

Control of Respiratory Infection Outbreaks in Long-Term Care Homes, 2018

Ministry of Health and Long-Term Care
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Preamble

Reference Documents are program or topic-specific documents that provide information and best practices relevant to implementing the Ontario Public Health Standards: Requirements for Programs, Services, and Accountability (Standards), Protocols and Guidelines. Reference Documents are not enforceable; the aim of Reference Documents is to provide professional staff employed by local boards of health support in operationalizing and implementing requirements outlined in the Standards, Protocols and Guidelines. Specifically, this document has been developed to support public health's work with long-term care and retirement homes in managing their outbreaks, and provides guidance on infection control measures.

This 2018 update was facilitated by the valuable input from Public Health Ontario and the public health units, along with other contributors such as the Ministry of Labour. Please note that this is a revised version of the document and any policies, procedures, or supporting documents which are based on previous versions of this document should be updated accordingly.

Definition of 'Staff' for non-Long-Term Care Home Facilities

The definition of staff used in this document is taken from the *Long-Term Care Homes Act, 2007*, s.2(1), and the *Retirement Homes Act, 2010*, s.2(1). These acts apply only to long-term care homes and retirement homes, respectively.

Should the guidance in this document be used for facilities other than long-term care homes or retirement homes, it is recommended that these facilities adopt a broader definition of staff to increase prevention and protection opportunities. The recommended definition for staff can be found in PIDAC's Routine Practices and Additional Precautions in All Health Care Settings, November 2012.²⁵ They define 'staff' as follows:

"Anyone conducting activities in settings where health care is provided, including but not limited to, health care providers", with health care providers being defined as "Any person delivering care to a client/patient/resident. This includes, but is not limited to, the following: emergency service workers, physicians, dentists, nurses, respiratory therapists and other health professionals, personal support workers, clinical instructors, students and home health care workers. In some non-acute settings, volunteers might provide care and would be included as health care providers."

This inclusive use of 'staff' also aligns with the Ontario Hospital Association for its Communicable Diseases Surveillance Protocols (available here:

<https://www.oha.com/labour-relations-and-human-resources/health-and-safety/communicable-diseases-surveillance-protocols>), which apply to “all persons carrying on activities in the hospital”.

Disclaimer

This document is a reference document and does not constitute legal advice. This document does not address all aspects of applicable legislation, including regulations and Orders under applicable legislation. It should be read in conjunction with all applicable legislation, including, but not limited to, the *Long-Term Care Homes Act, 2007*, the *Health Protection and Promotion Act* and the regulations and Orders made under those Acts. In the case of any conflict, the provisions of the legislation, regulations and/or Orders are authoritative.

Acronyms

ABHR	Alcohol-Based Hand Rub
ARI	Acute Respiratory Infection
DONPC	Director of Nursing and Personal Care
ES	Environmental Services
HCRF	Healthcare and Residential Facilities Regulation
HCW	Health Care Worker
HH	Hand Hygiene
HPPA	<i>Health Protection and Promotion Act, 1990</i>
ICP	Infection Prevention and Control Professional
IPAC	Infection Prevention and Control
iPHIS	Integrated Public Health Information System
LTCH	Long-Term Care Home
LTCHA	<i>Long-Term Care Homes Act, 2007</i>
MOHLTC	Ministry of Health and Long-Term Care
NACI	National Advisory Committee on Immunization
OHSA	<i>Occupational Health and Safety Act, 1990</i>
OMT	Outbreak Management Team
O. Reg. 79/10	Ontario Regulation 79/10 (under the LTCHA)
PIDAC	Provincial Infectious Diseases Advisory Committee
PHAC	Public Health Agency of Canada
PHU	Public Health Unit

PHO	Public Health Ontario
PHOL	Public Health Ontario Laboratory
PPE	Personal Protective Equipment
PTAC	Provincial Transfer Authorization Centre
SDM	Substitute Decision-Maker
TIV	Trivalent Inactivated Influenza Vaccine

1 Introduction

Respiratory infection outbreaks occur in long-term care homes (LTCHs) throughout the year but are more common from the fall to early spring. These can lead to substantial morbidity and mortality and are disruptive and costly for LTCHs. Respiratory tract infections are commonly diagnosed infections in LTCH residents. In Ontario, based on data from Public Health Ontario Laboratory (PHOL), the most common respiratory viruses causing respiratory infection outbreaks are influenza A and B, entero/rhinovirus, coronavirus, RSV, parainfluenza, and metapneumovirus.¹ Occasionally, not only one, but two or more infectious agents are identified in an outbreak.

LTCH residents are predisposed to Acute Respiratory Infections (ARIs) in part because they may be elderly, may have chronic illnesses which weaken their immune system, and may have chronic lung or neurological diseases which impair their ability to clear secretions from their lungs and airways. However, residents are also at risk because many viral and bacterial respiratory pathogens are easily transmitted in an institutional environment.

Early detection together with the timely implementation of outbreak control measures that are carefully adhered to, can effectively minimize transmission of infection, thereby preventing or more quickly bringing an outbreak under control.

1.1 Purpose of the Document

This document replaces “Recommendations for the Control of Respiratory Infection Outbreaks in Long-Term Care Homes”, Ontario Ministry of Health and Long-Term Care, March 2018 (previously known as “A Guide to the Control of Respiratory Infection Outbreaks in Long-Term Care Homes”).

The purpose of this document is to assist LTCHs and public health units (PHUs) with prevention, detection and management of respiratory infection outbreaks which arise from the transmission of common viral pathogens. For this document, PHU will refer to the organization including the Medical Officer of Health or designate and staff.

The recommendations contained in this document are based on current evidence and best practice at the time of writing.

It is also important to note that the recommendations contained in this document are intended to protect the health of the resident/patient populations, as required under the *Health Protection and Promotion Act* (HPPA).² Recommendations are made in the interest of the resident populations at risk. LTCH licensees are required to ensure that the rights of residents are fully respected and promoted as set out in the Residents' Bill of Rights in s.3 under the *Long-Term Care Homes Act, 2007* (LTCHA).³ The LTCH and PHU should work together to ensure that residents' rights under the LTCHA are fully respected and promoted, while implementing outbreak control measures that are protective to the resident populations and that are appropriate and proportional to the risk profile of the outbreak. Strategies will be presented in this document to address these issues.

Users of this document should also ensure that they are complying with any other legislation or regulations relevant to their workplace(s) that may not be addressed within these recommendations.

The recommendations in this document have been developed specifically for implementation in LTCHs. Recommendations regarding outbreak control can however, be implemented in principle, in other institutional settings, including complex continuing care or retirement homes, among others. Attention should be given to the guiding infection prevention and control (IPAC) principles and applying them to the specifics of each setting. The management of outbreaks may be different in LTCHs, as compared with other settings such as acute care facilities, but the principles remain the same.

While the information in this document may be applicable to respiratory infection outbreaks in retirement homes, the Ministry of Health and Long-Term Care (the "ministry") does not regulate retirement homes. A retirement home is not expressly listed as an "institution" for purposes of section 21(1) of the HPPA.² Boards of health, however, often do consider retirement homes to fall under the definition of an institution, as "any other place of a similar nature" under section 21(1) of the HPPA and is a reasonable interpretation of this definition.² Premises that meet the definition of retirement home in the *Retirement Homes Act, 2010* are required to consult on an ongoing basis, and at least once a year with the Medical Officer of Health or designate on how to reduce outbreaks and develop their surveillance protocol, and to report outbreaks under that Act's regulation (O. Reg.166/11, section 27).⁴

The specific management of influenza outbreaks will be referenced throughout this document. It is important to note that while the majority of the recommended IPAC measures for management of influenza outbreaks are the same for all respiratory infection outbreaks spread through droplets, with influenza outbreaks the use of vaccines and antivirals is an important component of outbreak management.

1.1.1 Special Circumstances

During an outbreak caused by new, emerging pathogens, (e.g. MERS-CoV, avian influenza A (H7N9)) LTCHs should follow recommendations developed specific to that emerging pathogen. This information will be available from the MOHLTC's Health

Systems Emergency Management Branch (HSEMB) online at <http://www.health.gov.on.ca/en/pro/programs/emb/>

During an influenza pandemic, recommendations for management and control may be altered and LTCHs should use guidance documents specific to pandemic outbreak management. This information will be available from the MOHLTC's HSEMB online at http://www.health.gov.on.ca/en/pro/programs/emb/pan_flu/default.aspx.

1.1.2 Out of Scope

Outbreaks caused by organisms that are spread via other mechanisms, e.g., airborne, require additional outbreak control measures and are out of scope for this document. As well, management of outbreaks caused by bacterial pathogens (e.g. *Legionella* and Tuberculosis) and fungal respiratory pathogens (e.g. *Aspergillus*), are out of scope for this document.

This document can be used in conjunction with:

- Influenza Prevention and Surveillance Protocol for Long-Term Care Homes, September 2014 (this is a surveillance protocol under s. 229 (7) of O. Reg. 79/10 under the *Long-Term Care Homes Act, 2007*);⁵ and
- PIDAC Best Practice documents (see Appendix 12 – Resources and Useful Links)

1.2 The Role of Local PHUs

PHUs act under the authority of the HPPA and in accordance with the Ontario Public Health Standards: Requirements for Programs, Services, and Accountability (including the protocols) 2018 (OPHS, 2018).⁶

For Board of Health requirements please see: Ontario Public Health Standards: Requirements for Programs, Services, and Accountability, Infectious Diseases Protocol, 2018 (or as current).⁶

This document will provide a comprehensive outline for PHUs regarding their requirements with respect to:

- Assisting LTCH staff to understand the parameters for establishing a surveillance program to detect and monitor respiratory illness. This will facilitate the early identification of outbreaks.
- Providing guidance and recommendations to LTCH and PHU staff in order to investigate and manage outbreaks of respiratory infections, including:
 - Identifying symptoms to form a case definition for the specific outbreak
 - Consulting promptly with PHUs when there is suspicion of an outbreak
 - Activating an Outbreak Management Team (OMT)
 - Ensuring that OMT members understand their roles and responsibilities
 - Outlining outbreak control measures
 - Ensuring that staff collect appropriate specimens in a timely manner to verify diagnosis

- Updating information regarding changes to procedures, laboratory guidelines, etc.
- Specifically addressing the use of antiviral medications for the prevention and treatment of influenza
- If necessary, supporting LTCHs through consultations on admissions and readmissions during outbreaks

In line with Board of Health requirements, PHUs are committed to providing support to all LTCHs, including:

- Annual promotion of influenza vaccination to staff of LTCHs;
- Provision of annual in-service education for staff on infectious diseases;
- Collaboration on the development of infection control policies and an outbreak contingency plan;
- Ongoing consultation about communicable disease surveillance programs, including the collection, analysis and appropriate management of infections;
- Assistance in the investigation, confirmation and management of the outbreak, when notified of a suspect or confirmed respiratory outbreak;
- Provision of specimen kits, and transport of the same to the laboratory; and
- If necessary, assisting with notifying nursing staffing agencies of LTCHs in outbreak.

2 Respiratory Outbreaks: Prevention, Preparation and Surveillance

This section focuses on practices aimed at preventing outbreaks as well as those practices that ensure LTCHs are prepared to manage outbreaks. This section includes specific recommendations in the areas of immunization, education, policy and procedure preparation, and the development of surveillance.

2.1 Prevention and Preparation

2.1.1 Immunization

Effective IPAC efforts for preventing respiratory infections are comprised of numerous strategies, the main strategy being seasonal influenza immunization of residents and staff. The MOHLTC supports annual influenza immunization as the primary strategy to minimize the impact of influenza on residents of LTCHs in Ontario.⁵

Influenza and pneumococcal immunization of LTCH residents, along with appropriate IPAC practices, reduces the impact of these vaccine-preventable diseases.

Residents who provide informed consent (or, if the resident is incapable, informed consent is provided by the resident's substitute decision maker) should receive annual influenza vaccination, unless contraindicated. The Canadian Immunization Guide indicates that one dose of polysaccharide pneumococcal vaccine is recommended for all adults 65 years of age and older, and for adults less than 65 years of age in LTCHs or who have conditions putting them at increased risk of pneumococcal disease.⁷ Individuals with unknown immunization histories for pneumococcal vaccine should receive the vaccine.⁷

LTCHs must have immunization programs in place which should include a policy for influenza and pneumococcal disease. LTCHs are responsible for:

- Offering residents immunization against the following as listed in O. Reg. 79/10, s.229(10): influenza at the appropriate time each year, and pneumococcus, tetanus and diphtheria, in accordance with the publicly funded immunization schedules posted on the Ministry website;⁸
- Promoting and implementing accessible influenza vaccination clinics;
- Ensuring their immunization policies are updated and clearly communicated each year;
- Ensuring that all staff members are provided with information annually regarding the influenza vaccine and the home's immunization and exclusion policies;
- Keeping an updated record of all staff influenza immunizations;
- Advising outside agencies that provide staff to the LTCH of the home's immunization/exclusion policy; and
- Developing a staffing contingency plan based on immunization rates in their own home.

Influenza Immunization

"Influenza immunization provides benefits to HCWs and to the patients for whom they care. NACI considers the provision of influenza vaccination to be an essential component of the standard of care for all HCWs for the protection of their patients".⁹ Please refer to the current season's NACI statement on seasonal influenza vaccine for immunization recommendations.

"HCWs should consider annual influenza immunization included in their responsibility to provide the highest standard of care. In the absence of contraindications, refusal of HCWs to be immunized against influenza implies failure in their duty of care to their patients".⁹

LTCH immunization policies should address influenza immunization requirements for residents, staff*, volunteers, students, private pay caregivers and visitors, who conduct activities within the home.

Each home should have policies and procedures related to annual staff immunization as well as resident influenza and pneumococcal immunization.⁵

* See section 2.1.2 for additional information regarding the Occupational Health and Safety Act (OHSA) and associated Regulations for Health Care and Residential Facilities.^{11,12}

Medical contraindications to influenza vaccination

For medical contraindications, please refer to the current NACI statement on influenza vaccination, as well as to each vaccine's product monograph.⁹

Role of the LTCH regarding visitor immunization status

Visitors, including family members/substitute decision-makers (SDMs) and friends to the home, should be encouraged to receive their annual influenza immunization.¹⁰

However, it is not the responsibility of the home to verify the immunization status of visitors and family members/SDMs beyond providing information on the importance and role of vaccination and where they may get vaccinated.

Influenza Immunization of Staff

Availability of on-site vaccination clinics for all staff is recommended to provide optimal access to immunization services.¹⁰ Staff can, of course, also obtain their seasonal influenza immunization from their regular care provider, pharmacist or other source in the community. All staff members who receive the influenza vaccine from a source other than the LTCH must provide proof of influenza immunization. If documentation is not available, the LTCH should consider the staff member unimmunized, and the employer must offer influenza immunization to the individual.

Only the following should be accepted as proof of influenza immunization:⁵

- A personal immunization record (e.g., Ontario Yellow Card) documenting receipt of the current season's influenza vaccine
- A record of immunization from a health care provider (e.g., pharmacist, physician or PHU immunization clinic) documenting receipt of the current season's influenza vaccine

Note: for persons that work in multiple LTCHs or health care facilities, it is prudent to retain proof of immunization obtained for other LTCHs or institutions.

Staff Exclusion Policy

A staff exclusion policy is a protective measure for residents and patients. Employers may send employees home, or enact other practices as contained within the LTCH's own policy, in the event of an influenza outbreak when the worker has not received the influenza vaccine and is not taking antiviral medication.

Currently, this is common practice in Ontario LTCHs and is an important strategy for minimizing the impact of influenza on residents and staff of LTCHs.

LTCHs should have an exclusion policy for staff, as well as students, private pay caregivers and volunteers, who choose not to be immunized and not take antiviral drugs during an outbreak. Staff with an illness compatible with influenza, and well staff that have not been immunized and are not taking antiviral prophylaxis, should be excluded from work.⁹ This is a reasonable measure to protect vulnerable patients/residents during an outbreak. (See Appendix 8 regarding suggestions for exclusion policy content).

Influenza Immunization of Residents

To ensure that protection lasts throughout the influenza season, the recommended time for influenza immunization is as early as possible when the vaccine becomes available unless otherwise advised by your local PHU. If the resident is admitted after the LTCH's fall influenza immunization program, but before the influenza season is over, vaccination must be offered, unless the person has already received the current season's influenza vaccine.⁵

Prior to, or upon admission, each resident should be assessed regarding immunization and medical status. If the influenza immunization status of a resident is not available or if it is unknown, the resident should be considered unvaccinated and immunization should be offered.⁵ A resident or their substitute decision-maker (SDM) may refuse any treatment/medication. Refusal (and reason for refusal) should be documented in the resident's health record.

The immunization record of the resident, including their influenza immunization status, should be retained in a readily accessible part of their health record. Upon transfer to another LTCH, Acute Care or Chronic Care facility, the residents' recent immunization status should be shared with the receiving health care facility.

Consent for Vaccination and Antiviral Medication

Informed consent from the resident (or if the resident is incapable with respect to treatment, the SDM) must be obtained for influenza and pneumococcal vaccines, and antiviral drugs for influenza prophylaxis in the event of an influenza outbreak. See Section 5 for information on antiviral planning and use.

Pneumococcal Immunization

There is considerable overlap in the indications for the influenza and pneumococcal vaccines. Consequently, the LTCHs annual influenza immunization program presents an excellent opportunity to immunize those residents who are eligible for the pneumococcal vaccine according to schedule provided in the Canadian Immunization Guide.⁷

The pneumococcal vaccine may be administered concurrently with influenza vaccine, but at a separate anatomic site, using a separate needle and syringe. For more information and recommendations related to pneumococcal vaccination, please refer to the Canadian Immunization Guide.⁷

2.1.2 Education

The ongoing education of staff, volunteers, residents, residents' families and visitors about infection and outbreak prevention and related strategies is part of a robust IPAC program.

The OHSA and associated Regulations for Health Care and Residential Facilities (HCRF) (O. Reg. 67/93) require annual review of measures and procedures for worker health and safety, and may include infection prevention and control, immunization and

other related topics. Under the HCRF, every employer in consultation with the joint health and safety committee or health and safety representative, if any, and upon consideration of the recommendation thereof, shall develop, establish and put into effect measures and procedures for the health and safety of workers, which may include measures and procedures on the control of infections, immunization and inoculation against infectious diseases. Section 9 of the HCRF requires that the measures and procedures be in writing, reviewed at least once a year and revised in the light of current knowledge and practice. Further, subsection 9(4) of the regulation requires that the employer, in consultation with and in consideration of the recommendation of the joint health and safety committee or health and safety representative, if any, shall develop, establish and provide training and educational programs in health and safety measures and procedures for workers that are relevant to the workers' work. Additionally, clause 25(2)(a) of the OHS Act requires the employer to provide information, instruction and supervision to a worker to protect the health and safety of the worker.^{11,12}

Education of Staff and Volunteers

At the time of hiring/placement, during staff/volunteer orientation and as appropriate annually thereafter, educational information about influenza as well as policy information related to influenza should be provided.

Box 1: Education for all Staff and Volunteers

Education for all Staff and Volunteers
Education/orientation programs for all staff and volunteers (as applicable) should include information and review on: • The effectiveness, benefits and risks of influenza immunization. • Information about the respiratory virus (including influenza) and its morbidity, mortality, and transmission • The prevention of influenza, and the requirement for annual influenza vaccination • The mechanisms to reduce disease transmission, for example respiratory etiquette and hand hygiene • Respiratory infection outbreak management and exclusion policies of the home: ○ Policies related to staff and visitor illness recommendations (persons experiencing symptoms of respiratory illness should not be working/visiting the home). ○ Influenza immunization and exclusion policies for staff. ○ Influenza immunization policies and recommendations for family members and visitors (i.e. those experiencing symptoms of respiratory illness should not be visiting the LTCH). • IPAC core competencies and resources: ○ Routine Practices and Additional Precautions, including use of personal protective equipment (PPE), cleaning and disinfecting requirements and environmental cleaning, as per PIDAC documents. ○ Just Clean Your Hands, including your Four Moments for Hand Hygiene (HH).

Education for all Staff and Volunteers

- Chain of transmission: modes of infection transmission.

Education of Residents, Residents' Families, Private Pay Caregivers and Visitors

Topics to include in education programs for all residents, residents' families, private pay caregivers, and visitors:

1. A review of influenza immunization policies and recommendations for residents' families, private pay caregivers, and visitors (i.e. those experiencing symptoms of respiratory illness should not be visiting the LTCH); and
2. Respiratory etiquette:
 - a. All individuals are advised to practice respiratory etiquette when coughing or sneezing:
 - i. Turn head away from others;
 - ii. Cover the nose and mouth with tissue; or sneeze into your sleeve;
 - iii. Discard tissues immediately after use into waste; and
 - iv. Perform hand hygiene (HH) immediately after disposal of tissues.

These are minimum requirements for education; the LTCH can provide more information, at their discretion.

2.1.3 Policy and Procedure Preparation

Each home should have a comprehensive set of policies and procedures related to respiratory infection outbreaks. This includes policies and procedures related to respiratory disease surveillance, staff and resident education, use of antivirals for residents and staff, immunization requirements, and exclusion policies, among others, related to outbreak management.⁵

The LTCH may seek to provide education for their staff in conjunction with the local PHU as well as the LTCH IPAC committee.

Policies and procedures should address the following topics:

- Education and related policies and procedures:
 - Annual review of IPAC policy.
 - Annual review of policies and procedures related to outbreak prevention and control.
- Outbreak-related policies and procedures:
 - Procedures for surveillance, early recognition for potential transmission of infectious conditions, and management of an outbreak including the composition and mandate of the OMT.
 - Procedures for and criteria for consultation with the PHU regarding admissions and re-admissions during outbreaks.
- Immunization-related policies and procedures:
 - Annual staff immunization.
 - Resident influenza and pneumococcal immunization.

- Annual reporting of staff and resident immunization to the local MOH. A policy and procedure on exclusion:
 - Staff exclusion policies, including refusal of immunization and refusal of antiviral medication in the event of an influenza outbreak.
 - Staff exclusion policies in regards to other respiratory virus outbreaks (e.g. when ill with any ARI)
- Staffing plans and related policies and procedures:
 - A staffing contingency plan addressing varying levels of available staff during outbreaks due to illness, refusal or inability to immunize, unwillingness or contraindication to antiviral agents.
 - A staffing plan to address adequate staff to patient ratios: as workload increases during an outbreak, staffing plans need to address continued provision of care and full implementation of infection control measures.
- Antiviral use related policies and procedures:
 - A policy on antiviral use, including: appropriate use, obtaining informed consent from residents or substitute decision-makers, obtaining medical directive signed by Medical Director for antiviral prophylaxis, payment and reimbursement processes, as well as indications for oseltamivir (Tamiflu™) and zanamivir (Relenza™).
 - A policy on staff antiviral use.
- Specimen collection, laboratory testing and related policies and procedures:
 - Process to rapidly access specimen kits, testing facilities, and results of laboratory tests in the event of a suspected outbreak.
 - Policy requiring availability of staff with competencies related to correct technique for the collection of nasopharyngeal specimens.
 - Policy regarding obtaining medical directive for specimen collection, including nasopharyngeal swab.
- Communication related policies and procedures:
 - A policy related to communication requirements and processes between the home, local PHU, laboratory, and other regulators (e.g. MOL, WSIB, JHSC, trade union), as appropriate and ensuring staff on all shifts are aware of these lines of communication.
 - A policy related to ongoing and effective communication with residents, families of residents, staff and the media.

2.2 Surveillance

2.2.1 Definition and Goal

Surveillance is an essential component of any effective IPAC program. LTCHs are required to have an ongoing surveillance program to detect the presence of infections in residents.³ A well-functioning respiratory infection surveillance system provides the means to establish the endemic, or baseline rate of respiratory infections in a health care setting. Moreover, surveillance can assist in the detection of respiratory infection

outbreaks in LTCHs by identifying significant deviations from the baseline rate.¹³ Pursuant to s. 229 (7) of O. Reg. 79/10 under the *Long-Term Care Homes Act, 2007*, licensees of LTCHs are required to implement the PIDAC “Best Practices for Surveillance of Health Care Associated Infections in Patient and Resident Populations” protocol given to them by the Director under the LTCHA.

Definition

Surveillance is defined as “the ongoing systematic collection, analysis, interpretation and evaluation of health data closely integrated with timely dissemination of this data to those who need it”.¹³ There are two key aspects of surveillance systems: surveillance is an organized, ongoing component of a program to improve a specific area of population health and surveillance systems go beyond the collection of information; knowledge gained through surveillance must reach those who can use it to direct resources where needed to improve health.¹³

Goal of Surveillance

An important goal of surveillance is to ensure early identification of symptoms in residents and staff that precede a potential outbreak or an outbreak in its early stages so that IPAC measures can be implemented as soon as possible.

Personnel Requirement

Pursuant to subsection 229 (3) of O. Reg. 79/10 under the *Long-Term Care Homes Act, 2007*, a designated staff member who has education and experience in IPAC practices is responsible to co-ordinate the IPAC program, which includes surveillance and outbreak management activities. In their absence, a competent person (see glossary) must be designated to continue these functions, including on weekends and during holiday periods. Moreover, staff at all levels of the organization should be trained to monitor for signs and symptoms of acute respiratory illness in residents and staff as well as who they should contact with this information.

2.2.2 Target Groups for Surveillance

Surveillance should be done for both resident and staff populations. Although resource implications may impact the LTCHs ability to conduct year round staff surveillance, this remains an essential component of the infection prevention and control program.

Resident Surveillance

Continuous home-wide surveillance is required to establish baseline levels of infection throughout the year. Suspect outbreaks are recognized when infection rates increase above the baseline. It is expected that LTCHs will ensure they have the capacity to recognize and respond to infection rate increases above the baseline indicative of outbreaks during off-hours (weekends, holidays) as well. Targeted surveillance for respiratory symptoms should be implemented during influenza season (typically November to April) and when influenza-like illness activity has been reported in the local community, which can start as early as September for some common respiratory

viruses, such as rhinoviruses. All staff must be aware of the symptoms of respiratory illness, the criteria for a suspected outbreak and the procedures for reporting to the ICP.

LTCHs are required to have ongoing surveillance programs to determine the presence of infections. Key features of these programs include:

- A sufficiently sensitive surveillance program to identify sentinel events and trends.
- Analysis of surveillance data by the ICP in order to trigger actions designed to reduce or eliminate disease transmission and influence policy and practice.
- Sharing of surveillance data with administration, IPAC team and PHU as necessary.

Staff Surveillance

Surveillance for ARI among staff should be done throughout the year. All staff should be aware of early signs and symptoms of ARI. In accordance with the OHSA and its regulations, the following are required steps for communicating staff illness.

Reporting to the LTCH's Infection Prevention and Control – IPAC/ ICP/designate

Ill staff should be asked to report their respiratory infection to their manager or to Employee Health/Occupational Health and Safety.¹⁰ The manager or Employee Health/Occupational Health designate must promptly inform the ICP or designate of cases/clusters of employees/contract staff who are absent from work with ARI.¹⁰ The information should be reported non-nominally (without using names) to protect the employees' right to confidentiality, but should include the location of the case.

Should clinical staff become aware of any case(s) or cluster(s) of respiratory infection in residents and/or staff, or if daily ARI surveillance identifies such cases, the LTCH's ICP or designate must be promptly notified.¹⁰ Should occupational health and safety (OHS) become aware of a case or cluster of respiratory infections in staff, they must notify the ICP or designate.¹⁰

Reporting to Occupational Health and Safety

Should staff develop any symptoms of respiratory infection, they must report their condition to OHS or delegate.

Should IPAC staff become aware of a case or cluster of respiratory infections in staff, they will notify OHS.¹⁰

Reporting to the Ministry of Labour

Under subsection 52(2) of the OHSA, an employer must provide written notice within 4 days of being advised by, or on behalf of a worker that a worker has an occupational illness, including an occupationally-acquired infection, or has filed a claim with the Workplace Safety and Insurance Board (WSIB) with respect to an occupational illness, to:

- the Ministry of Labour;
- the joint health and safety committee (or health and safety representative); and

- the trade union, if any.^{11,12}

Further information is available in the Section 21 Committee Guidance Note on Occupational Injury and Illness Reporting Requirements.¹⁴

Reporting to the Workplace Safety and Insurance Board

Any instances of occupationally-acquired infection shall be reported to the WSIB within 72 hours of the LTCH receiving notification of said illness.¹¹

Non-staff Surveillance (includes volunteers, private pay caregivers, and visitors)

- All volunteers, private pay caregivers and visitors who conduct activities within the home should self-screen and exclude themselves from entering the home when they have respiratory symptoms (i.e., new cough, new shortness of breath, fever).
- Screening tools and policies are to be posted, and followed by all persons entering the LTCH.

2.2.3 Methods of Data Collection for Surveillance

Daily surveillance is the most effective way to detect respiratory infections. There are two methods to conduct daily surveillance: active and passive.

Passive Surveillance

Passive surveillance involves the identification of infections by staff whose primary responsibility is resident care, while providing routine daily care or activities. Residents with respiratory and other symptoms should be noted on the daily surveillance form (refer to Appendix 3 - Sample Respiratory Outbreak Line Listing Form). This form should be easy to use and include patient identification and location, date of onset, a checklist of relevant signs and symptoms, including fever, diagnostic tests and results when available. The completed form should be forwarded to the ICP on a daily basis. Any suspected outbreak should be reported immediately to the ICP (see Step #3 of Outbreak Detection and Management). It is important to maintain a high index of suspicion for respiratory infections, especially during influenza season.

Active Surveillance

Active surveillance involves actively seeking out infections on a regular basis by individuals trained in surveillance, usually ICPs.¹⁰ Several strategies may be used including, but not limited to:

- Conducting unit rounds.
- Reviewing unit reports, which may include elevated temperature reports.
- Reviewing physician/staff communication books.
- Reviewing medical and/or nursing progress notes in resident charts.
- Reviewing pharmacy antibiotic utilization records.
- Reviewing laboratory reports.
- Verbal report from unit staff, based on clinical observations.

All available sources of information within the home may contribute to the surveillance activities. The method used by each home should be practical in that setting.

Analysis

The ICP or designate reviews the surveillance data for both staff and residents and consults with their local PHU to determine whether the findings meet the criteria for infection in each resident and staff and if a suspected outbreak exists.

For more information related to surveillance programs, including tools and templates, see PIDAC, Best Practices for Surveillance of Health Care – associated Infections in Patient and Resident Populations, July 2014.¹³

Reporting:

LTCH Outbreak Reporting Requirements

Confirmed and suspected outbreaks of diseases of public health significance shall be reported as soon as they are identified to the local Medical Officer of Health or designate by the LTCH and all other persons required to do so under the HPPA.² LTCHs are also responsible for immediately reporting outbreaks of diseases of public health significance or a communicable disease as defined in the HPPA to the Director under the LTCHA (O. Reg. 79/10, s.107(1)(5)), and shall report, if after hours, using the Ministry's after hours emergency contact pursuant to s.107(2).¹⁵

In addition, as outlined in section 2.2.2 of this document (staff surveillance), under the OHSA, if an employer is advised that a worker has an occupational illness or that a claim in respect of an occupational illness has been filed with the WSIB, the employer must notify a Director of the Ministry of Labour, the joint health and safety committee (or health and safety representative) and the union, if any, within four days of being advised. This notice must be in writing and must contain prescribed information as stated in the HCRF Regulation, s. 5(5). Occupational illness includes occupationally-acquired infections of workers. Laboratory confirmation of infection is not required before reporting occupational illness.¹¹

PHU Outbreak Reporting Requirements

Local PHUs are required to report outbreaks as specified in the provincial case definition.¹⁶ Preliminary report of outbreaks shall be made using the integrated Public Health Information System (iPHIS), or any other method specified by the MOHLTC within one (1) business day of receipt of initial notification of the outbreak as per iPHIS Bulletin Number 17: Timely Entry of Cases.¹⁷ The final outbreak report shall be submitted within 15 business days of the outbreak being declared over.

The minimum data elements to be reported for each case and outbreak are specified in the following:

- Ontario Regulation 569 (Reports) under the HPPA;
- The disease-specific User Guides published by PHO; and
- Bulletins and directives issued by PHO and the MOHLTC.

2.2.4 Clinical Presentation: Respiratory Tract Infections

The clinical presentation of influenza in an elderly, fully immunized population can differ from the usual clinical presentation of influenza. Because influenza in the elderly often causes tiredness (malaise), muscle aches (myalgia), loss of appetite, headache, and chills, the incorporation of these symptoms into the case definition, if they occur, may be useful. In the elderly, typical influenza symptoms may not be apparent (i.e. may not have a fever), but could present as exacerbations of underlying conditions such as congestive heart failure.¹⁸

See Box 2, Box 3, and Box 4 which outline similar acute respiratory symptoms for different respiratory outbreak-associated viruses:

Box 2: Upper Respiratory Tract Illness (includes common cold, pharyngitis)¹⁶

Upper Respiratory Tract Illness (includes common cold, pharyngitis)
Signs and symptoms may include: • Runny nose or sneezing; • Stuffy nose (i.e. congestion); • Sore throat, hoarseness or difficulty swallowing; • Dry cough; • Swollen or tender glands in the neck (cervical lymphadenopathy); • Fever/abnormal temperature for the resident may be present, but is not required; • Tiredness (malaise); • Muscle aches (myalgia); • Loss of appetite; • Headache; and • Chills.

Box 3: Lower Respiratory Tract Infection (bronchitis, tracheobronchitis)

Lower Respiratory Tract Infection (bronchitis, tracheobronchitis)

The resident must have at least three of the following:

- New or increased cough;
- New or increased sputum production;
- Abnormal temperature for the resident, or a temperature of $\leq 35.5^{\circ}\text{C}$ or $\geq 37.5^{\circ}\text{C}$;
- Pleuritic chest pain;
- New physical findings on examination (rales, rhonchi, wheezes, bronchial breathing);
- One of the following to indicate change in status or breathing difficulty:
 - new /increased shortness of breath;
 - respiratory rate $>25/\text{minute}$;
- Worsening functional or mental status (deterioration in resident's ability to perform activities of daily living or lowering of their level of consciousness).

Box 4: Pneumonia (e.g. Streptococcus Pneumonia)

Pneumonia (e.g. Streptococcus Pneumonia)

All of the following criteria must be met:

- Interpretation of a chest x-ray as pneumonia, probable pneumonia, or presence of infiltrate.
- The resident must have at least two of the signs and symptoms described under lower respiratory tract infection.
- Other non-infectious causes of symptoms, in particular congestive heart failure, must be ruled out.

If a cluster of pneumonia or lower respiratory infection cases is suspected, steps must be taken to determine a common causative agent. Investigations may include nasopharyngeal (NP) swabs for respiratory virus testing, chest x-ray, urine for *Legionella* antigen or respiratory specimen for *Legionella* polymerase chain reaction (PCR), and sputum smear/culture, etc. A full discussion of *Legionella* case or outbreak management is out of scope for this document. Not all outbreaks will have a causative agent identified and should be managed as respiratory infection outbreaks in accordance with their severity of illness.

Outbreak Case Definitions

Different respiratory viruses can cause similar acute respiratory symptoms; however, there is some variability among viruses in incubation period and potential infectious period (see Appendix 1). Each outbreak will also have unique characteristics. A case definition should be developed for each individual outbreak and modified if necessary to ensure that the majority of cases are captured by the definition (MOHLTC, Infectious Diseases Protocol, Appendix B - Provincial Case Definition for Diseases of Public Health Significance, Respiratory Infection Outbreaks in Institutions and Public Hospitals, 2018).¹⁶

Outbreak case definitions differ from provincial MOHLTC surveillance outbreak definitions, which provide a standard for determining when outbreaks become reportable provincially (i.e. confirmed outbreaks are reportable to the MOHLTC).

For the MOHLTC surveillance outbreak definitions for respiratory infection outbreaks in institutions and public hospitals see Appendix B, Respiratory Infection Outbreaks in Institutions and Public Hospitals, 2018. Outbreak definitions are subject to periodic review as scheduled by the ministry.

3 Outbreak Detection and Management

Early recognition of cases signaling suspected outbreaks and swift action are essential for effective management. Timely specimen collection, communication and the implementation of appropriate control measures have the potential to make a significant impact in the course of the outbreak that will benefit both residents and staff.

The steps outlined below are the responsibility of the LTCH, unless otherwise noted. The roles and responsibilities of the PHU (Medical Officer of Health or designate) should be clarified at the first OMT meeting, to which the public health representative is always invited.

The following steps should not be taken as a prescriptive approach to outbreak management; many of these steps may be performed concurrently. Every effort was made to ensure a flow that aligns with the course of an outbreak, but LTCHs will have to exercise judgment regarding the specific actions required at each stage of the outbreak, and may look to PHUs for guidance.

Step 1 - Assess the Suspect or Confirmed Outbreak, Establish a Preliminary Outbreak Case Definition, and Begin a Line-list.

Whenever there are two cases of acute respiratory tract illness within 48 hours on one unit, an outbreak should be suspected and tests should be done to determine the causative organism.¹⁶ Note: specimens submitted under an outbreak number are given testing priority and undergo an expanded testing algorithm which includes rapid influenza testing. Please refer to the current Lababstract. To have non-outbreak specimens tested as high priority see step 3.

When the LTCH suspects an outbreak, or has declared an outbreak, the LTCH should establish a preliminary case definition. This helps to guide the detection of persons potentially associated with the suspect or confirmed outbreak. The case definition should include clinical signs and symptoms, time of onset of illness, and location of resident/staff in the home.¹⁶

An example of a case definition: a resident or staff member on any unit of the home with illness onset from (date) who is experiencing any two of the following symptoms: cough,

fever, headache, chills, lethargy or muscle ache. The definition can be modified if necessary to ensure that the majority of cases are captured by the definition and ensure it is including cases related to the outbreak (i.e. excluding cases where onset/acquisition was from outside the affected unit/LTCH).

Begin a line listing of residents who are ill with respiratory symptoms, based on information collected through the LTCH's surveillance program (see Appendix 3 for an example of a line listing). The line listing provides for rapid assessment of the extent and nature of the suspected outbreak. It may be expanded to include other relevant data beyond what is recommended here as the investigation proceeds. Residents and staff are line-listed when they exhibit symptoms consistent with the outbreak case definition; laboratory confirmation of illness is not required to line-list individuals.

A separate line listing should be completed for staff who present with signs and symptoms that are consistent with respiratory illness.

Confirm the population at risk in the home. This includes:

- The total number of residents, staff, including casual workers and non-resident care staff, and volunteers at the home.
- If the outbreak is restricted to specific unit(s)/floor(s), the number of residents and staff at risk directly in or that have contact with the outbreak unit/floor should be identified by the OMT.

Keeping a separate line listing for each unit affected by the outbreak may be useful for large LTCHs.

The following information should be included on the line listing for all residents/staff that meet the outbreak case definition:

Box 5: Line listing: Resident and Staff Surveillance

Line listing: Resident and Staff Surveillance
Resident Surveillance: • Name of resident. • Age. • Location in home such as unit, room, bed number. • Date of onset of symptoms. • Signs and symptoms relating to the case definition. • Date started and treatment given such as antibiotics or antiviral medications. • Diagnostic tests such as x-rays. • Samples taken including date and results if known (e.g. nasopharyngeal swab). • Immunization history for influenza. • If the resident was hospitalized – date and location of hospitalization. • If deceased (include date and cause of death). • If the resident was isolated, the start date of isolation. • Date illness resolved. • Date on which antiviral prophylaxis was initiated (if applicable).

Line listing: Resident and Staff Surveillance

- Complications (e.g. pneumonia).

Staff Surveillance

- Staff identification.
- Work assignments in the home including notation of assigned wards/units.
- Date of onset.
- Signs and symptoms relating to the case definition.
- Antiviral medication given for treatment.
- Influenza immunization history.
- Any diagnostic tests including results if available.
- Last day of work of ill staff member.
- Date of recovery.
- Date returned to work.

Step 2 - Implement General IPAC Measures.

IPAC measures are to be implemented as soon as an outbreak is suspected. All staff shall be notified quickly of the outbreak and supplies (e.g. alcohol based hand rub, PPE, including gowns, face/eye protection, gloves, surgical masks, etc.) should be made available as necessary. In addition to Routine Practices, all residents symptomatic with an ARI should be placed on Droplet/Contact Precautions as soon as possible after symptoms are identified. Asymptomatic residents should be cared for using Routine Practices and carefully monitored for any change in their symptoms.¹⁰ See section 4.0 for Respiratory Outbreak IPAC Measures.

Step 3 - Declare an Outbreak in your LTCH and Notify the Local Medical Officer of Health or Designate at your PHU of the Suspect or Confirmed Outbreak.

- Notify the local Medical Officer of Health or designate.
- There should be a discussion between the Medical Officer of Health or designate and the LTCH regarding whether to declare a facility-wide outbreak or an outbreak confined to one or more units when the cases are on one or more unit/floor and can be confined to those units/floors.
- **Laboratory confirmation of an organism is not required to declare an outbreak.** Once an outbreak is confirmed and declared in the LTCH, the home should start assembling the OMT, with appropriate representation from the LTCH (see below, Step 4) as well as the PHU.
- Notify the MOHLTC through the Critical Incident System and/or by contacting the local service area office (pursuant to section 107 of O. Reg. 79/10 under the Long-Term Care Homes Act, 2007).

In addition, the LTCH staff should:

- Provide the Medical Officer of Health or designate with an updated line list daily. Do not wait until the line list is completed to notify the Medical Officer of Health or designate.

- Provide the Medical Officer of Health or designate with the name of the primary ICP or the person responsible for IPAC that is responsible for the outbreak investigation along with the person's contact information. The LTCH should designate a staff person to be responsible for the management of the outbreak at all times including weekends, holidays and vacation. Contact names and appropriate numbers shall be provided to the Medical Officer of Health or designate.
- Report the initial control measures that have been implemented.
- Obtain an 11 digit outbreak number from the PHU investigator supporting the outbreak.
 - PHUs are responsible for notifying PHOL of the investigation and providing the laboratory with the particulars of the suspected outbreak.
 - The PHU completes and faxes the PHOL Outbreak Notification Report to their local PHOL. 19 When there are special concerns such as severity of illness, extent of illness in facility/community, suspicion of unusual agent or other special testing considerations then the PHU should phone PHOL to discuss additional testing considerations. After-hours notification of PHOL, including weekends and holidays, can wait until the next business day unless specimens are being submitted for after-hours testing.
 - LTCHs should discuss with the PHU how specimens will be collected, stored and submitted to the laboratory, using as reference current PHOL specimen collection instructions in the relevant Test Information Sheet and Lababstracts on the PHO website.^{20,21,22} This will ensure that the most up-to-date instructions, proper laboratory requisitions and appropriate collection kits are used.
- Confirm the number of laboratory specimens (maximum four (4) specimens) to be taken during the initial outbreak investigation.
- If additional testing is desired, contact PHOL's Customer Service Centre at 416-235-6556/1-877-604-4567. This allows special situations to get proper consideration. Considerations for additional testing may include changes in severity, new cases in a prophylaxed population during a confirmed flu outbreak, suspicion of a non-viral agent, new cases in other parts of a facility, ongoing cases after a substantial period of time, new cases after a long gap, or for other reasons. Discussion may include testing of additional specimens or for additional agents.
- Clarify which residents should be tested and establish which residents should not be tested. To maximize sensitivity of respiratory virus testing, nasopharyngeal swabs should ideally be collected from residents early in the course of their acute symptoms (onset within the preceding 48 hours); however specimen submission can be considered in residents who remain symptomatic for longer periods. Swabs should be taken for residents with typical and atypical ARI presentations. The reason for this is that older residents may not mount typical response, but may also be ill with an ARI. Consider, as well, taking NP swabs from ill staff and ensure a process to convey results to the staff's physician.

- All specimen containers (vials, tubes, etc.) must include the patient's name and date of birth, and should be checked to ensure they have not expired.
- When possible, the PHU should use themselves as the return addressee on the laboratory requisition, and include a phone number and contact name (if different, the investigator's name may also be included).
- The laboratory requisition must also include the name and address of the affected LTCH, the Outbreak Investigation Number, client name, Health Insurance Number (HIN), date of birth, date on which the specimen was collected and sufficient test request information as indicated by the relevant specimen collection instructions (see above).
- Outbreak specimens are tested with higher priority than investigation-level or non-outbreak institutional specimens. If prioritized testing is desired on a non-outbreak specimen contact PHOL's Customer Service Centre at 416-235-6556/1-877-604-4567 to make arrangements.
- PHOL will reject specimens with incomplete labeling or information, leaking specimens or specimens collected in improper or expired kits.
- For more information please refer to PHOL's test directory or call the PHOL Customer Service Centre at 416-235-6556/1-877-604-4567.^{20,22}

Review the preliminary case definition for the suspect outbreak and make changes as necessary to the clinical signs and symptoms, time frame of onset of illness, location in the home, etc.

An outbreak can be declared at any time by the Medical Officer of Health (or their designate), the Medical Director of the LTCH or the Director of Nursing and Personal Care (DONPC) of the LTCH.

Step 4 - Notify Appropriate Individuals Associated with the LTCH of the Outbreak and Establish OMT Membership.

In addition to notifying the local Medical Officer of Health or designate, the LTCH's ICP, who declared the outbreak and must be a member of the OMT, should consider notifying the following individuals, as appropriate, in order to enlist their collaboration in helping to bring the outbreak under control. These may or may not be individuals that form the OMT.

- Medical director
- Director of Nursing and Personal Care (DONPC)
- Administrator
- Licensee and/or Board of Directors
- Chair of the Infection Prevention and Control Committee
- Employee health nurse
- Director of food services
- Director of volunteer services
- Director of housekeeping/maintenance
- Director or manager of OT/PT services of the home
- Resident representatives

- Pharmacist
- Staff members
- Community volunteers (family members/SDMs/caregivers)
- Attending physician
- Nurse representative from affected unit or other relevant staff members
- Local Health Integration Network (LHIN)
- PHU staff
- Representative from the MOHLTC (through the Critical Incident System report)

Step 5 - Call an initial OMT Meeting.

At this point, the LTCH should assemble an OMT and hold an OMT meeting.

The OMT directs and oversees the management of all aspects of an outbreak. It should include representatives who have decision making authority within the home as well as a representative from the PHU. Public health representation on IPAC committees will establish good two-way communication between the PHU and the home about all aspects of their IPAC program.

The OMT can include any or all persons identified in the notification list above, but must include the LTCH's ICP.

At a minimum, the following roles and responsibilities should be assigned to members of the OMT:

- Chairperson
 - Coordinates the outbreak control meetings.
 - Sets the meeting time and agenda.
 - Delegates tasks.
- Outbreak Coordinator (often the ICP)
 - Ensures all OMT decisions are carried out.
 - Coordinates all activities required to investigate/manage the outbreak.
- Secretary (Administrative Support)
 - Sets meeting times, location, and notifies committee members of any changes.
 - Records and distributes minutes of meetings.
- Media Spokesperson
 - Only the representative(s) identified by the OMT as the spokesperson(s) should give information to the news media. The media spokesperson can be a representative from the LTCH, the PHU or a representative from each organization.

The Outbreak Management Team should:

Review the line-listing information to confirm an outbreak exists and ensure that all members of the team have a common understanding of the situation.

- Develop a working case definition for the outbreak. A case definition is the criteria that will be used throughout the outbreak to consider a resident or staff

member as an outbreak-associated case. The case definition developed for residents may be different from that developed for staff. Residents/staff who meet this case definition will be considered a case regardless of the results of laboratory testing unless another diagnosis is confirmed or the case definition is changed to include the laboratory diagnosis.

- Review the outbreak control measures necessary to prevent the outbreak from spreading. See Section 4.0 of this document for Respiratory Outbreak IPAC Measures. Confirm the ICP or designate of the home is responsible for ensuring that agreed upon control measures are in place and enforced.
- Determine the signage requirements for the outbreak and take steps to ensure it is placed where appropriate.
- For influenza outbreaks, confirm the use of antiviral medications for treatment of cases and/or prophylaxis of well residents and non-immunized staff. In the event of a mismatched vaccine year, direction may be provided by the Medical Officer of Health or designate. PHUs may consult with PHO regarding scientific and technical support regarding evidence of mismatch.
- For influenza outbreaks, confirm the implementation of the exclusion policy, review and implement the staffing contingency plan. Determine if additional influenza immunization clinics are required for non-immunized staff, and if so, take steps to ensure that it is implemented.
- For non-influenza outbreaks with other or no laboratory confirmed respiratory viruses, determine the key prevention/control measures to be implemented and the decision rules in terms of terminating the outbreak, including decision rules if multiple pathogens are involved.
- Confirm the process and logistics for the collection and submission of specimens for laboratory analysis.
- Identify and notify any additional persons/institutions that require notification of the outbreak:
 - Residents' physicians
 - Other health care providers, e.g. physiotherapists
 - Acute care hospitals (IPAC professional, admitting, emergency)
 - Families of ill residents or families of all residents in the home
 - LHIN/other LTCHs
 - Staffing agencies
 - Emergency services, including dispatch
 - Provincial Transfer Authorization Centre (PTAC)
 - Ministry of Labour Director, Joint Health and Safety Committee, and/or trade union if there are occupational illnesses

Note 1

Note
In addition, PHUs should notify, as appropriate: • Physicians in the community • Adjacent PHUs • EMS • Other LTCHs and institutions and facilities in the community The Medical Officer of Health or designate may release as much information (including the name of the home) as is necessary to the media or others in order to decrease the risk of disease transmission to the community and to other homes within the PHU's jurisdiction.

- Prepare a communication plan, including a media release as necessary.
- Prepare internal communications for resident, family members, staff groups and volunteers. Determine if education sessions are required for staff members and confirm who will conduct them.
- Confirm who will be responsible for the ongoing monitoring of the outbreak in both residents and staff members.
- PHU is responsible for informing the home's ICP. Review the process for discussing laboratory results and IPAC measures with PHU and the home's ICP, or designate.
- Confirm how and when daily communications will take place between the home and the PHU. Ensure that contact information is available for both the health unit and LTCH at all times.
- Decide how frequently the OMT will meet and set next meeting(s).

Step 6 - Communicate the Results of Laboratory Tests.

PHOL will phone all influenza rapid test results. If these are all negative, then PHOL will call with the first influenza positive result from subsequent testing (e.g. PCR, culture) directly to the PHU, in addition to notifying the submitting physician. Once an influenza positive result has been delivered by phone, any other results will only be faxed. If the first finding is a non-influenza virus, then the result will only be faxed. The PHU is responsible for informing the home's ICP. Direction will be provided at that time regarding any additional control, treatment or prophylaxis measures to be implemented.

PHOL will send a hard copy of all results (negative and positive) to the PHU and submitting physician indicated on the data sheet. The PHU will provide copies of the lab results to the LTCH for their records.

Step 7 - Monitor the Outbreak on an Ongoing Basis.

Outbreak monitoring must include:

- Ongoing surveillance to identify new cases.
- Monitoring the status of ill residents and staff.
- Updating line listings.

- Ongoing monitoring of precautions and control measures.
- Ongoing monitoring of sufficient staffing to support outbreak IPAC measures.
- Reporting any significant changes in the nature of the outbreak (e.g. hospitalizations, deaths, changes in clinical picture).

The ICP or designate of the LTCH must update the line listing with new information and communicate this to the PHU contact on a daily basis or as previously arranged. The review of the updated information should examine: issues of ongoing transmission, and the effectiveness of control measures and prophylaxis.

Changes to the outbreak control measures may be indicated from a review of the data. Some control measures may be lifted as the outbreak comes under control or alternatively other measures may be added if the outbreak is not being controlled successfully. If new cases continue to be identified during an outbreak, prophylaxis failure or a new causative organism must be considered; additional laboratory testing may be indicated.

Box 6: Updated Line Listing: Resident and Staff Surveillance

Updated Line Listing: Resident and Staff Surveillance
Resident Surveillance: • New cases, with all appropriate information (see Step 1, Resident Line Listing Information). • Names of residents who have recovered/recovery date. • The status of ill residents and noting any issues, such as worsening symptoms or complications. • Adverse reaction to any prescribed antiviral prophylactic medication, or discontinuation of antiviral prophylactic medication, as relevant to the resident. • Transfers to/returns from acute-care hospitals. • Cases of pneumonia (confirmed by chest x-ray, met the case definition and were related to the outbreak). • Deaths (among cases where they are believed to be as a result of infection with the causative organism and met the case definition).
Staff Surveillance: • New staff cases, together with all appropriate information (see Step 1, Staff Line Listing Information). • Initials of staff who have recovered. • Last day worked and return-to-work dates as determined in collaboration with the PHU.

Step 8 - Declare the Outbreak Over.

The Medical Officer of Health or designate in collaboration with the OMT shall determine when to declare an outbreak over, taking into consideration the etiologic agent and the epidemiology of the outbreak.

Please note that the Medical Officer of Health or designate retains the final authority to determine if an outbreak is over.

Large LTCHs tend to have some sporadic influenza or respiratory infection cases that may not be part of the outbreak (e.g. newly arrived, spent time in another setting where could have acquired it, etc.), as expected during the influenza season when influenza-like-illness is occurring in the community. The OMT needs to differentiate between these sporadic cases and outbreak-associated cases when identifying the last outbreak-related resident and staff case.

To declare an outbreak over, the LTCH must not have had any new cases of infection in either residents or staff, which meet the case definition for the period of time established by the OMT i.e., predetermined decision rules that the OMT has decided to use to declare the outbreak over. Commonly these decision rules are based on the period of communicability + the incubation period, or based on two incubation periods.

As an example, viral respiratory outbreaks may be declared over if no new cases have occurred in 8 days from the onset of symptoms of the last resident case or 3 days from last day of work of an ill staff, whichever is longer. This “8-day rule” is based on the period of communicability (5 days) and an incubation period (3 days) for influenza and in general may apply to many other respiratory viruses associated with respiratory infection outbreaks as well. If symptoms in the last resident case resolve sooner than 5 days, or if the last case is a staff member who was away from work (according to exclusion policy) throughout their period of communicability, the time until the outbreak can be declared over can be shortened accordingly. Please refer to Appendix 1 for additional information on incubation periods for other respiratory viruses.

These decision rules, depending on the organism (if known), can equate to a very long and disruptive period of time for the residents of a LTCH. **In practice, the time before which an outbreak can be declared over is dependent on:**

- The causative organism, if known (contributes to the communicability, incubation period calculation).
- The epidemiology of the outbreak: how aggressive transmission has been, how severe illness has been, mortality profile, the number of hospitalizations, etc.
- Whether the last case was a resident or staff member.

Once the outbreak has been declared over, all individuals notified of the outbreak at the beginning of the investigation are to be notified that the outbreak is over. Refer to Steps 5 and 6 for a listing of individuals to be notified of the end of the outbreak.

For novel viruses, where the period of infectivity is unknown, the PHU should consult with PHO and/or special guidance that may be available from HSEMB on the management of novel viruses. Further information on novel viruses is out of the scope of this document.

Step 9 - Complete the Outbreak Investigation File.

The outbreak file shall be reviewed to ensure that it contains the following:

- Copies of laboratory and other results;
- Copies of all minutes and other communications;
- Any other documentation specific to the investigation and management of the outbreak; and
- A summary report.

Completion of the Final Report of an Institutional Respiratory Outbreak is to be done jointly by the LTCH and the PHU. Copies of all documents related to the outbreak are to be kept on file by the IPAC staff at the LTCH.

This could be an opportunity to review the outbreak, with all members of the OMT present. At this point, the OMT may make decisions about ongoing surveillance needs after declaring the outbreak over.

As well, following the outbreak, the LTCH should arrange a meeting with the PHU to review the course and management of the outbreak. The purpose of this meeting is to review what was handled well and what could be improved for managing future outbreaks. A copy of this report should be provided to the infection control committee and a copy should be kept by the LTCH administration. As always, staff from a Regional IPAC office of Public Health Ontario (PHO) is also available to consult with LTCH staff regarding improvements in IPAC programming.

4 Respiratory Outbreak IPAC Measures

Daily surveillance will help to identify symptomatic individuals and quickly detect patterns of spread that may indicate the start of respiratory infection outbreaks. Promptly declaring an outbreak will expedite the implementation of outbreak IPAC measures that may help to bring the outbreak under control more quickly.

This section will cover respiratory infection outbreak IPAC measures, excluding the use of antiviral medication. For antiviral treatment and prophylaxis recommendations during an influenza outbreak, please refer to section 5.

4.1 General IPAC Measures

4.1.1 Background

It is recognized that respiratory viruses, such as influenza, respiratory syncytial virus (RSV), parainfluenza, rhinovirus, adenovirus, etc. are primarily transmitted by large respiratory droplets. Some organisms can remain viable for up to 24 hours, after landing on hard surfaces. General control measures including environmental cleaning, wearing appropriate PPE, and HH will interrupt this mode of disease transmission.²³

The following recommendations regarding HH and use of PPE are taken from PIDAC documents:

- The Best Practices for Hand Hygiene, April 2014;²⁴
- Routine Practices and Additional Precautions in All Health Care Settings, November 2012;²⁵
- Annex B, Best Practices for Prevention of Transmission of Acute Respiratory Infection, March 2013;¹⁰
- Appendix D – Just Clean Your Hands, Best Practices for Hand Hygiene in All Health Care Settings, April 2014;²⁴ and
- Best Practices for Environmental Cleaning for Prevention and Control of Infections, May 2018.²⁶

For ease of use and convenience, excerpts from the related PIDAC documents are included here with reference to the source. The most current PIDAC documents are available at:

http://www.publichealthontario.ca/en/BrowseByTopic/InfectiousDiseases/PIDAC/Pages/PIDAC_Documents.aspx

4.1.2 Hand Hygiene

“The hands of health care providers are the most common vehicle for the transmission of microorganisms from resident-to-resident, from resident to equipment and the environment, and from the environment to the resident. During the delivery of health care, the health care provider’s hands continuously touch surfaces and substances including inanimate objects, resident’s intact or non-intact skin, mucous membranes, food, waste, body fluids and the health care provider’s own body. The total number of hand exposures in a LTCH might reach as many as several tens of thousands per day. With each hand-to-surface exposure a bidirectional exchange of microorganisms between hands and the touched object occurs and the transient hand carried flora is thus continuously changing. In the way, microorganisms can spread throughout a health care environment within a few hours”.²⁴

In LTCHs, retirement homes or other shared living facilities, health care associated infections have a significant impact on residents’ health and quality of life. In LTCHs and other health care settings, adherence to hand hygiene (HH) recommendations is the single most important practice for preventing the transmission of microorganisms and directly contributes to resident safety.²⁵ Section 229 (9) of O. Reg. 79/10 of the *Long-Term Care Homes Act, 2007* requires licensees to ensure that there is in place a HH program in accordance with evidence-based practices and, if there are none, in accordance with prevailing IPAC practices. Hand hygiene agents are to be accessible at point of care.

Alcohol-based hand rubs (ABHRs)

Alcohol-based hand rubs containing 70% alcohol are the preferred method of HH when hands are not visibly soiled. If there is visible soiling, hands must be washed with soap

and running water. If soap and running water are not available, cleanse hands first with moistened towelettes to remove visible soil, let hands dry and then use ABHR.²⁴

Four Moments for HH:²⁴

1. Before initial resident/resident environment contact.
2. Before invasive/aseptic procedures.
3. After body fluid exposure risk and contact with blood, body fluids, secretions and excretions.
4. After resident/ resident environment contact.

Box 7: Staff Hand Hygiene

Staff Hand Hygiene

In addition to the four moments for HH, good staff HH practices include the following:

- HH after contact with items known or considered likely to be contaminated with blood, body fluids, secretions and excretions, including respiratory secretions (e.g. oxygen tubing, masks, used tissues and other items handled by the resident);
- HH immediately after removing gloves and other PPE;
- HH between certain procedures on the same resident to avoid cross-contamination of body sites where soiling of hands is likely; and
- HH before preparing, handling, serving or eating food and before feeding a resident.

If at all possible, HCWs should not wash their hands in a resident's washroom. If a resident's washroom is used, care must be taken to avoid hand contamination from the environment e.g. taps. Using an ABHR after hand washing in this circumstance is recommended.

Box 8: Resident Hand Hygiene

Resident Hand Hygiene

In addition to the four moments for HH, good resident HH practices are necessary at all times, especially during influenza season, and include the following:

- Residents should be instructed on (assisted, as necessary) proper HH;
- Care of HH in residents is necessary at all times and especially during influenza season;
- Resident hands should be washed or sanitized after using the washroom and washed or sanitized frequently before and after meals;
- HH before and after shared activities; and
- HH when leaving and returning to their room.

4.1.3 Personal Protective Equipment

PPE is used alone or in combination to prevent exposure, by placing a barrier between the infectious source and one's own mucous membranes, airways, skin and clothing.

The selection of PPE is based on the nature of the interaction with the resident and/or the likely mode(s) of transmission of infectious agents. Selection of the appropriate PPE is based on the risk assessment (e.g., interaction, status of resident) that dictates what is worn to break the chain of transmission.²⁵

The selection of controls should be based on a hierarchy of controls approach. PPE ranks lowest in the hierarchy of controls. PPE is a last line of defense for workers against hazards related to infectious agents that cannot otherwise be eliminated or controlled.

LTCHs must ensure that staff has sufficient supplies of, and quick, easy access to, the PPE required. As well, LTCHs should provide education in the proper selection and use of PPE to all health care providers and other staff who have the potential to be exposed to blood and body fluids.²⁵

LTCHs should also consider the requirement of the HCRF Regulation 67/93 section 10 in this regard, which states that:

- 1) A worker who is required by his or her employer or by this Regulation to wear or use any protective clothing, equipment or device shall be instructed and trained in its care, use and limitations before wearing or using it for the first time and at regular intervals thereafter and the worker shall participate in such instruction and training.
- 2) Personal protective equipment that is to be provided, worn or used shall,
 - a) be properly used and maintained;
 - b) be a proper fit;
 - c) be inspected for damage or deterioration; and
 - d) be stored in a convenient, clean and sanitary location when not in use.

Gloves

When a resident is placed on Contact or Droplet-Contact precautions, gloves are used when direct care will be provided. In addition, gloves must be worn when it is anticipated that the hands will be in contact with mucous membranes, non-intact skin, tissue, blood, body fluids, secretions, excretions, or equipment and environmental surfaces contaminated with the above.²⁵

Indiscriminate or improper glove use has been linked to transmission of microorganisms. Gloves are task specific and single-use for the task.²⁵

Box 9: Appropriate Glove Use²⁵

Appropriate Glove Use
Appropriate Glove Use: • Wear the correct size of gloves. • Put on gloves immediately before the activity for which they are indicated. • Perform hand hygiene before putting on gloves for a clean/aseptic procedure. • Remove carefully and discard gloves immediately after the activity for which they were used. • Perform HH immediately after glove removal.

Appropriate Glove Use

- Change or remove gloves if moving from a contaminated body site to a clean body site with the same resident.
- Change or remove gloves after touching a contaminated site and before touching a clean site or the environment.
- Do not wash or re-use gloves.
- Do not reuse the same pair of gloves for the care of more than one resident.
- Double-gloving is not recommended.

Additional considerations:

- Gloves should be used as an additional measure, not as a substitute for HH.
- Gloves are recommended when providing care involving direct contact with an ill resident.
- Gloves should be put on before entering and removed prior to leaving the resident's room or dedicated bed space.
- Gloves are task-specific and single-use for the task. Gloves should be changed between dirty and cleaner procedures on the same resident, e.g., after open suctioning of a tracheostomy and remainder of care.
- Gloves that fit snugly around the wrist are preferred for use with a gown because they will cover the gown cuff and provide a better barrier for the arms, wrists and hands.

Masks

A mask is used by a health care provider (in addition to eye protection) to protect the mucous membranes of the nose and mouth when it is anticipated that procedure or care activity is likely to generate splashes or sprays of blood, body fluids, secretions or excretions, or when within two metres of a coughing resident.²⁵

Box 10: Appropriate Mask Use²⁵

Appropriate Mask Use

Appropriate Mask Use:

- Select a mask appropriate to the activity.
- Secure mask over nose and mouth.
- Change mask if it becomes wet.
- Do not touch mask while wearing it.
- Remove mask correctly immediately after completion of task and discard into an appropriate waste receptacle.
- Do not allow mask to hang or dangle around the neck.
- Clean hands after removing the mask.
- Do not re-use disposable masks.
- Do not fold the mask or put it in a pocket for later use.

Additional Considerations:

- Masks are recommended when providing care involving direct contact with ill

Appropriate Mask Use

residents or when within 2 metres of coughing residents.

- For the care of a resident with respiratory illness, put a surgical mask on the resident, if tolerated, whenever the resident is not in his/her room (e.g. transfer to hospital). If masks are not available or not tolerated, residents should be encouraged to use another method to cover their mouth and nose when coughing or sneezing (e.g., tissue).
- Change masks if they become wet, or contaminated by secretions.
- Remove mask with clean hands before caring for another resident, and when leaving the residents dedicated environment.
- Handle masks only by the strings/ ties, to prevent self-contamination.
- Change masks according to the manufacturer's recommendations.
- Perform HH before and after mask removal.

Eye Protection

Eye protection is used by health care providers (in addition to a mask) to protect the mucous membranes of the eyes when it is anticipated that a procedure or care activity is likely to generate splashes or sprays of blood, body fluids, secretions or excretions, or within two meters of a coughing resident.²⁵

Box 11: Appropriate Use of Eye Protection²⁵

Appropriate Use of Eye Protection

Appropriate Use of Eye Protection:

- Remove eye protection immediately after the task for which it was used and discard into waste or place in an appropriate receptacle for cleaning and disinfection.
- Prescription eye glasses are not acceptable as eye protection.

Additional Considerations:

- If using a mask, eye protection is needed. However, if a face shield is being used, a mask is not required.
- Eye protection includes the use of safety glasses, goggles, and face shields. It does not include personal eye glasses.
- Eye protection should be worn where there is a potential for splattering or spraying of blood, body fluids, secretions or excretions, including cough producing aerosol-generating procedures, while providing direct resident care.
- Safety glasses, goggles and face shields should be removed carefully to prevent self- contamination.
- If re-used, eye protection should be cleaned and disinfected between uses according to the manufacturer's recommendations using a minimum of a low level disinfectant.
- To prevent self-contamination, HCWs should not touch their eyes during care of a resident with a respiratory illness.
- Perform HH before and after removal of eye protection.

Gowns

A gown is recommended when it is anticipated that a procedure or care activity is likely to generate splashes or sprays of blood, body fluids, secretions, or excretions, or a resident is on contact or droplet/contact precautions and direct care will be provided.²⁵

Long-sleeved gowns protect the forearms and clothing of the health care provider from splashing and soiling with body substances during procedures and resident care activities which are likely to generate splashes or sprays of blood, body fluids, secretions, or excretions.²⁵

Box 12: Appropriate Gown Use²⁵

Appropriate Gown Use
Appropriate Gown Use: • Gowns should only be worn when providing care for residents, as per the above indications. • When use of a gown is indicated, the gown should be put on immediately before the task and must be worn properly, i.e., tied at the top and around the waist. • Remove the gown immediately after the task for which it has been used in a manner that prevents contamination of clothing or skin and prevents agitation of the gown. • Discard used gown immediately after removal into appropriate receptacle. Do not hang gowns for later use. • Do not re-use gown. Do not go from patient resident-to-patient resident wearing the same gown. Additional Considerations: • Gowns should be removed before leaving the residents' room or dedicated space.

It is important to remove (doff) PPE correctly (i.e. in the correct order) to prevent cross-contamination and the potential spread of infection from resident to resident. Doffing incorrectly also poses a risk of self-contamination.

4.2 IPAC Measures for Residents

As mentioned in the introduction, the recommendations contained in this document are intended to protect the health of resident populations. Recommendations are made in the interest of resident populations at risk. LTCH licensees are required to ensure that the rights of residents are fully respected and promoted pursuant to the Resident Bill of Rights as outlined in s.3 of the LTCHA. The LTCH and PHU should work together to ensure that residents' rights under the LTCHA are fully respected and promoted, while implementing outbreak control measures that are protective to the resident populations and that are appropriate and proportional to the risk profile of the outbreak.

Consideration for individual resident's rights has always been important to PHU staff when providing outbreak management recommendations; however, PHUs, under the

authority of the HPPA, make recommendations aimed at protecting the health of resident populations in LTCHs.

When communicating outbreak control measures and recommendations to the LTCH, the PHU will need to emphasize the need for adherence to IPAC principles with respect to exceptional visit requests; LTCH staff should be advised to call the PHU on how to proceed, if there are any concerns regarding how to mitigate the infection control risks of a particular request from a resident/resident's family members /SDM. Examples include a request for allowing children to visit during an outbreak because they don't have child sized PPE or if a visitor wishes to visit numerous residents.

The LTCH IPAC professional or designate should contact the PHU in order to balance the needs of the resident against the risk to the health of the other residents; at this point, a discussion around if/how the request can be accommodated can take place.

When providing outbreak management recommendations, PHUs will have to assess the risk of non-compliance to outbreak control measures on the general resident population.

Generally, LTCHs and PHUs discuss with OMT members the respiratory infection outbreak IPAC measures and decide jointly on appropriate measures to implement. The extent to which outbreak IPAC measures can be implemented and what is considered reasonable throughout the course of each outbreak will vary. Examples of reasonable and appropriate measures during the course of an outbreak include:

- limiting visiting hours;
- limiting the number of residents with whom the visitor has contact;
- requiring anyone (including visitors, other residents, etc.) providing direct care to a resident on Additional Precautions to wear the necessary PPE;
- requiring visitors to not visit when they have an ARI;
- requiring visitors to wear the required PPE when visiting a resident on Additional Precautions and to carefully remove and discard PPE and perform HH upon leaving the room;
- requiring residents to wear a gown, masks or other PPE, if they have an ARI and are leaving their room or are within 2 metres of others who are not wearing PPE;
- posting signs at entrances of LTCHs and/or affected unit/area, discouraging visitors during the outbreak period; and
- notifying persons of the outbreak.

However, under outbreak conditions that present a greater risk to the resident population of the LTCH, more restrictive control measures may be required and occasionally there may be a conflict relating to PHU recommended outbreak IPAC measures. If the PHU assesses the risk of not complying with outbreak control recommendations to be high - that is, the probability of adverse health events to other residents, such as disease transmission, is high - the PHU may have to consider a written order from the Medical Officer of Health or designate under the HPPA to the licensee of the LTCH to ensure compliance with outbreak IPAC measures. Under these circumstances, it is reasonable and necessary for the Medical Officer of Health or

designate, if he or she is satisfied that the statutory test in the HPPA is met, to issue a section 22 order under the HPPA to the licensee of the LTCH, to:

- stop new admissions to the LTCH
- restrict resident movement to and from the home, or
- restrict visitors from the home

These, and other possible actions which the Medical Officer of Health or designate may list in the order, are fairly significant measures, and presumably lesser measures would be discussed with the LTCH and implemented before admissions would be stopped or visitors restricted completely from the LTCH.

4.2.1 Admissions and Returns from Absences

When experiencing an outbreak, LTCHs, with support from the PHU as necessary, need to be vigilant regarding admissions and residents returning after absences to ensure that due diligence has been exercised in order to protect these residents and/or the residents with whom they may come into contact. Admissions and return from absence decisions may be made in consultation with the PHU if necessary. See below for factors to consider.

A comprehensive approach to new admissions or return of residents from hospitals back to the LTCH requires consideration of a number of factors, including the risk of remaining in hospital (and being exposed to other nosocomial risks) and the risk to individual residents, as well as patients in the larger context of health care. Restricting admissions to a LTCH in outbreak may create a backlog in emergency departments or acute care, with a risk to patients in that system. On the other hand, admission of an unexposed resident into a LTCH that is experiencing an outbreak may put them at risk and may lengthen the duration of the outbreak, with an impact to the larger resident population. Therefore a measured and considered approach is required, in consultation with the Medical Officer of Health or designate if necessary.

Depending on the causative organism, the severity of the illness, the extent of the outbreak and the physical layout of the building, admission restrictions may or may not be applied to one floor, one wing or the entire LTCH.²⁷

An applicant to a LTCH cannot be removed from a waitlist for a LTCH where an outbreak of disease prevents the applicant from moving into the LTCH at the time that the LHIN offers to authorize the applicant's admission to the LTCH (O. Reg. 79/10 s. 167).

New Admissions and Return of Non-cases

From the perspective of susceptibility to disease transmission, the admission of new residents and return of residents who have not been line-listed in the outbreak (i.e. are not known cases) is generally not advised during an outbreak (see above discussion).

Changes in this outbreak IPAC measure should be considered carefully with respect to resident safety and quality of life, as well as system capacity (see Appendix 10 - Transfer and Return Algorithm for Use During Outbreaks). Members of the OMT from

the LTCH and PHU should discuss the situation and consider all relevant factors to assess if new admissions and/or return of non-cases are being considered, such as:

- What is the current status of the outbreak at the LTCH? What is known about the outbreak pathogen (if identified) and its severity?
- Does the resident's attending physician at the hospital agree to the admission/return based on a review of the current health status of the resident? And are they aware of the outbreak?
- Is the resident protected from the outbreak pathogen through appropriate IPAC measures? If the outbreak is due to influenza, is the resident protected by immunization and/or an antiviral drug?
- Are appropriate accommodations available for the returning resident? Will the resident return to an outbreak affected area of the LTCH?
- Has the resident or their substitute decision-maker been given information about the return to the LTCH?

Return of Cases

The return of residents, including those from hospital, who were line-listed and were part of the outbreak, is permitted provided appropriate accommodation and care can be provided; the working assumption is that the resident has been exposed to the causative organism and is now immune.²⁷ If, however, the outbreak is laboratory-confirmed influenza, returning residents should be placed on antiviral prophylaxis medication in line with other residents.

4.2.2 Absences from the LTCH in Excess of the Maximum Allowable Days Due to an Outbreak and Re-admissions

A resident who is away from the LTCH on a medical absence will have their bed held for them as long as the length of the medical absence does not exceed 30 days. In the case of a psychiatric absence, the bed will be held for up to 60 days.

If the resident's medical or psychiatric leave exceeds the maximum length identified above the resident will be discharged by the LTCH; they will then be placed in the re-admission category to return to that home which will give the resident priority for re-admission to the home when the resident is well enough to return. However, in the event that a resident cannot return to the LTCH because of an outbreak of disease in the home, the licensee of the LTCH is not permitted to discharge the resident and the resident will return to the home when the outbreak is declared over (O. Reg. 79/10 s. 146).

4.2.3 Restriction of Symptomatic Residents to Their Room

Cases (ill residents) should be encouraged to stay in their room, and should be on Droplet and Contact Precautions until 5 days after the onset of acute illness or until symptoms have resolved (whichever is shorter). For some pathogens, the period of communicability may be longer than 5 days, but for practical reasons, this could still be applied to outbreaks caused by respiratory viruses other than influenza or in the case of outbreaks when the pathogen is not known. There may be some respiratory outbreaks for which longer isolation periods are required. This would occur in consultation with the OMT. For influenza, the recommendation to isolate residents to their rooms is due to the increased viral shedding that occurs when patients are symptomatic; restriction of ill residents to their room is recommended as long as it does not cause the resident undue stress or agitation. If, however, restriction causes undue stress or agitation, alternative IPAC measures can be considered, including the use of a surgical mask and compliance with HH, at the discretion of the LTCH in consultation with the PHU.

Residents with an ARI who are not in single room accommodation can be managed in their bed space using Droplet and Contact Precautions with privacy curtains drawn, where these accommodations are available.²⁵ However, residents may leave their room if they are able to comply with HH requirements and with the use of a surgical mask. This strategy may not work with all populations and its application is left to the discretion of the LTCH in consultation with the PHU.

4.2.4 Restriction of Residents to Their Unit

In some LTCHs, if ill residents cannot be contained in one geographical area of the LTCH, then the outbreak must be considered facility-wide. If cases are confined to one unit, all residents and staff from that unit should avoid contact with residents and staff in the remainder of the LTCH.²⁵ Additional recreational activities/resources should be made available. In some LTCHs, the outbreak may be confined to one or more units without declaring a facility-wide outbreak, however, this will depend on a number of factors (e.g. design of the facility, causative organism, speed of spread, proximity of cases, staffing resources).

4.2.5 Communal Meetings and Other Activities

As much as possible, encourage symptomatic residents to stay within their own units within the home. It is always important to balance the rights of residents with the need to manage the outbreak. Previously scheduled events, (e.g. holiday events) may have to be rescheduled. The OMT should discuss restriction of activities, revisiting the issue as the outbreak progresses.

If possible, consideration should be given to planning events in such a way as to permit well residents to participate, according to geographical areas.

The following should be considered for implementation during an outbreak, based on OMT and local decision making:

- Reschedule communal meetings on the affected unit/floor. However, other meetings or activities may proceed in non-affected areas;
- Discontinue group outings from the affected unit/floor;
- The OMT should discuss restricting meetings or activities in the entire LTCH if the outbreak spreads to two or more units/floors;
- Restrict visits by outside groups, such as entertainers, volunteer organizations and community groups, as deemed necessary by the OMT;
- Conduct on-site programs such as physiotherapy and foot care for residents in their rooms, if possible. Proper precautions should be taken for ill residents; and
- Ensure there is no interaction between the affected floor/unit and participants in on-site child-care or other day programs.

4.2.6 Medical Appointments

At the discretion of and after consultation with the treating physician, non-urgent appointments may be rescheduled, with the consent of the resident/SDM.

4.2.7 Transfer to Hospital

It is the policy of the MOHLTC that no inter-facility resident transfer takes place without the sending facility first obtaining a Medical Transfer (MT) authorization number from the Provincial Transfer Authorization Centre (PTAC). This policy also applies to residents being transported from a healthcare facility to and from a private doctors' or dentists' office for treatment. Of course, the policy does not apply to life threatening emergencies which DO NOT require authorization to transfer.

Before sending an ill resident to acute care, the facility should notify the receiving healthcare facility and the PTAC that the home is experiencing an outbreak.

To contact PTAC:

- call 1-866-869-PTAC(7822)
- <https://www.hospitaltransfers.com/transfer/>

If approved, an authorization number will be issued immediately and either sent on-line or by fax depending on the method used to obtain the MT authorization number from PTAC.

The goal is to protect sending and receiving facilities, paramedic and private transfer companies and the public by ensuring appropriate personal protective measures are taken thus containing any risk of spreading.

The hospital ICP must be provided with the details of the outbreak to ensure control measures are in place when the resident arrives at the hospital. The hospital ICP shall be informed of whether or not the resident to be transferred has been identified as a case. The outbreak transfer letter attached in Appendix 9 can be used to provide the required information.

In addition, notifying the receiving hospital whether the transferred resident was or was not on the line list, allows the hospital to start discharge planning.

4.2.8 Transfer to another Long-Term Care Home

Symptomatic resident transfers (from anywhere in the home) to another LTCH are not recommended during an outbreak. The OMT should discuss exceptions to this recommendation and make decisions on a case by case basis. All transfers must go through PTAC. Refer to the PTAC approval process above.

4.3 IPAC Measures for Staff, Students and Volunteers

4.3.1 Reporting of Respiratory Illness

Staff, volunteers or contracted service workers with an ARI should not enter the LTCH; they should report any respiratory illness to their supervisor who shall report to the employee health nurse or the ICP.⁵

4.3.2 Exclusion of Staff, Students, and Volunteers, with an Acute Respiratory Infection

Staff, students, or volunteers with any respiratory infection symptoms should not return to work/placement for 5 days from the onset of symptoms of a respiratory illness or until symptoms have resolved whichever is shorter.⁵ This includes staff, students and volunteers on antiviral medication.

4.3.3 Working at Other Facilities

During non-influenza outbreaks, well staff, students, and volunteers may be able to work/provide services at other facilities based on OMT and local decision making.

During an influenza outbreak, staff protected by either immunization or antiviral have no restrictions on their ability to work at other facilities. However, unimmunized staff not receiving prophylactic therapy must wait one incubation period (3 days) from the last day that they worked at the outbreak facility/unit prior to working in a non-outbreak facility, to ensure they are not incubating influenza. However, unimmunized staff on antiviral prophylactic therapy that wishes to work at another facility may do so, assuming the following considerations:

- They do not have a fever and/or other symptoms of ARI.
- This does not conflict with the policies of the receiving facility, as these would supersede the general direction provided here.
- This does not conflict with direction provided by the Medical Officer of Health or designate based on information available to them about the epidemiology of the outbreak or other local considerations.

Staff, students, and volunteers experiencing respiratory symptoms or fever should not work/provide services in any health care setting.⁵

4.3.4 Cohort Staffing

During non-influenza outbreaks, consider cohorting staff and staff assignment between the affected residents/outbreak units and unaffected units. Alternatively, consider the possibility of keeping staff members working on only one unit if possible. Attempts should be made to minimize movement of staff, students, or volunteers between floors/resident home areas, especially if some units are unaffected.²⁵

4.3.5 Exclusion of Unimmunized Staff

During a laboratory-confirmed influenza outbreak, immunized staff who has been immunized at least two weeks prior to outbreak declaration may work in the outbreak home. Unimmunized staff may resume work at the affected home as soon as they are taking antiviral prophylaxis. If issues arise regarding compliance with work exclusions, options should be reviewed with the OMT.⁵

4.4 IPAC Measures for Visitors and Private Pay Caregivers

4.4.1 Notification of Visitors and Private Pay Caregivers

During a vaccine-preventable disease outbreak, such as influenza or pneumonia, all visitors/private pay caregivers should be encouraged to be immunized if applicable (e.g. pneumonia vaccine only if >65 years of age), as some residents may not be immunized, or may have waning protection from immunization.¹⁰ LTCHs shall post outbreak notification signs at all entrances to the home indicating the institution is in outbreak.

Visitors/private pay caregivers shall be advised of the potential risk of acquiring illness within the home, and the re-introduction of illness into the home, and of the visiting restrictions as indicated below. LTCHs may choose to notify families of the outbreak and the impact on visitation.

4.4.2 Visitor and Private Pay Caregiver Restrictions

Ill visitors/private pay caregivers shall not be permitted in the home, unless under extenuating circumstances. Under these circumstances, they should wear the appropriate PPE, perform HH upon arrival, as needed during their stay and when leaving both the room of the resident and the LTCH, and finally, they should restrict their visit to the resident.²⁵

Well visitors/private pay caregivers who choose to visit during an outbreak and *who are not going to be providing direct care* to an ill resident should be asked to:

- Consider wearing PPE if they plan on visiting again in the next week; will also help them avoid getting sick themselves;
- Perform hand hygiene when entering the LTCH, before entering and upon leaving the resident's room;
- Visit residents only in their rooms and avoid communal areas;
- If possible, visit only one resident and leave the LTCH immediately after the visit; if multiple residents are in the home but in different locations, it is recommended that the healthy resident(s) (non-outbreak case) be visited first; and
- Not mingle with other residents.

In addition to these recommendations, well visitors/private pay caregivers who choose to visit during an outbreak and *are going to be providing direct care* to an ill resident should be asked to wear the appropriate PPE.

Moreover, the following recommendations apply regarding visitor restrictions:

- Notices shall be placed on the door of the rooms of ill residents or in other visible locations advising all visitors to check at the nursing station before entering the room. Visitors are to be advised of the above visitor restrictions.
- Ill residents should be visited in their room only.

Complete closure of a LTCH to visitation is not permitted unless there is an order issued by the Medical Officer of Health or designate as it may cause residents and visitors emotional hardship. Under exceptional circumstances, the Medical Officer of Health or designate may assess the risk to be significant such that it requires complete closure to visitors. In these circumstances, an order from the MOH to the licensee is required to ensure compliance. It is important to note however that even under these circumstances, that there are exceptional personal circumstances under which barring visitors is neither ethical nor permitted. In these situations, the LTCH must ensure full compliance with infection control requirements. Furthermore, decisions to restrict visitors with or without an order of the MOH may be challenged and therefore need to be carefully considered and implemented. Visitation restrictions should be discussed by the OMT.

4.5 Environmental Cleaning and Disinfection

The principles of Routine Practices are based on the premise that all residents, their secretions, excretions and body fluids and their environment might potentially be contaminated with harmful microorganisms. By following simple preventive practices at all times regardless of whether or not an illness is 'known', staff will be protecting residents/visitors and themselves from an unknown, undiagnosed infectious risk.²⁶

During an outbreak there may be a requirement for additional or enhanced environmental cleaning of a health care setting, in order to contain the spread of the microorganism causing the outbreak. Policies and procedures regarding staffing in

Environmental Services (ES) departments should allow for surge capacity (e.g., additional staff, supervision, supplies, equipment) during outbreaks as determined by the outbreak management committee. The outbreak management committee should include, among other departments, representation from ES who will lead the coordination of the department's activities.²⁶

PHUs and LTCHs should become familiar with PIDAC's Best Practices for Environmental Cleaning for Prevention and Control of Infections in All Health Care Settings, April 2018.²⁶ This document will help the PHU and LTCH staff assess the cleaning requirements:

- Frequency of environmental cleaning is determined according to the Risk Stratification Matrix in Appendix B of PIDAC's Best Practices for Environmental Cleaning for Prevention and Control of Infections in All Health Care Settings, May 2012.²⁶
- Recommended minimum cleaning and disinfection level and frequency for non-critical resident care equipment and environmental items, Appendix 2 of PIDAC's Best Practices for Environmental Cleaning for Prevention and Control of Infections in All Health Care Settings, April 2018.²⁶

In addition, procedures for assigning responsibility and accountability of routine cleaning of all environmental surfaces and non-critical resident care items should be established.

5 Use of Influenza Antivirals for Residents and Staff

Vaccination is recognized as the cornerstone for preventing or attenuating the risk of influenza infection for those at high risk of serious illness or death from influenza and its complications.

Staff and their employers should actively promote, implement and comply with influenza immunization recommendations in order to decrease the risk of infection and complications among the vulnerable populations for whom they care. For immunization recommendations, please refer to the current season's National Advisory Committee on Influenza (NACI) statement of seasonal influenza vaccine.⁹

Antiviral prophylaxis should not replace annual influenza immunization.

Antiviral medication is recommended for the management of institutional outbreaks of influenza A and/or influenza B. Antivirals play a key role in outbreak management and control. Research has shown that antiviral drugs are effective for both the prevention (prophylaxis) and early treatment of influenza infection. The use of antiviral medication, in conjunction with other outbreak IPAC measures, can quickly bring influenza outbreaks in health care facilities under control.²⁸ Influenza vaccination provides incomplete protection to the elderly and the immunocompromised.⁹ Antiviral medications offer protection that is additive to that of annual influenza immunization in

these populations. Antiviral medications are also effective in the prevention of influenza in unvaccinated healthy adults.²⁸

Two antiviral drugs are currently used in Canada for the treatment and prophylaxis of influenza. Oseltamivir (oral) and zanamavir (inhaled) are both neuraminidase inhibitors that help to prevent further replication of the influenza virus.²⁸ Zanamivir is generally not recommended for residents, as they may have difficulty using the inhaler.

Decisions regarding influenza antiviral prophylaxis or treatment should be made based on current data of circulating influenza strains, including antiviral resistance. Testing of influenza isolates for antiviral resistance is performed as part of routine laboratory surveillance at the National Microbiology Laboratory (NML), and is reported by PHO's Ontario Respiratory Pathogen Bulletin, the Laboratory-Based Respiratory Pathogen Surveillance Report and the national FluWatch report.^{1,29,30}

Health care providers are advised to refer to updates on influenza activity and antiviral resistance patterns in ongoing surveillance reports mentioned above.

If antiviral drug resistance is detected or suspected in an institutional outbreak (e.g. if an outbreak appears poorly controlled despite proper antiviral use), or resistance has been reported in local community, local and provincial health authorities should be contacted for up-to-date advice on antiviral use.

5.1 Antiviral Medication Recommendations

PHUs should be aware that clinical recommendations for the use of antiviral medications may change from season to season, as additional evidence becomes available.

To ensure guidance related to the use of antivirals reflects the most up-to-date seasonal antiviral medication use recommendations, PHUs should be aware of the Association of Medical Microbiology and Infectious Disease (AMMI) Canada's current guidelines for the use of antiviral drugs for influenza.²⁸

AMMI Canada is a national association that represents physicians, clinical microbiologists and researchers specializing in the fields of medical microbiology and infectious diseases and has published antiviral guidance for practitioners since the 2010/2011 influenza season.

In addition to AMMI, the current manufacturer's product monograph contains information regarding the use of the drug. The manufacturer publishes an updated product monograph when changes relating to recommended use of their products take effect.

The Tamiflu™ product monograph is located on the Roche Canada website and the Nat-oseltamivir product monograph is on the Natco Pharma Canada website.^{31,32}

It is important to ensure that the most current guidelines/publications/product monographs are accessed as guidelines/publications/product monographs may be revised for each influenza season.

As always, clinical decisions regarding the use of medications for influenza treatment and chemoprophylaxis are at the discretion of the attending physician / health care provider.

5.2 Antivirals as Part of an Influenza Outbreak Preparedness Plan

An outbreak plan should include measures that will expedite the administration of antiviral medication for staff and residents. A plan is required to begin antivirals quickly not only because treatment is most effective when started within 48 hours of symptom onset, but also because prophylaxis should begin as soon as possible to stop the progression of the outbreak. This plan should include measures to ensure rapid access to antiviral medications from local pharmacies.

The following recommendations, excerpted from the Influenza Prevention and Surveillance Protocol for Long-Term Care Homes, September 2014, should be addressed in appropriate LTCH policies in preparation for an outbreak to ensure that there are no delays in providing influenza immunization and/or antiviral medication.

- Consent for antiviral medication use during the entire influenza season should be obtained from residents or their substitute decision-makers in advance of each influenza season. For LTCHs, this consent may be obtained at the same time that consent is obtained for influenza immunization.
- In LTCHs, advance medical orders for influenza antiviral medication for residents should be obtained from medical staff at the beginning of each influenza season, or a plan should be in place to obtain physician's orders quickly in the event of an outbreak. Advance medical orders can substantially expedite administration of antiviral medications.
- Staff who are unimmunized against influenza for any reason should be informed that in the event of an outbreak, they may be given the option of taking antiviral medication for the duration of the outbreak in order to continue their duties, or if unable or refuse to take antiviral medication for the duration of the outbreak, they may be excluded from working in the LTCH depending on the policy of the LTCH.⁵
- To facilitate antiviral treatment during outbreaks, staff who are unable to receive the influenza vaccine should be assessed for eligibility for antiviral drugs such as oseltamivir or zanamivir prior to the influenza season. A record of this information should be kept on-hand at the LTCH to expedite timely implementation of antiviral prophylaxis. In addition, staff who are not immunized, who conduct activities in the LTCH, and who are assessed as being able to take antiviral

medication, may wish to obtain and keep prescriptions on hand to assist with timely commencement of antivirals, in the event of an influenza outbreak.⁵

- During the influenza season, LTCH administration must keep a current list of staff working in the LTCH who are not immunized, in order to promptly implement control measures such as antiviral prophylaxis and cohorting staff.⁵ Other control measures such as non-patient care work arrangements or staff exclusions may also be considered.
- The PIDAC document *Annex B: Prevention of Transmission of Acute Respiratory Infection in all Health Care Settings*, March 2013 recommends: “Annual influenza vaccination should be a condition of continued employment in, or reappointment to, health care organizations”.¹⁰
- As soon as an outbreak of influenza is suspected, unimmunized residents and staff carrying on activities in the LTCH, who do not have contraindications to the vaccination, should be offered the vaccine. When an outbreak is declared, immunized persons carrying on activities in the LTCH may continue to work without disruption of their work pattern. Those who have not provided documentation of receipt of vaccine should be managed as unimmunized.⁵
- Unimmunized staff carrying on activities in the LTCH who refuse antivirals during an outbreak should not provide resident care or conduct activities where they have a potential to acquire or transmit influenza.⁹ The LTCH may choose to exclude from work unimmunized staff carrying on activities in the LTCH, unless they take antivirals. Unimmunized staff carrying on activities in the LTCH who agree to be immunized during an outbreak but do not take antivirals may return to work 14 days following receipt of vaccine (the duration required to achieve vaccine-induced immunity). They may return earlier if they begin a course of antiviral prophylaxis.⁵
- Newly immunized (within 2 weeks) or unimmunized staff taking antiviral prophylaxis could continue their work without interruption.⁵
- Antiviral drugs for staff carrying on activities in the LTCH require a prescription. All staff should try to use their own doctor for medical services. However in the event of an outbreak, to facilitate eligible staff with timely antiviral medication (in situations where the medical assessment does not contraindicate such) the LTCH may wish to discuss with the LTCH physician(s)/nurse practitioners the opportunity for LTCH staff to access their medical services as applicable.⁵
- Unimmunized staff working in an outbreak LTCH can work in a non-outbreak or alternate healthcare setting if three or more days (one incubation period) have passed since their last day of activities in the outbreak LTCH.⁵

5.3 Antiviral Medication for Prevention (Prophylaxis)

During a public health-confirmed influenza outbreak, antiviral medication for prevention shall be offered to all residents/patients in the outbreak-affected area who are not

already ill with influenza, whether previously vaccinated or not, until the outbreak is declared over.

In addition, all unvaccinated asymptomatic staff who work in the area of the LTCH where the influenza outbreak is occurring should be advised to take prophylactic antiviral medication until the outbreak is declared over.

During a confirmed influenza outbreak, when the circulating strain is not well-matched by the vaccine, antiviral prophylaxis may be offered to all staff, regardless of vaccination status, as determined by the OMT or in consultation with the Medical Officer of Health or designate until the outbreak is declared over. PHUs may consult with PHO regarding scientific and technical support regarding evidence of a mismatch.

Antiviral prophylaxis should be initiated as soon as an influenza outbreak is declared. In almost all situations, it is prudent to wait for laboratory confirmation of influenza before initiating prophylaxis and treatment. Once the specimen reaches the appropriate laboratory, rapid test results are usually available within one business day. In some circumstances, the Medical Officer of Health may provide recommendations for prophylaxis prior to laboratory confirmation.

Institutions should consult with PHU representatives on the outbreak management team when starting antiviral prophylaxis and treatment.

Recommendations regarding influenza antiviral prophylaxis:

- It is reasonable to allow unvaccinated staff to work with residents or patients on an outbreak unit as soon as they start antiviral prophylaxis. Unless there is a contraindication, consenting staff should also immediately be offered immunization against influenza with the current seasonal influenza vaccine.
- In healthy adults, it takes two weeks to develop antibodies to the influenza virus after receiving the influenza vaccine. Staff who have been vaccinated for less than two weeks at the time the influenza outbreak is declared should take antiviral prophylaxis for two weeks after vaccination or until the outbreak is declared over (whichever comes first). Note: Antiviral medications do not interfere with the immune response to vaccine.
- Staff should be alerted to the symptoms and signs of influenza, particularly within the first 4 days after starting antiviral prophylaxis. Staff illness should immediately be reported to the supervisor, ICP and/or occupational health. Staff reporting signs and symptoms of influenza should be excluded from working in any health care setting if symptoms develop. This information should be shared with the local public health representative.
- Prophylaxis may be discontinued once the influenza outbreak is declared over.
- Prophylaxis may also be given during influenza season in institutional settings not experiencing an influenza outbreak to unvaccinated individuals at high-risk of influenza-related complications, at the discretion of the treating physician.
- If a person taking a neuraminidase inhibitor (i.e. oseltamivir or zanamivir) for prophylaxis of influenza develops symptoms of an influenza-like illness, the neuraminidase inhibitor can be continued, however, the neuraminidase inhibitor

should be increased to the recommended treatment dose. Consideration should be given to obtaining a nasopharyngeal specimen if the individual has been on antiviral prophylaxis for more than four days to determine the presence of a resistant strain or another respiratory virus.

5.3.1 Antiviral prophylaxis of the outbreak unit(s) only versus the whole facility

The advantages and disadvantages of providing antiviral prophylaxis to the outbreak unit(s) only or to the whole facility may be evaluated based on the specific characteristics of the outbreak and the design of the facility.

Advantages of a whole-facility approach include: preventing the spread of the outbreak to other units, preventing the introduction from another outside source when influenza is circulating in the community, not needing to be as vigilant to detect the spread on another unit as would be needed if surveillance is being used as a trigger for prophylaxis, and preventing the need to manage an outbreak unit by unit as new units are added.

Disadvantages to the whole-facility approach include: logistics of using antiviral medication for a large number of residents, the theoretical potential for resistance if the drug is widely used for prevention, antiviral availability, and the potential for side effects occurring in a larger number of residents.

PHUs may consult with PHO for scientific and technical support regarding the use of antivirals for prophylaxis in outbreak unit(s)/facilities.

5.4 Antiviral Medication for Treatment

Treatment decisions for the residents/patients are the responsibility of the attending physicians. However, treatment decisions for health care staff that work in the LTCH rest with their health care provider and as such, obtaining prescriptions for antiviral treatment is the responsibility of the staff.⁵ See section 5.6 for payment information.

Treatment should be started within 48 hours (or less) of onset of symptoms for maximum effectiveness. This may also decrease complications of influenza infection.²⁸

Recommendations regarding antiviral treatment:

- Antiviral treatment should be started for ill residents/patients (who meet the outbreak case definition), as soon as possible and preferably within 48 hours of symptom onset.²⁸ As much as possible symptomatic residents should be encouraged to remain in their rooms for the duration of antiviral treatment.
- Once an outbreak has been laboratory-confirmed as influenza, additional laboratory confirmation of each new case is not required in order to initiate antiviral treatment in individuals who meet the outbreak case definition.

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Diagrams 1 and 2, below, provide additional detail on actions to take in cases where antiviral treatment is not initiated within 48 hours (Diagram 1), or in cases where treatment has been completed but an outbreak is still ongoing (Diagram 2).

The algorithm in Diagram 2 would not apply if there was known to be two different influenza strains in the same facility. If this were the case, all residents on treatment should switch to prophylaxis after treatment completion, until prophylaxis is no longer indicated in the facility.

Diagram 1: Antiviral treatment use recommendation in influenza outbreaks. If treatment is not initiated within 48 hours of symptoms onset

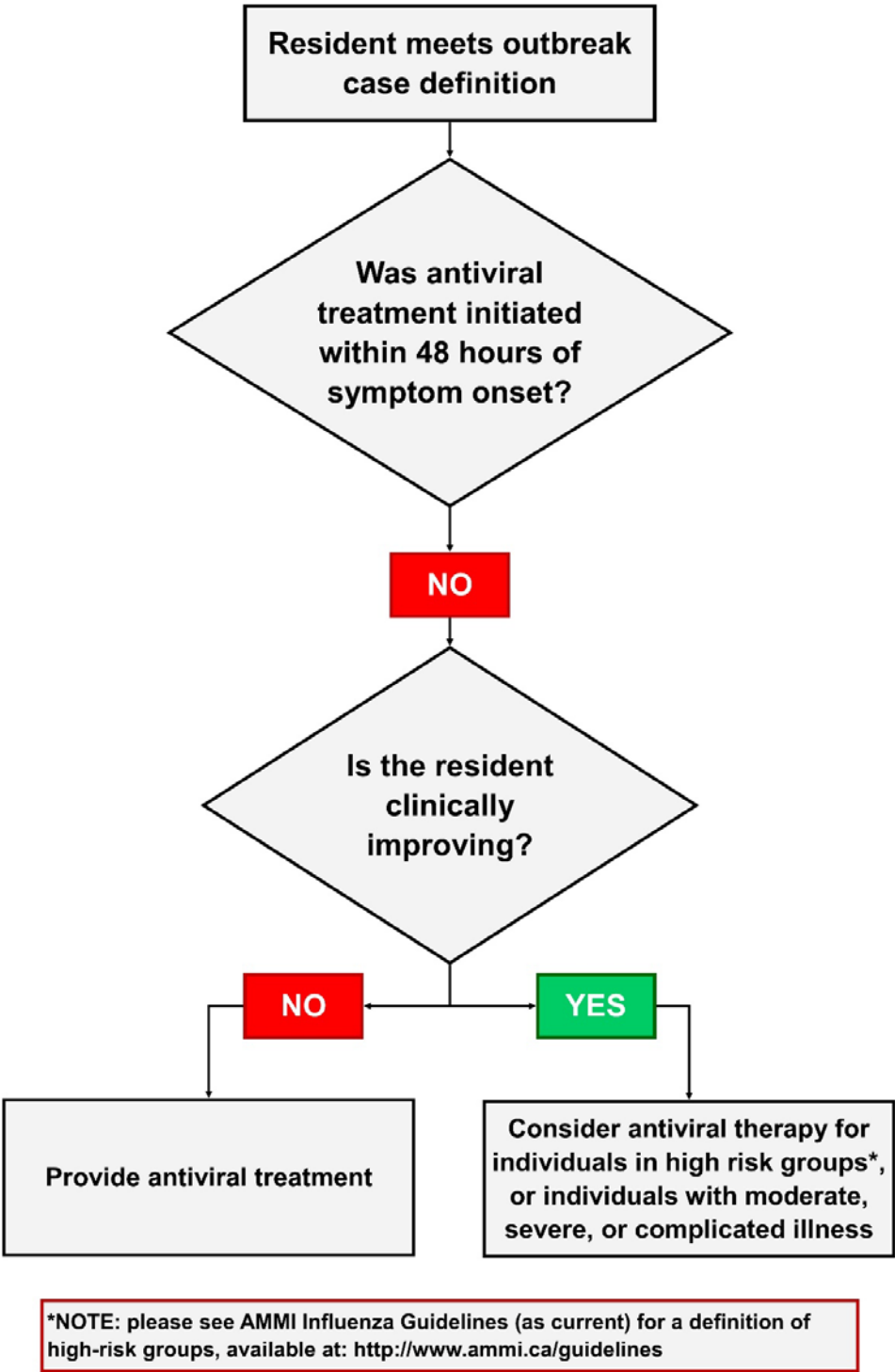
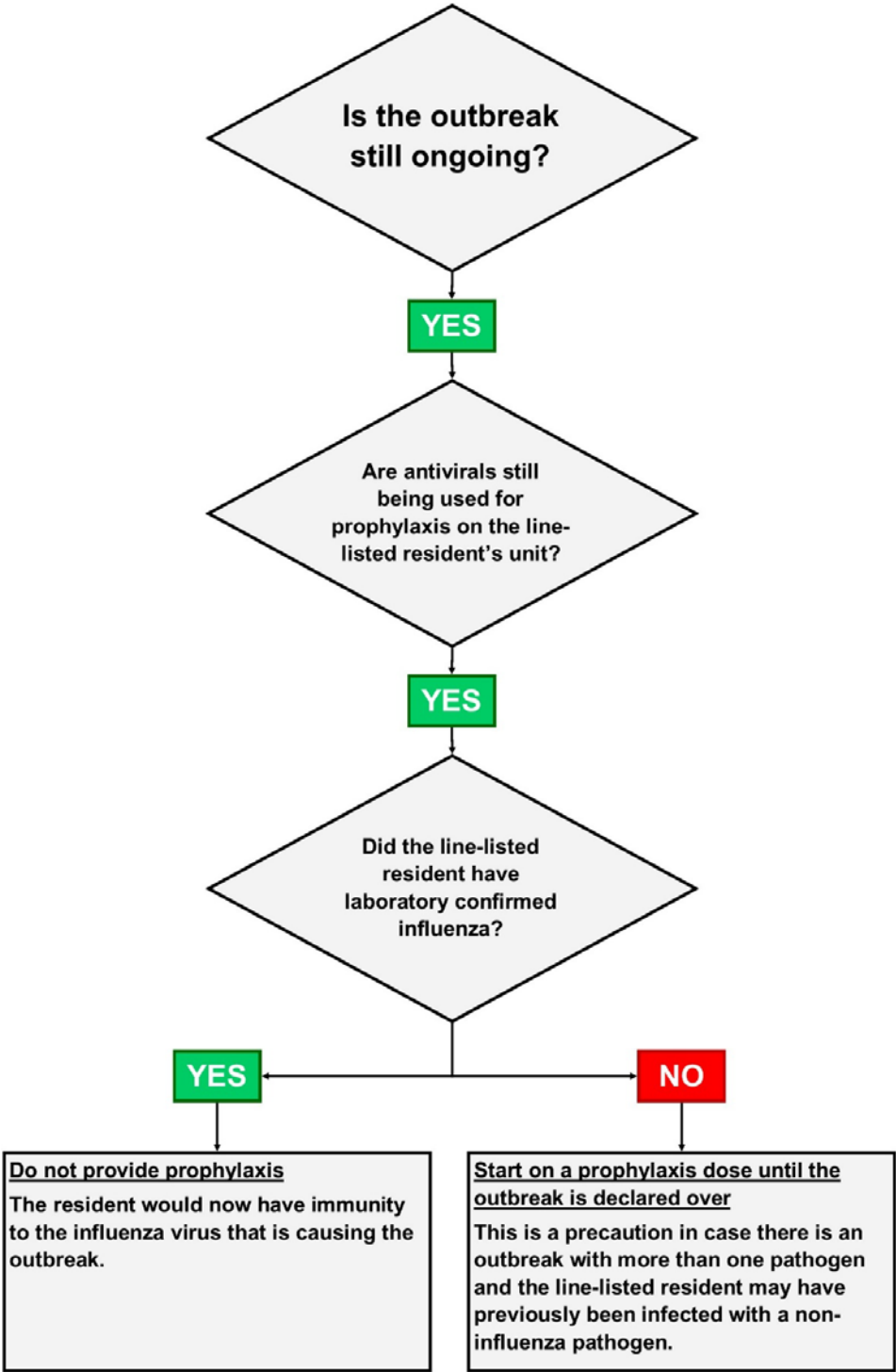


Diagram 2: Antiviral prophylaxis recommendations in influenza outbreaks for line-listed cases after completion of treatment with antiviral medication



5.5 When Antiviral Use Does Not Control the Outbreak

As discussed above, it is prudent to wait for laboratory confirmation of the causative agent of an outbreak before initiating antiviral prophylaxis or treatment. If new cases of influenza-like illness continue to occur 96 hours or more after the initiation of antiviral use, one or more of the following may be occurring:

- The new cases could be caused by an agent other than influenza (e.g. RSV);
- There may be compliance issues;
- The circulating strain may be resistant to the antivirals.

In the event that the outbreak is not controlled with antiviral use, the following actions should be taken:

- Consult with the PHU
- The PHU should consult with PHOL about additional testing strategies.
- The PHU representative on the outbreak management team should be consulted regarding continued use of antivirals.
- Resistance testing on positive influenza specimens may be done in consultation with PHOL if resistance is suspected and no other organism is identified in the outbreak. The results, however, may not be received within a time-frame to influence decision-making regarding the continued use of antivirals to control the outbreak. PHUs should contact PHOL's Customer Service Centre at 416-235-6556/1-877-604-4567 in the event that they want to perform resistance testing. Note that influenza virus must be detected from the patient(s) of concern; only then can sensitivity testing on the virus be performed. This testing usually requires that the patient's influenza virus grows in culture.

5.6 Procedures for Obtaining Reimbursement for Antiviral Medications from the Ontario Drug Benefit (ODB) Program

All LTCH residents are eligible for prescription drug coverage under the Ontario Drug Benefit (ODB) Program. Prescriptions for antiviral medications, as for all other medications, are the responsibility of the medical directors or attending physicians of the residents.

A searchable on-line ODB eFormulary database

(<https://www.formulary.health.gov.on.ca/formulary/>) is available with information on the conditions for reimbursement of the neuraminidase inhibitors oseltamivir and zanamivir.

Staff are not eligible for prescription drug coverage under any circumstances from the ODB Program. Staff that do not have insurance or that have an insurance plan that does not cover antivirals may be eligible for reimbursement through the Level-of-Care (LOC) envelope funding system allocated through the LHINs. LTCHs should refer to

their *Guideline for Eligible Expenditures for Long-Term Care Homes* available from the LTC portal for further information on the process (http://www.health.gov.on.ca/en/public/programs/ltc/ltaa_policies.aspx). Prescriptions for antiviral medications for staff, as for all other medications, are obtained from their health care provider or another source, as appropriate.

General information regarding the ODB Program is available at the ODB Program, Available at: <https://www.ontario.ca/page/get-coverage-prescription-drugs>.

Full details of the reimbursement criteria are below in Table 1. Reimbursement for residents/institutionalized individuals applies only during a public health-confirmed influenza outbreak for residents requiring treatment (up to five days of therapy) and for residents requiring prophylactic therapy (up to six weeks of therapy for prophylaxis).

5.6.1 Oseltamivir (Tamiflu®) Reimbursement³³

Oseltamivir is available as a Limited Use (LU) benefit and is the recommended drug of choice for both prophylaxis and treatment in an influenza outbreak. The MOHLTC reimburses LTCHs and other institutions for the use of oseltamivir for prophylaxis and treatment only during public health-confirmed influenza outbreaks. Refer to Table 1 for the clinical criteria to obtain reimbursement under the ODB Program.

5.6.2 Zanamivir (Relenza®) Reimbursement³⁴

Zanamivir is available as a LU benefit for both prophylaxis and treatment in an influenza outbreak when the predominant circulating strain is resistant to oseltamivir. Zanamivir is reimbursed in a similar manner when the predominant circulating strain is resistant to oseltamivir. Refer to Table 1 for the clinical criteria to obtain reimbursement under the ODB Program.

Table 1: Limited Use (LU) Criteria for Oseltamivir (Tamiflu™) and Zanamivir (Relenza™)^{33,34}

LU Code	Drug	Clinical Criteria
371	Oseltamivir (Tamiflu®) 30mg, 45mg, 75 mg capsule	For the prophylaxis (max: 75 mg daily) of institutionalized individuals during confirmed outbreaks of influenza A or influenza B. Supply is limited to a maximum of 6 weeks. The outbreak must be confirmed by Public Health.
372	Oseltamivir (Tamiflu®) 30mg, 45mg, 75 mg capsule	For the treatment (max: 75 mg twice daily) of institutionalized individuals during confirmed outbreaks due to influenza A or influenza B. Supply is limited to 5 days. The outbreak must be confirmed by Public Health.

LU Code	Drug	Clinical Criteria
414	Zanamivir (Relenza®) 5 mg inhalation	For treatment: 2 inhalations of 5 mg (10 mg) twice daily for 5 days. For the treatment of institutionalized individuals during confirmed outbreaks due to influenza A or influenza B when the predominant circulating strain is resistant to oseltamivir The outbreak must be confirmed by Public Health.
415	Zanamivir (Relenza®) 5 mg inhalation	For prophylaxis: 2 inhalations of 5 mg (10 mg) once daily for 10 days For the prophylaxis of institutionalized individuals during confirmed outbreaks due to influenza A or influenza B when the predominant circulating strain is resistant to oseltamivir. The outbreak must be confirmed by Public Health.

5.6.3 Antiviral Limited Use process: individual prescription

Under the general LU process, an individual LU prescription must be completed for each patient and kept on file at the dispensing pharmacy. Note that the LU form has been discontinued; LU codes are now written directly onto the prescription.

5.6.4 Oseltamivir Only Limited Use process: institutional prescriptions

Recognizing that this could result in a delay in therapy in institutions with large numbers of residents, the MOHLTC has created an exception to this requirement for oseltamivir ONLY. The MOHLTC will accept a single LU prescription to be completed for multiple patients who require treatment or prophylaxis and meet one of the approved criteria. All institutions are eligible for the exemption provided the outbreak was confirmed by the MOH or the PHU.

Once confirmation of an outbreak is received and an attending physician decides to prescribe oseltamivir or zanamivir, the prescribing physician must complete a LU prescription by filling in the appropriate LU code, date, CPSO number and signing the form. The name of the home should be written in under "Patient's name". The completed LU prescription must then be attached to a list of affected patients and forwarded to the dispensing pharmacy. One LU prescription should be used for patients/residents requiring treatment and a separate LU prescription must be completed for patients/residents requiring prophylactic therapy during the influenza outbreak. The standard LU process (i.e. one completed LU prescription for each patient) is also acceptable.

Glossary

Antiviral Medication - Antiviral medication is medication that is used for preventing or treating a viral infection. Two antiviral influenza medications, oseltamivir and zanamivir (both neuraminidase inhibitors) are licensed for use in Canada, for the treatment and prophylaxis of influenza A and B, in adults. Oseltamivir is the recommended antiviral of choice for both treatment and prophylaxis of influenza A and B for residents in LTCHs.

Acute Respiratory Infection (ARI) - Any new onset of acute respiratory infection that could potentially be spread by the droplet route (either upper or lower respiratory tract), which presents with symptoms of a fever greater than 38°C and a new or worsening cough or shortness of breath (also known as febrile respiratory illness, or FRI). It should be noted that elderly people and people who are immunocompromised may not have a febrile response to a respiratory infection.

Case - A person with the particular illness or disease, usually fitting the case definition.

Case definition - A set of criteria for determining who should be classified as a case. The definition is comprised of clinical information and should include epidemiological information related to time, place, and person.

Competent Person - A person who:

- a) is qualified because of knowledge, training and experience to organize the work and its performance,
- b) is familiar with [the Occupational Health and Safety Act] and [any] regulations that apply to the work, and
- c) has knowledge of any potential or actual danger to health or safety in the workplace;

Control Measure - Any action or activity that can be used to prevent, eliminate or reduce a hazard.

Droplet Precautions - Droplet Precautions are used in addition to Routine Practices for residents known or suspected of having an infection that can be transmitted by large infectious droplets.

Hand Hygiene (HH) - A general term referring to any action of hand cleaning. HH relates to the removal of visible soil and removal or killing of transient microorganisms from the hands. HH may be accomplished using soap and running water or an alcohol-based hand rub. HH also includes surgical hand antisepsis.

Health Care Setting - Any location where health care is provided, including settings where emergency care is provided, hospitals, LTCHs, outpatient clinics, community health centres and clinics, physician offices, dental offices, and home health care.

Incubation Period - The time interval between initial contact with an infectious agent and the first appearance of symptoms associated with the infection. For influenza, the incubation period is 1-4 days.

Infected/Infectious Individual - A person who harbours an infectious agent and who has either become symptomatic or is asymptomatic. An infectious person is one from whom the infectious agent can be acquired.

Infection Prevention and Control Professional (ICP) - A health professional designated to be responsible for infection prevention and control programs in the LTCH, in accordance with LTCHA, 2007, s.86(1) and O. Reg. 79/10, s.229(1). The ICP should possess expertise and additional training in infection prevention and control.

Influenza - A viral infection of the respiratory system. Symptoms of influenza include fever, cough, sore throat, muscle ache, extreme fatigue, and headache. Unlike the common cold and most other respiratory viruses commonly called “the flu”, influenza virus infection can result in severe illness, pneumonia and even death. The incubation period of influenza is 1-4 days; duration of infectivity is usually not more than 5 days after onset of symptoms. Influenza can cause epidemics, or outbreaks, which are a cluster of cases occurring within a short period of time in a defined geographic area (e.g., schools or health care institutions) or group of people.

Influenza Vaccine – All influenza vaccines authorized and recommended for use in adults in Canada are prepared from killed and denatured influenza virus. They stimulate the formation of immunity (e.g. antibodies) against the strains of influenza virus likely to be circulating that season. For further information on influenza vaccines in Canada, see the National Advisory Committee on Immunization (NACI) website at:

<https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci.html>.

Influenza Vaccine in Pregnancy - NACI recommends that all pregnant women (any stage of pregnancy) be included as “specifically recommended recipients” of inactivated influenza vaccine due to their high risk of influenza-related complications or hospitalization ([NACI, Statement on Seasonal Influenza Vaccine](#)).

Line Listing - A table that summarizes information about probable or confirmed cases associated with an outbreak. It often includes identifying information, demographics, clinical information and exposure or risk-factor information.

Long-Term Care Home (LTCH) - The term “long-term care home” has the same meaning as under the LTCHA. Subsection 2(1) of the LTCHA defines long-term care home as follows:

“long-term care home” means a place that is licensed as a long-term care home under the Act and includes a municipal home, joint home or First Nations home approved under Part VIII.

Medical Contraindication to Influenza Immunization - NACI has concluded that “egg-allergic individuals without other contraindications may be vaccinated against influenza with any product, without a prior influenza vaccine skin test and with the full dose.”

NACI does state that, “Persons who have developed an anaphylactic reaction to a previous dose of influenza vaccine or to any of the vaccine’s components, with the exception of egg, or who have developed Guillain-Barré Syndrome (GBS) within six weeks of influenza vaccination, should not receive a further dose.” ([NACI, Statement on Seasonal Influenza Vaccine](#)).

Private pay caregiver - A person who is hired directly or indirectly by a resident, or a person acting on behalf of a resident as the case may be, to provide care or companionship to the resident.

Recommended Recipients - People at high risk for influenza-related complications. High risk groups are defined by the NACI ([NACI, Statement on Seasonal Influenza Vaccine](#)).

Resident - The term “resident” has the same meaning as under the LTCHA. Subsection 2(1) of the LTCHA defines resident as follows:

“resident” means a person admitted to and living in a long-term care home.

Respiratory etiquette – Practices that should be observed when coughing or sneezing:

- Turning head away from others;
- Covering the nose and mouth with tissue, or sneeze into your sleeve;
- Discarding tissues into waste immediately after use; and
- Performing hand hygiene (HH) immediately after disposal of tissues.

Retirement Home – The term “retirement home” has the same meaning as under the RHA. Subsection 2(1) of the RHA defines retirement homes as follows: a residential complex or the part of a residential complex that is occupied primarily by persons who are 65 years of age or older, that is occupied or intended to be occupied by at least the prescribed number of persons who are not related to the operator of the home, and where the operator of the home makes at least two care services available, directly or indirectly, to the residents.

Routine Practices - The system of infection prevention and control (IPAC) practices recommended by the Public Health Agency of Canada (PHAC) to be used with all residents during all care to prevent and control transmission of microorganisms in health care settings
(http://www.publichealthontario.ca/en/BrowseByTopic/InfectiousDiseases/PIDAC/Pages/PIDAC_Documents.aspx)

Sentinel events - Sentinel Event: A colonization/infection in which the occurrence of perhaps even a single case may signal the need to re-examine preventive practices
(http://www.publichealthontario.ca/en/BrowseByTopic/InfectiousDiseases/PIDAC/Pages/PIDAC_Documents.aspx)

Staff – The term “staff” has the same meaning as under the *Long-Term Care Homes Act, 2007* (LTCHA) and the *Retirement Homes Act, 2010* (RHA) . Subsection 2(1) of the LTCHA and the RHA defines staff as follows:

“staff”, in relation to a long-term care home, means persons who work at the home,

- a) as employees of the licensee,
- b) pursuant to a contract or agreement with the licensee, or
- c) pursuant to a contract or agreement between the licensee and an employment agency or other third party”

Surveillance of Disease - The continuous scrutiny of all aspects of occurrence and spread of a disease that are pertinent to effective control. Included are the systematic collection and evaluation of: data on individual cases; laboratory test results; information about immunity or vaccination status; use of medications; other relevant data.

Transmission of Influenza - Influenza is spread from person to person when droplets produced by the cough or sneeze of a person infected with influenza come into contact with another person’s mucous membranes (eyes, nose, mouth). It can also be spread by contact with infected respiratory secretions through articles such as bedrails, facial tissue, or (unwashed) utensils.

Visitor - Person who attends at a LTCH but who is not staff or a volunteer.

Volunteer - A person who is part of the organized volunteer program of the LTCH, but does not receive a wage or salary for the services or work provided for that program.

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nasopharyngeal swab method for Bordetella pertussis. Available from:
<http://www.publichealthontario.ca/en/ServicesAndTools/LaboratoryServices/Pages/Kit%20Instruction%20Sheets/Bordetella-pertussis.aspx#.U9Fx5-NdXzg>

Appendix 1 - Incubation Periods of Acute Respiratory Viral Infections

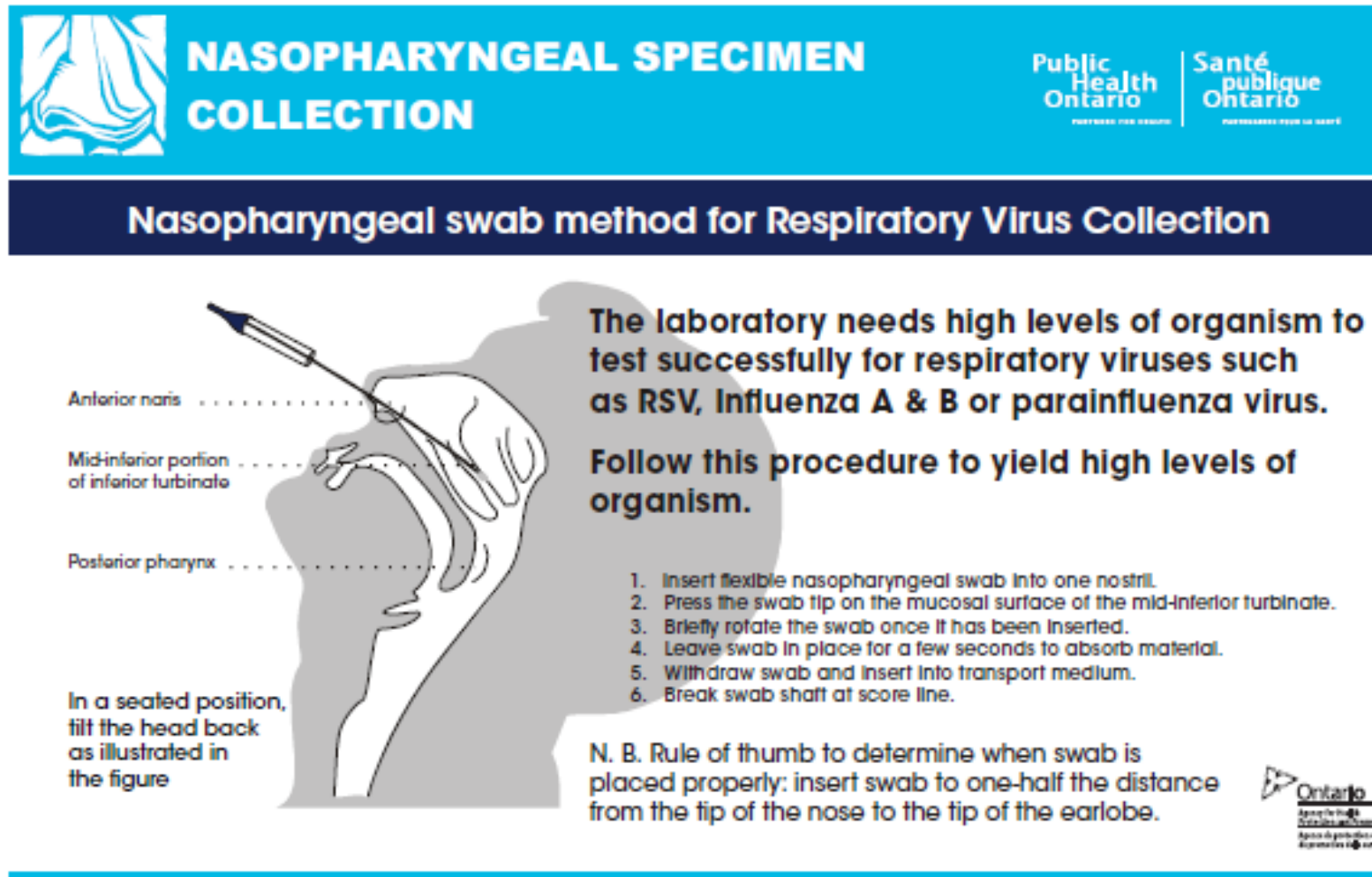
Additional resources regarding the incubation range, shedding/potential infectious period include: Public Health Agency of Canada pathogen safety data sheets, Red Book, Control of Communicable Diseases Manual and the Centre for Disease Control.

Table 1: Incubation Periods of Acute Respiratory Viral Infections

Virus	Incubation (range) ³⁵	Shedding/potential infectious period	Comments
Influenza	1-4 days	Usually 5 to 10 days, peak at 24 to 48hrs	The immunocompromised may shed virus for months.
RSV	3-7 days	Usually 3 to 8 days; up to 3-4 weeks in children and immunocompromised	Acute phase of illness 3 to 10 days.
Human Metapneumovirus	Not known (4-9 days?)	Shed for 1 to 2 weeks	Similar to RSV; the immunocompromised may shed virus for months
Rhinovirus	2-4 days	1 to 3 weeks; peak days 2 to 3 of illness	Immunocompromised may shed for months.
Adenovirus	4-8 days	Days to weeks	Immunocompromised may shed for months.
Parainfluenza virus	2-6 days	Up to 10 days in children	Shorter duration of shedding in elderly
Bocavirus	Not established	Duration of shedding variable: 50% <1 week, 25% over one month (1 record of 402 days).	Not firmly established as a respiratory pathogen. Role in respiratory infection remains under investigation
Human Coronaviruses (229E, OC43, HKU1, NL63)	2-5 days	Peak shedding occurs during days 2 to 3 of illness	
SARS Coronavirus	2-10 days	Peak shedding and transmission occurs during week 2 of illness. Maximum communicability is less than 21 days.	May be detectable week 3 to months after illness onset

Appendix 2 - How to Take a Nasopharyngeal Swab³⁶

Figure 1: How to Take a Nasopharyngeal Swab



NOTE: Staff should be wearing appropriate PPE when taking a NP swab.

Appendix 3 - Sample Respiratory Outbreak Line Listing Form

Figure 2: Sample Respiratory Outbreak Line Listing Form

Respiratory Outbreak Line Listing Form																																	
Check one	Data:		☐	Investigation Name:												Case Definition:																	
	Resident Data:		☐	Investigation Number:																													
Case Identification				Symptoms										Complications			Specimens/Diagnostics			Prophylaxis/Treatment													
Case (Sequential)	Name and Location (Floor, Room, Bed)			Gender	Age	Onset of First Symptoms (d/m)	Abnormal temperature (°C)	Dry cough (new)	Runny nose/sneezing	Nasal Congestion/Stuffy Nose	Sore Throat	Hoarseness/Difficulty	Chills	Myalgia	Malaise	Productive Cough (new)	Headache	Poor appetite	Other (please specify)	Bronchitis (d/m)	Pneumonia (d/m)	Hospitalization (d/m)	Death (d/m)	Nasopharyngeal swab (d/m)	Nasopharyngeal Swab Result date	X-Ray confirmed pneumonia (Y/N)	Other – Specify (d/m)	Result (d/m)	Antiviral Medication	Flu vaccination (d/m)	Pneumo vaccine (d/m)	Antibiotic (d/m)	
Comments:																																	

Appendix 4 - Respiratory Outbreak Investigation Checklist

Table 3: Respiratory Outbreak Investigation Checklist

Outbreak Investigation Action	Date Completed
Is there a suspected outbreak and has an assessment been conducted?	
Has an initial OMT meeting been set which will address the establishment of a working case definition for the outbreak, review of control measures and confirming communication issues and systems?	
Have general infection prevention and control (IPAC) measures been implemented?	
Has the local Medical Officer of Health or designate been notified?	
Has an outbreak investigation laboratory number been obtained from the PHU?	
Have appropriate individuals associated with the LTCH been notified of the suspected/confirmed outbreak?	
Has the communication of laboratory results been reviewed?	
Have organism specific IPAC measures for influenza A or B been reviewed and implemented (if appropriate to do so)?	
Has the responsibility for ongoing monitoring of the outbreak been established?	
Have the criteria to declare the outbreak over been confirmed?	
Have the individuals who were notified of the onset of the outbreak been notified that the outbreak has been declared over?	
Once the outbreak has been declared over, has the outbreak summary report been completed?	
Has a post outbreak review meeting been set to review the management of the outbreak?	

Appendix 5 - Sample Consent Form – Pneumococcal Vaccination

To be used in conjunction with fact sheets on pneumococcal vaccines.

Consent for Pneumococcal Vaccination

I _____ (Resident or Substitute decision-maker, if the Resident is incapable with respect to treatment) have been informed of the treatment, benefits, contraindications and side effects to the administration of a dose of pneumococcal vaccine and understand the procedure. I give consent to the administration of a dose of the pneumococcal vaccine to _____ (Resident) by a registered nurse or attending physician. I understand that the vaccine will not be given if the resident has a contraindication to receipt of the vaccine at the scheduled time of administration of the vaccine.

Signature of resident/substitute decision-maker giving consent

Date

Please return this form promptly by mail or in person. Telephone consent may be given.

Appendix 6 - Sample Consent Form – Influenza Vaccination

To be used in conjunction with fact sheets on the influenza vaccine.

Consent for Annual Influenza Vaccination

I _____ (Resident or Substitute decision-maker, if the Resident is incapable with respect to treatment) have been informed of the treatments, benefits, contraindications to the administration of the influenza vaccine every autumn and understand the procedure and its side effects. I give consent to the administration of the influenza vaccine to _____ (Resident) by a registered nurse or attending physician. I understand that the vaccine will not be given if the resident has a contraindication to receipt of the vaccine at the scheduled time of administration of the vaccine.

Signature of resident/substitute decision-maker giving consent

Date

Please return this form promptly by mail or in person. Telephone consent may be given.

Appendix 7 - Sample Letter to Physicians Regarding Antiviral Prophylaxis for Staff in LTCHs

Dear Health Care Providers,

_____ (staff member's name) is a LTCH employee who has chosen not to be immunized against influenza this year. In the event of influenza outbreak in the LTCH this employee, in accordance with the home's exclusion policy will not be allowed to return to work until the outbreak is declared over by the Medical Officer of Health or designate or unless he/she is taking antiviral prophylaxis for influenza.

Please provide a prescription for the recommended medication for influenza prophylaxis.

Oseltamivir (Tamiflu TM) -

Zanamivir (Relenza TM) -

If you have any questions, please contact the local Public Health office.

Appendix 8 - Sample Home Exclusion Policy Content

Points to consider in the development of an exclusion policy:

- How and when the exclusion policy comes into effect
- Who falls under the definition of staff
- Consequences of failure to comply
- Managing shared staff working in a home with a declared outbreak
- Length of exclusion time clearly defined when staff are not on an antiviral drug
- How to verify staff are taking the antiviral
- How staff will be educated and updated regarding the policy requirements
- Obtaining antiviral prescription pre-season from staff member's health care provider (as per Appendix 7)
- Define Human Resource issues, e.g. time off designation, cost of antivirals.

Appendix 9 - Outbreak Transfer Notification

Sample only

Please be advised that _____ (name of resident) is being transferred from a facility where there is a **suspect** OR **confirmed** influenza outbreak. Please ensure that appropriate infection prevention and control measures are taken upon receipt of this resident.

At the time of transfer, this resident was confirmed OR suspected OR appears free of influenza.

Resident is on antiviral medication _____ starting on _____. Dose of the medication: _____.

Resident's vaccination status:

Pneumococcal yes ☐ no ☐

Influenza yes ☐ no ☐

For further information, contact: _____ (Name of ICP), Infection Control Professional at _____ (Name of Home) at _____ (Phone Number)

Appendix 10 - Sample Transfer & Return Algorithm for Use During Outbreaks

Transfers and Returns between Long-Term Care Homes and Hospitals during Outbreaks

The return of residents to a long-term care home (LTCH) during outbreaks is generally restricted in an effort to protect susceptible individuals from being exposed to respiratory infections such as influenza, and gastrointestinal infections such as norovirus. Returns to LTCHs are not automatically prohibited. They must be considered carefully with respect to resident safety and quality of life, as well as system capacity.

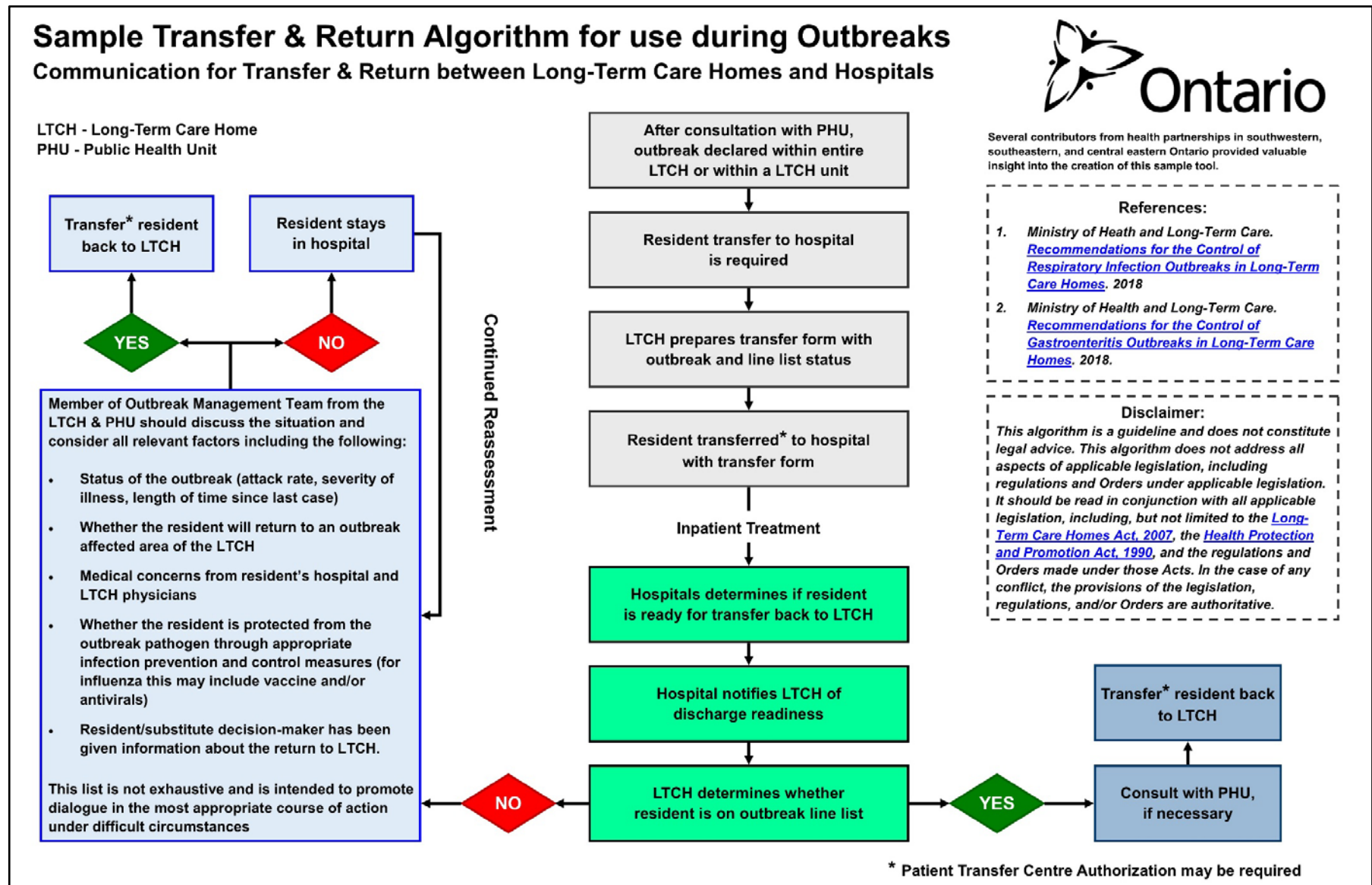
The sample algorithm provided here is a compilation of work done in southwestern, southeastern, and central eastern Ontario involving all relevant partner organizations. The tool is an outline of the process and factors to consider when making decisions about returning residents to their long term care homes after a hospital stay. It outlines opportunities for dialogue among the system partners who are involved in the care of residents: long-term care homes, hospitals, public health units, physicians, and of course, the residents themselves.

The sample algorithm provided here, may be used or adapted by stakeholders across Ontario who may not have documented their processes and considerations for transfers and returns between LTCHs and hospitals during an outbreak. It is intended to promote dialogue of key considerations. Users of this sample may modify it as appropriate to reflect their local practices, and should do so in consultation with relevant partners.

For more information, LTCHs can follow up with their public health unit, or see Control of Respiratory Infection Outbreaks in Long-Term Care Homes, Available at: <http://health.gov.on.ca/en/pro/programs/publichealth/flu/guide.aspx>.

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Image 1: Sample Transfer & Return Algorithm for use during Outbreaks



Appendix 11 - Sample Language for Returning to a Long-Term Care Home During an Outbreak

Initially published on January 18, 2013 as a Fact Sheet

Returning to a Long-Term Care Home during an Outbreak

Return of residents from hospitals to long term care homes (LTCHs) during outbreaks is generally restricted in order to protect unexposed individuals. Returns to LTCHs are not automatically prohibited however, and must be considered carefully with respect to patient safety and system capacity.

The following key messages for LTCH residents and their families may be useful to explain how these returns can happen. These messages should be adapted to reflect local processes.

LTCHs often restrict the return of residents to affected areas during outbreaks. Despite an outbreak, it may still be possible to return to the LTCH.

LTCHs, in partnership with public health units, carefully consider many factors to assess each return, such as:

- the status of the outbreak at the LTCH or a specific unit has been carefully reviewed;
- the resident will not be exposed to the outbreak as the outbreak is in another unit;
- the returning resident was already exposed to the outbreak before leaving the LTCH and therefore has now developed immunity; and
- the resident is protected from the outbreak through appropriate measures (for influenza this may include immunization and antiviral medications)

It is critical that you understand what is being done for you or your family member's wellbeing. If you have questions about being in a LTCH during an outbreak, you can ask questions before leaving the hospital or upon your return to the LTCH.

Appendix 12 - Resources and Useful Links

Ministry of Health website - <http://www.health.gov.on.ca/>

Health Protection and Promotion Act, 1990 - <https://www.ontario.ca/laws/statute/90h07>

Long-Term Care Homes Act, 2007 - <https://www.ontario.ca/laws/statute/07l08>

Reg. 79/10 - <https://www.ontario.ca/laws/regulation/100079>

Coroner's Act, 1990 - <https://www.ontario.ca/laws/statute/90c37>

Occupational Health and Safety Act- <https://www.ontario.ca/laws/statute/90o01>

Ontario Drug Benefit Program -

<https://www.ontario.ca/page/get-coverage-prescription-drugs>

Ontario Drug Benefit Formulary -

http://www.health.gov.on.ca/english/providers/program/drugs/odbf_mn.html

PIDAC -

http://www.publichealthontario.ca/en/BrowseByTopic/InfectiousDiseases/PIDAC/Pages/PIDAC_Documents.aspx

- I. Cleaning, Disinfection and Sterilization
- II. Environmental Cleaning for Prevention and Control of Infections
- III. Infection Prevention and Control Programs in Ontario
- IV. Hand Hygiene
- V. Routine Practices and Additional Precautions In All Health Care Settings
 - a) (Annex A) Screening, Testing and Surveillance for Antibiotic-Resistant Organisms in all health care settings
 - b) (Annex B) Prevention of Transmission of Acute Respiratory Infection
 - c) (Annex C) Testing, Surveillance and Management of Clostridium Difficile
- VI. Surveillance of Health Care-Associated Infections

Labstracts - Public Health Ontario -

<https://www.publichealthontario.ca/en/ServicesAndTools/LaboratoryServices/Pages/Labstracts.aspx>

National Advisory Committee on Immunization - <http://www.phac-aspc.gc.ca/naci-ccni/>

Association of Medical Microbiology and Infectious Disease Canada -

<http://www.ammi.ca/>

Povincial Transfer Authorization Centre (PTAC) -

<https://www.hospitaltransfers.com/transfer/>

Health Canada websites - <http://www.hc-sc.gc.ca/pphb-dgspsp/sars-sras/index.html>

