


**Further actions when a resident is identified as having symptoms
OR diagnosis compatible with ILI**



AGMPs with Seasonal Influenza-Like-Illness (ILI)

Judgment must be exercised when making decisions regarding the appropriate use of Personal Protective Equipment. The guidelines provided below adhere to the Public Health Agency of Canada' Point of Care Risk Assessment-see Appendix C



Appendix E Preparedness Checklist: for Use to Assist in Outbreak Planning

Planning

- Does the nursing home have an influenza/respiratory infection outbreak plan?
- Is the influenza plan reviewed and updated annually?
- Have the relevant health care providers/organizations in the community (e.g. associated Primary Care Providers (PCPs), local public health unit, acute care hospitals) been involved in the planning process?
- Does the plan contain an agreement between the nursing home and associated PCPs and medical services to provide medical care during weekends and public holidays during outbreaks?
- Are all staff aware of the plan and their roles and responsibilities?
- Is there a practice for seasonal influenza assessments regarding immunization of residents and staff and the use of antivirals?

Immunization

- Does the nursing home achieve a high rate of annual immunization of staff and residents?
- Does the nursing home have an up-to-date (at mid-October) consolidated line listing of all residents' influenza and pneumococcal immunization status?
- Does the nursing home have an up-to-date (at mid-October) consolidated line listing of all staff members' influenza immunization status?

Outbreak recognition

- Does the nursing home routinely assess residents for ILI from October- to April?
- Does the nursing home encourage staff to report ILI symptoms from October to April?
- Does a process exist to notify the infection control designate as soon as practicable and within 24 hours when an outbreak is suspected?

Infection Control

- Does the nursing home have access to an Infection Control designate who is known to staff and available 24/7?
- Does the nursing home have plans for internal traffic and restricting access in affected areas of the facility?
- Has the nursing home made arrangements for appropriate signage?
- Does the facility routinely provide training on the proper donning and removal of personal protective equipment?

Antivirals

- Has the nursing home consulted with visiting PCPs to develop the antiviral component of the plan?
- Are mechanisms for prescribing antivirals in a timely manner identified?
- Does the nursing home have an up-to-date (at mid-October) consolidated line listing of all residents with details of precautions (e.g. impaired renal function) for using antivirals and relevant doses to be used for them?

Staffing

- Does the nursing home have a staffing contingency plan in case 20% to 30% of staff fall ill?
- Has the nursing home developed plans to support staff during an outbreak?
- Has the nursing home developed a plan for the cohorting of staff?

Communication

- Does the nursing home have a contact list for the local public health unit and other partners?

- Does the nursing home have a plan for communicating with staff, residents, volunteers and family members during an outbreak?
- Have key personnel been designated to manage the needs of the media?

Management of Residents

Has the nursing home identified residents who could be cared for in other settings if necessary (e.g. family care, transfers between hospitals and nursing home, local nursing home's partnering to support each other by delegating certain resident care activities to one organization while the other focuses on the care of influenza-like illness/influenza residents)?

Visitors

- Have personnel been designated to control and take care of issues that arise due to visitors?
- Does the facility have a plan to reduce the risk of visitors entering the facility during an outbreak (e.g. security, signage, restricted access)?

Training

- Does the plan specify who is responsible for the training program?
- Does the plan include methods for ramp up and quick training for new and altered roles (e.g. have policies and procedures been made, have job action sheets been developed)?
- Does the nursing home have ongoing, outbreak training programs?
- Does the nursing home provide outbreak education material at staff orientation to raise staff awareness?

Cleaning

- Does the plan identify who is responsible for overseeing increased frequency of cleaning and arranging liaison with contractors or hiring extra cleaners if necessary?
- Does the plan include arrangements for increased frequency of emptying bins?

Appendix F: Droplet Contact Precautions for Seasonal Influenza in Nursing Homes

Accommodation

- Perform a point of care risk assessment to determine appropriate accommodation.
- Prioritize residents who cannot be confined to their bed/bed space maintaining spatial separation of ≥ 2 meters from others for a private room / private Bathroom
- In shared accommodations the privacy curtains must remain pulled
- The resident's door may remain open if the distance from the resident to the door is ≥ 2 meters ▪ Cohorting of residents may be required.

Personal Protective Equipment

- Gloves for entry into the room, cubicle or bed space if a shared room
- Surgical mask for activity within 2 meters
- Eye Protection for activity within 2 meters. Prescription eye glasses do not provide protection
- Long sleeved gowns if it is anticipated that clothing or forearms will be in direct contact with the resident, environmental surfaces, or objects within the resident, environmental
- Instruct visitors on necessary infection control measures including:
 - How to put on and remove isolation attire
 - Hand Hygiene (alcohol based hand rub and/or soap and water)
- AGMP with Suspected/Confirmed Influenza
 - Perform on residents with suspect/confirmed influenza only if medically required and cannot be postponed
 - Limit the HCWs in the room to the minimum required for the safety and well being of the resident
 - Limit HCWs participating in AGMPs to those immunized against influenza
 - All HCWs in the room (even those positioned more than 2 meters away) must wear a surgical mask, eye protection, gown, and gloves.

Hand Hygiene

- Most important measure to prevent spread of infection, See Appendix A
- Clean hands before and after contact with the resident and/or resident's environment with alcohol based hand rub or with soap and water
- Do not use the resident's bathroom sink for hand hygiene.

Isolation Supplies

- Alcohol based hand rub 60 – 90% (method of choice for hand hygiene in all healthcare facilities)
- Long sleeved isolation gowns
- Gloves
- Eye protection
- Surgical masks
- Dedicated thermometer
- Stethoscope
- Laundry hamper
- Waste containers
- Specimen bags
- Pen
- Post-it notes
- Isolation Signage (Droplet Contact Precautions)
- Approved disinfectant for equipment cleaning (e.g. accelerated hydrogen peroxide).

Resident Care Supplies

- Limit the disposable supplies taken into the room to the amount anticipated for use
- Disposables not used cannot be returned to stock. If not used by this resident they must be discarded
- Provide the resident with tissues, a waste container for used tissues and a mechanism to perform hand hygiene following coughing/sneezing.

Isolation Room Set up

- Post signs with the required precautions (both official languages) outside the resident room— must be clearly visible
- Waste can and laundry hamper in resident room
- Ensure that the resident can dispose of used tissues
- Set up the personal protective supplies outside the resident room (anteroom or corridor).

Enter/Exit Room Procedure

Before entering room, cubicle, or bed space in a shared room:

- Perform hand hygiene
- Put on gown— if required
- Put on surgical/procedure mask
- Put on eye protection ▪ Put on gloves.

To exit room:

- PPE is removed prior to exiting the room
- Remove gloves and dispose
- Remove gown (if worn), touching only the inside of gown and place in hamper
- Perform hand hygiene
- Remove eye protection (front of eye protection is contaminated)
- Remove mask-remove by ties (front of the mask is contaminated)
- Perform hand hygiene.

Note: Re-usable eye protection must be cleaned and disinfected after each use

Charting

Do not take any part of the resident chart into the room To transfer information from the resident room:

- Keep dedicated pen and post-it notes inside resident room
- Write information on post-it and stick on window/door of resident room
- Exit the resident room following the Enter/Exit Room Procedure
- Use another pen outside the room to record information on chart/paper.

Equipment

- Use disposable equipment, when possible.
- Dedicate reusable equipment to this resident and leave in room.
- Clean and disinfect reusable equipment before removing from the room.

Laundry and Waste

- Tie off the laundry and waste bags before leaving the room
- Place outside the room for pick-up
- No further special handling is required for laundry and waste.

Food Trays

- Regular dishes and cutlery
- Regular dishwashing procedures.

Room Cleaning

- Twice daily cleaning of all high touch surfaces, bed rails, light switches, bathrooms, bedside tables, walker, wheelchair, cane, and drawer handles remotes, phone, etc.
- If resident is discharged or transferred out of room, carry out discharge cleaning (per facility policy) and discard all magazines, personal care supplies, disposable supplies, etc.

Resident Transport

Resident remains confined to room except for medically required activities. Re-schedule all non-urgent medical appointments. If it is necessary to leave the room for tests/facility transfer/therapy:

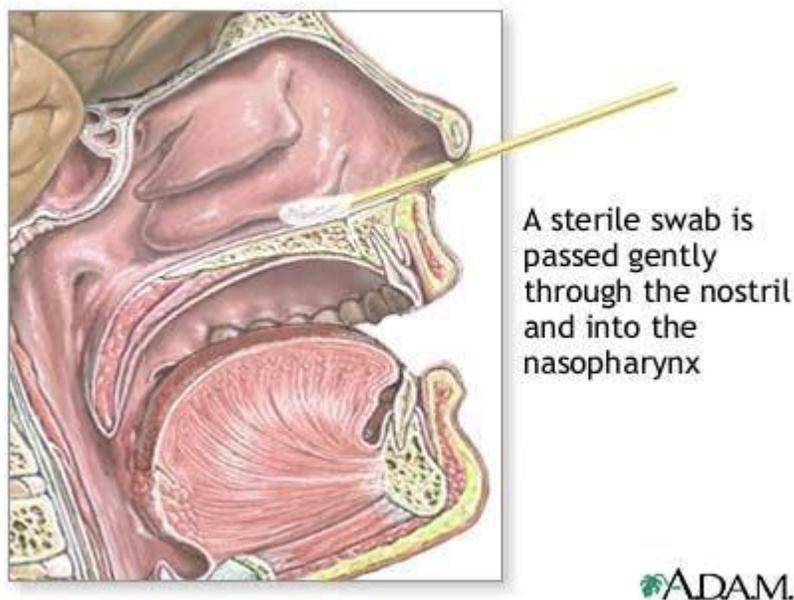
- Sending facility must notify receiving facility of required precautions
- Transport Personnel to don Personal Protective Equipment (PPE) to enter resident room
- Resident to don a surgical/procedure mask and clean clothing
- Utilize clean linens on the clean transport-wheelchair/stretcher (the resident's linen should not be used for transport)
- Assist resident with hand hygiene
- When leaving the room with the resident, transport personnel should remove PPE (gowns and gloves) and perform hand hygiene and don clean PPE. The surgical mask and eye protection do not need to be changed
- Use facility supplied disinfectant (i.e. accelerated hydrogen peroxide) to provide a clean area for hands on the transport equipment
- If equipment from the resident's room must also be transported, it must be disinfected and allowed to air dry prior to use
- Use a transport route that avoids populated areas
- Maintain ≥ 2 meters from others
- Use a dedicated elevator, with no other persons in it
- Disinfect equipment after transfer.

Appendix G: Nasopharyngeal Swab Procedure

Nasopharyngeal Swab Procedure⁸:

1. Explain the procedure to the resident.
2. Use the Nasopharyngeal swab supplied with the viral transport media.
3. If the resident has a lot of mucus in the nose, this can interfere with the collection of cells. Either ask the resident to use a tissue to gently clean out visible nasal mucus or clean the nostril yourself with a cotton swab (e.g. Q-Tip).
4. 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.
5. Seat the resident comfortably. Tilt the resident's head back slightly to straighten the passage from the front of the nose to the nasopharynx to make insertion of the swab easier (see Figure 1)
6. Insert the swab provided 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; the resident may have a deviated septum.)
7. Allow the swab to sit in place for 5–10 seconds.
8. Rotate the swab several times to dislodge the columnar epithelial cells. Note: Insertion of the swab usually induces a cough.
9. Withdraw the swab and place it in the collection tube.

Figure 1: Nasopharynx swab collection²



ADAM.

⁸ Nasopharyngeal swab procedure based on PHAC description in Annex C of Canadian Pandemic Influenza Plan for the Health Sector (English): <http://www.phac-aspc.gc.ca/cpip-pclcpi/ann-c-eng.php#appb3> (French)version: <http://www.phac-aspc.gc.ca/cpipplcpi/ann-c-fra.php>

Appendix H: Routine Practices

Routine Practices include:

1. A point of care risk assessment of the resident and the planned interaction is completed prior to each interaction –See Appendix C
2. Hand hygiene before and after physical contact with the resident and/or with the resident's environment—see Appendix A.
3. Hand hygiene by residents and visitors. Residents may require assistance from health care providers—see Appendix B.
4. Use of barriers to prevent HCW contact with blood, body fluids, secretions, excretions, non-intact skin or mucous membranes (e.g. gloves, gown, mask, eye protection).
5. Single room and private toileting facilities for residents who soil the environment with blood, body fluids, excretions or secretions.
6. Safe handling of sharps to prevent injury including the use of safety-engineered devices and the provision of sharps containers at point-of-care where required.
7. Safe handling of soiled linen and waste to prevent exposure and transmission to others
8. Cleaning and disinfection of equipment that is being used by more than one resident between residents.
9. Respiratory Hygiene
 - Post signage at facility entrances re performing hand hygiene and donning a surgical mask if sneezing or coughing
 - Use disposable tissues for wiping nose
 - Cover both mouth and nose with disposable tissues when coughing or sneezing
 - Discard tissues after one use into a hands free receptacle
 - Sneeze and cough into sleeve or shoulder when tissues are not available rather than the bare hand
 - Perform hand hygiene immediately after coughing, sneezing or using tissues
 - Turn head away from others when coughing or sneezing
 - Keep hands away from the mucous membranes of the eyes and nose
 - Maintain a spatial separation of 2 meters between residents symptomatic with an acute respiratory infection (new cough/shortness of breath and fever) and those who do not have symptoms of a respiratory infection

Appendix I: Guidelines for Antiviral Use in Outbreak Situations

There is a potential role for antiviral medications in the management of influenza outbreaks in long term care facilities, as an adjunct to all other control measures.

Use of antivirals requires forward planning, and consultation with, and participation of, a health care provider. The decision to use antivirals in any particular outbreak will be made by the facility or resident's physician in consultation with the RMOH noting that antiviral medication is generally costly and may not be readily available from community pharmacies.

Oseltamivir (Tamiflu®) and zanamivir (Relenza®) are available as special authorization benefits for NBPDP beneficiaries who are residents of long-term care (LTC) facilities (refers to licensed nursing homes and does not include special care homes). The following protocol has been developed by Public Health for the treatment of infected patients and prophylaxis during influenza outbreaks in LTC facilities.

In the event of a respiratory outbreak in a LTC facility, the attending physician or the facility's Medical Advisor/House Physician will consult with the Regional Medical Officer of Health (RMOH) to determine if the cause of the outbreak is or believed to be due to influenza.

If the cause of the outbreak is determined to be, or likely to be, influenza, the RMOH will make general recommendations regarding antiviral use in the facility. The responsibility for individual resident treatment decisions during the outbreak remains with the attending physician. The process for coverage is as follows:

- Oseltamivir: Special authorization NBPDP benefit, Plan V only
- Zanamivir: Special authorization NBPDP benefit, Plan V only.

Refer to the New Brunswick Prescription Drug Program for the latest policy on antivirals in licensed nursing homes <http://www.gnb.ca/0212/benefitupdates-e.asp>.

Guidance on the use of antivirals can be found here: <https://www.ammi.ca/?UpdateID=188>

Antiviral medication for prophylaxis

Two classes of antiviral medications that are active against influenza are available: neuraminidase inhibitors and M2 ion channel inhibitors (e.g. amantadine). Amantadine should not be used for treatment or prevention of influenza in outbreaks due to high rates of resistance and adverse effects, and will not be considered further.

Neuraminidase inhibitors act by reducing the replication of viruses within the body. Two neuraminidase inhibitors are available in Canada:

- Oseltamivir (Tamiflu) - a capsule or powder for oral solution
- Zanamavir (Relenza) - inhaled via a diskhaler.

Oseltamivir is the recommended prophylaxis option based on effectiveness, side effect profile and ease of administration. Zanamavir may be used if oseltamivir is contraindicated, when clinical isolates suggest oseltamivir resistance is likely, or when oseltamivir is not available, and the person is capable of using its delivery device (a diskhaler) effectively.

Treatment

Treatment decisions are the responsibility of the attending physicians of the residents. Whatever the drug choice, treatment should be started as rapidly as possible after onset of illness to be effective and possibly decrease the rate of complications. For treatment to be most effective it should be initiated immediately, but no later than 48 hours after onset of illness. For individuals with risk factors and illness of more than 48 hours duration, treatment with antivirals may be considered.

Consideration of use of antivirals during an outbreak should be made by the nursing home operator during the planning period, in consultation with the resident or facility family physicians.

At the time of publication, resistance to neuraminidase inhibitors by various strains of influenza is an emerging issue. The decision to use these antivirals should be influenced by current knowledge of influenza virus sensitivity/resistance patterns.

Prophylaxis

Antiviral drug prophylaxis, combined with treatment and inactivated vaccine administration, is indicated to control outbreaks in nursing homes and other long-term care facilities with residents at high risk of acquiring influenza and experiencing complications related to influenza infection,

During an influenza outbreak antiviral medication should be offered to all residents who are not already ill whether vaccinated or not. It may be considered for the unvaccinated staff during outbreaks caused by Influenza A strains that are not well matched by the vaccine.

Antiviral prophylaxis should not replace annual influenza immunization. Immunization remains the primary tool for the prevention of influenza infection illness.

Incomplete or patchy use is likely to reduce the effectiveness of the intervention and increase the risk of the influenza virus developing resistance to the antiviral drug.

Prophylaxis of residents

- Residents who are not yet ill should receive their first dose of antiviral drugs as soon as is practicable after an outbreak is declared and preferably within 24 hours.
- In general, all uninfected residents across the entire facility should receive antiviral drugs regardless of vaccination status. Exceptions may be considered by the OMT when there are a small number of cases (<5) in a confined area of the facility and there is no mixing of staff or residents with other areas of the facility.
- Residents with documented impaired renal function should have their dosage of oseltamivir adjusted.
- Residents who have known normal serum creatinine levels may safely be started on usual doses of oseltamivir.
- Measurement of serum creatinine at the time of the outbreak is not indicated unless there is reason to suspect a recent change in renal function. If a recent change in renal function is suspected, it is safe to start usual doses of oseltamivir whilst awaiting serum creatinine results. Dose/frequency adjustment can be made one to two days into treatment.
- Antiviral prophylaxis should be continued for 10 days or until the outbreak is declared over (as determined by the OMT), whichever is longer.
- Antiviral prophylaxis can be prescribed by the resident's PCP either through a standing order, developed on admission and reviewed on an annual or semi-annual basis or by prescription at the time of the outbreak. Logistically, the latter option is more difficult and may incur significant and unacceptable time delays.

- As a result of reported gastrointestinal upset, it is recommended that oseltamivir be given with a snack or at mealtimes. Gastrointestinal upset, if it occurs, is usually associated with the first dose. If this occurs, try persisting with subsequent doses.
- If respiratory symptoms develop in a resident on prophylaxis, the dose should be changed to the treatment dose whilst tests are being performed. These changes should be made in consultation with the resident's PCP. If the resident is shown to have influenza, a full 5 day course of the treatment dose should be completed and antivirals then ceased.

Prophylaxis of staff

- In planning, the nursing home should consider options for provision of antivirals for staff:
 - Referral to their own PCPs to obtain a prescription
 - Provision by the nursing home through a visiting general practitioner
- Staff should be educated about their choice of neuraminidase inhibitor.
- All staff must be alert for the symptoms and signs of influenza, particularly within the first 48 hours after starting antiviral prophylaxis and should be excluded from resident care if symptoms develop.
- Oseltamivir should be used during pregnancy and lactation only if the potential benefit justifies the potential risk to the fetus or breast-fed infant. Pregnant or lactating women should discuss these issues with their PCP.

Unvaccinated staff

- All unvaccinated staff should receive antiviral prophylaxis as soon as is practicable after the outbreak is declared, and preferably within 24 hours of residents commencing antiviral prophylaxis. At the same time, unvaccinated staff should be vaccinated.
- For previously unvaccinated staff who are vaccinated at the start of the outbreak, antiviral prophylaxis should be continued for 14 days (as it takes this long for the vaccine to take effect). If the outbreak is declared over before the 14 days are up, the person can cease taking antivirals at that point in time.
- For previously unvaccinated staff who decline vaccination at the start of the outbreak, antiviral prophylaxis should be taken for 10 days or until the outbreak is declared over (as determined by the OMT/RMOH), whichever is later.
- Management should develop an exclusion policy for staff who decline vaccination and antiviral drugs.

Vaccinated staff

- Vaccinated staff do not require antiviral prophylaxis unless the outbreak is considered by the OMT to be caused by an influenza strain that is not well matched to the vaccine. In this case, prophylaxis should be extended to all staff, regardless of vaccination status. The match between strain and vaccine is unlikely to be known until sometime into the outbreak, but there may be evidence of a nonvaccine-susceptible strain circulating in the community.
- Staff who are immunocompromised (e.g. those with HIV infection or taking immunosuppressive therapy) may benefit from antiviral prophylaxis, even if they are vaccinated.

Appendix J: Recommended Data Elements for Nursing Home Influenza Investigation Line Lists

A strong line listing of influenza cases is very helpful in both identifying an outbreak and then monitoring and managing that outbreak. An excel spreadsheet containing the data elements listed below is located in the Members Area of the New Brunswick Association of Nursing Homes (NBAH) website with this guidance document. The home page for NBAH is <http://www.nbanh.com/en/about/>

The bracketed information contains the suggested responses for the specific data element.

Name Initials (first, last)	Other symptoms specify
Case Number	Date specimen collected (dd-mmm-yyyy)
Reason person at Nursing Home	NP Swab for Influenza (yes, no)
Gender (Male or Female)	Lab Results (influenza negative, influenza A, influenza B, other positive)
Date of Birth (dd-mmm-yyyy)	Other tests requested specify
Age	Other positive lab result, specify
Room number	Received seasonal influenza vaccine? (yes, no, unknown)
Date onset of first ILI symptoms (dd-mmm- yyyy)	Date of received
Fever (yes or no)	seasonal influenza vaccine (dd-mm-yyyy)
Cough (yes or no)	Received Pneumococcal vaccine? (yes, no, unknown)
Sore throat (yes or no)	Received Antivirals? (yes, no, unknown) –
Chills (yes or no)	If yes, indicate antiviral type, specify
Myalgia (yes or no)	Date ILI symptoms resolved (dd-mmm-yyyy)
Athralgia (yes or no)	Outcome (recovered, deceased, unknown)
Prostration (yes or no)	Hospitalized (Yes, No, Unknown)
SOB (yes or no)	Comments

Appendix K: Public Health Communicable Disease Team Contact List

Contact information for the RHA Public Health Offices is listed below and is also available on the Office of the Chief Medical Officer of Health'

website: http://www2.gnb.ca/content/gnb/en/departments/ocmoh/healthy_people/content/public_health_clinics.html

Department of Public Safety Public Health Inspectors	Regional Health Authority Public Health Nurses
Central Region Fredericton (Regular hours): Main office (506) 453-2830 Communicable Disease Line (506) 444-5905	Zone 3 Fredericton (Regular hours): Main office (506) 453-5200 Communicable Disease Line (506) 444-5905
Central Region After Hours Emergency Number 1-506-453-8128	
South Region Saint John (Regular hours): Main office (506) 658-3022 Communicable Disease Line (506) 658-5188	Zone 2 Saint John (Regular hours): Main office (506) 658-2454 Communicable Disease Line (506) 658-5188
South Region After Hours Emergency Number 1-506-658-2764	
East Region Moncton (Regular hours): Main office (506) 856-2814 Communicable Disease Line (506) 856-3220	Zone 1 Moncton (Regular hours): Main office (506) 856-2401 Communicable Disease Line (506) 856-3220 Zone 7 Miramichi (Regular hours): Main office (506) 778-6756 Communicable Disease Line (506) 778-6104
East Region After Hours Emergency Number 1-506-856-2004	
North Region Edmundston (Regular hours): Main office (506) 737-4400 Campbellton (Regular hours): Main office (506) 789-2549 Bathurst (Regular hours): Main office (506) 549-5550	Zone 4 Edmundston (Regular hours): Main office (506) 735-2065 Zone 5 Campbellton (Regular hours): Main office phone number (506) 789-2266 Zone 6 Bathurst (Regular hours): Main office phone number (506) 547-2062 Communicable Disease Line (506) 547-2067
North Region After Hours Emergency Number 1-506-789-2428	

Note:

Regular hours are 8:15 am - 4:30 pm Monday-Friday.

The after-hours emergency number is to report notifiable diseases after 4:30 pm on weekdays and on the weekends and holidays. The pager is intended for emergency reporting only – operators are asked to keep the after-hours pager number confidential within the facility (only for operators and staff).

Appendix L: Immunization

The best protection against *influenza* is getting the annual influenza immunization and practicing basic hygiene. The influenza vaccine causes the immune system to develop protection (antibodies) against the strains of the virus in the vaccine. The antibodies help prevent infection or reduce the severity of the illness. Minor antigen changes (referred to as drifts) are common, and the greater the change the less the cross-immunity will be to the previously circulating virus. It is this antigenic variation from one influenza virus subtype to another that is responsible for continued outbreaks of influenza, necessitating annual reformulation and annual administration of the influenza vaccine. Although many other respiratory viruses can cause influenza-like illness during the year, influenza virus is usually the predominant cause of serious respiratory infections in a community.

The national goal of the *seasonal influenza immunization program* in Canada is to prevent serious illness caused by influenza and its complications, including death ⁽⁹⁾. In keeping with this, NACI ¹⁰ recommends that immunization priority for seasonal influenza vaccine be given to those persons at high risk of influenza-related complications, those capable of transmitting influenza to individuals at high risk of complications, and those who provide essential community services. Included amongst these groups are:

- People of any age who are residents of nursing homes, since they often have one or more chronic medical conditions and live in an institutional setting that may facilitate the spread of influenza and other respiratory diseases.
- People ≥ 65 years of age. Admissions attributable to influenza in this age group are estimated at 125 to 228 per 100,000 healthy persons¹¹, and death rates increase with age ¹¹.
- Health care and other care providers in facilities and community settings. This group includes regular visitors, emergency response workers, those who have contact with residents of continuing care facilities or residences, those who provide home care for persons in high-risk groups, and students of related health care services.

However, influenza vaccine is encouraged for all Canadians who have no contraindication.

Current influenza vaccines approved for use in Canada are immunogenic, safe, and associated with minimal side effects and can be administered to anyone ≥ 6 months of age who has no contraindications.

Pneumococcal vaccine

In addition to influenza vaccine, *pneumococcal vaccine* is also recommended for residents of New Brunswick as follows:

- All individuals ≥ 65 years of age
- Individuals newly admitted to nursing homes
- For other criteria please see the *Eligibility Criteria for Publicly Funded Vaccines and Biologicals*¹².

⁹ Public Health Agency of Canada. Final Report of Outcomes from the National Consensus Conference for Vaccine-Preventable Diseases in Canada. Public Health Agency of Canada 2008 March 2008(34S2):28-32. Available from: URL: <http://www.phacaspc.gc.ca/publicat/ccdr-rmtc/08vol34/34s2/index-eng.php>

¹⁰ For the most current statement go to the NACI website at <https://www.canada.ca/en/public-health/services/publications/vaccines-immunization/canadian-immunization-guide-statement-seasonal-influenza-vaccine-2019-2020.html>

¹¹ NACI statement

¹² Immunization Program Guide:

http://www2.gnb.ca/content/gnb/en/departments/ocmoh/for_healthprofessionals/cdc/NBIimmunizationGuide.html

Appendix M: Surveillance, Monitoring and Reporting of Influenza and ILI in New Brunswick Nursing Homes

The NB Influenza Program is comprised of: laboratory reporting of positive influenza specimens; the NB Sentinel Practitioner Influenza Network (NB SPIN); RHA reporting of influenza-related hospitalizations and deaths; school surveillance; and nursing home outbreak surveillance.

Information obtained from this system is compiled and distributed on a weekly basis and generated in a report.

There are three aspects of surveillance and monitoring for influenza in nursing homes:

1. Active monitoring of residents – staff that provide direct care to residents should be vigilant for ILI symptoms in their patients and report them daily to their supervisor and/or the person in the facility designated for monitoring influenza in the facility.
2. **Weekly surveillance reporting** to RHA Public Health – The New Brunswick Nursing Homes Influenza Surveillance Form is available in the Members Area of the New Brunswick Association of Nursing Homes (NBANH) website with this guidance document. The NBANH home page is located here: <https://www.nbanh.com/about>
3. Reporting influenza outbreaks with lab confirmed influenza cases – **If an influenza outbreak is identified through monitoring and confirmed with laboratory testing, the nursing home must notify RHA Public Health as soon as possible and within 24 hours.**

Purpose of surveillance and monitoring in a nursing home

An important goal of surveillance and monitoring is to ensure identification of a potential outbreak in its early stages so that control measures can be instituted as soon as possible.

Active monitoring of residents helps the health care setting detect possible symptoms of respiratory infection as early as possible, so that staff members can take appropriate precautions and stop a potential outbreak from occurring or delay its occurrence. The focus of monitoring is less on confirming a diagnosis of influenza and more on alerting healthcare workers of the possible risk so that diagnostic testing and control measures are instituted as soon as a potential problem is identified. Residents should be monitored on a daily basis for signs and symptoms of ILI throughout the year.

Surveillance of ILI activity is done throughout the year by RHA Public Health by requesting weekly reports from nursing homes and intensified during influenza season – typically October to the end of April of each year, and when influenza has been reported in the community. This weekly information is used to assist in tracking ILI activity in the region for early identification of outbreaks and to enhance the working relationship between Public Health and nursing homes

Considerations

It is vital that staff is able to recognize outbreaks during all hours in order to implement appropriate precautions. They also need to be aware of the symptoms of respiratory illness and of all the steps that they must follow in order to prevent the spread of infection among the residents and staff. A knowledgeable employee or employees must be designated to perform these functions, during regular hours of operation, on weekends, and during holiday periods.

Active Monitoring of Residents

Continuous nursing home-wide monitoring for ILI is *required* to establish baseline levels of infection throughout the year.

- All staff that provides direct care to residents must be aware of signs and symptoms in order to ensure that all cases within the facility are reported and recorded.
- The relevant information should be forwarded to the person designated for monitoring infections, on a daily basis.
- Note the total number of residents experiencing ILI or who have been diagnosed with influenza and the total number of residents in the nursing home.

See **Appendix J** for the recommended data elements of a line list

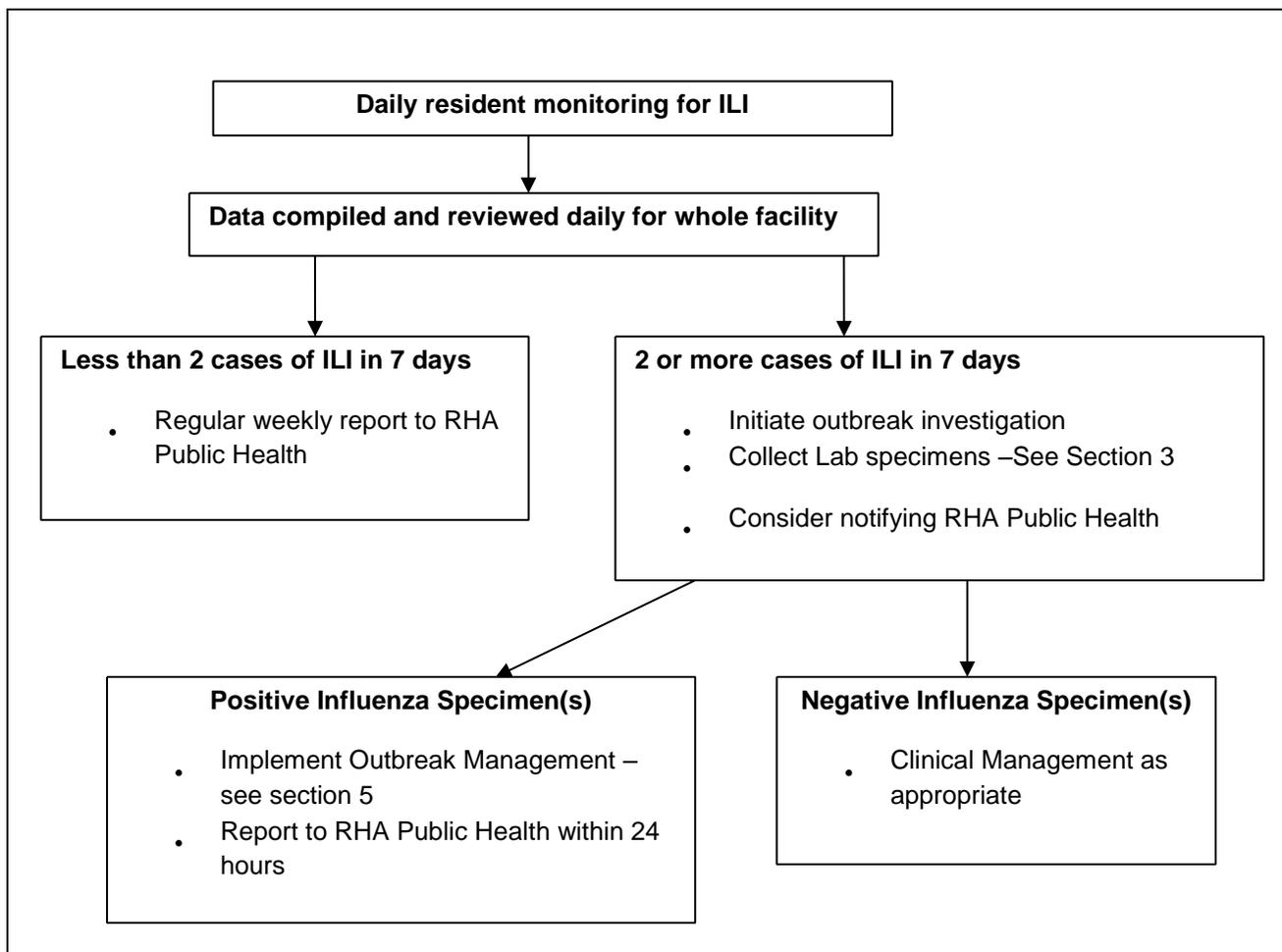
Staff Illness

All staff are encouraged to report to their supervisor, when they are absent with febrile respiratory infection. The supervisor must then inform the person responsible for monitoring and surveillance within the facility of the number of ILI cases among staff. Note the total number of staff experiencing ILI or who have been diagnosed with influenza and the total number of staff working in the nursing home.

Forward the weekly surveillance report form to RHA PH in the pre-determined manner established by the RHA PH team.

Reporting of outbreaks should be done by contacting the RHA PH office in your region.

Flowchart for Reporting of Influenza to RHA Public Health



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