

Long-Term Care Homes & Retirement Homes Infection Prevention and Control Manual



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Introduction

Purpose

This Infection Prevention and Control Manual was created by the Haldimand Norfolk Health Unit (HNHU) for Long-Term Care Homes (LTCHs) and Retirement Homes (RHs). It is designed to provide current information for the development and maintenance of an Infection Prevention and Control Program within your facility.

How to Use This Manual

This manual contains eight sections. In addition, a resource disc has been provided containing all relevant guidelines and protocols used to develop this manual.

Acknowledgments

This manual has been adapted and reproduced with permission of Simcoe Muskoka District Health Unit. The Haldimand Norfolk Health Unit recognizes the emerging infectious diseases within the home environments and felt that a manual would be a great resource for each facility.

The Haldimand Norfolk Infectious Disease Team would like to thank Simcoe Muskoka for sharing their manual and references.

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Infection Prevention and Control Manual

The Ministry of Health and Long-Term Care (MOHLTC) mandates that all LTCHs in the province of Ontario maintain an Infection Prevention and Control Manual. This manual should contain infection prevention and control policies and related procedures, as well as guidelines on infection prevention and control to serve as a reference for all departments.

The purpose of an Infection Prevention and Control Manual is to provide recommendations and best practices for health care workers (HCWs) to protect themselves, residents, visitors to the facility, and the community from infection whenever possible. The manual also serves as a tool to enhance surveillance for the IPCP.

The manual should be reviewed and updated at least annually, and more often as needed.

Annual Review of Policy and Procedure Manual⁴

Date	Reviewed by	Changes Made	Approved by



Section I - Infection Prevention and Control Program

The Ministry of Health and Long-Term Care (MOHLTC) mandates that all LTCHs in the province of Ontario maintain an Infection Prevention and Control Manual. This manual should contain infection prevention and control policies and related procedures, as well as guidelines on infection prevention and control to serve as a reference for all departments.

The purpose of an Infection Prevention and Control Manual is to provide recommendations and best practices for health care workers (HCWs) to protect themselves, residents, visitors to the facility, and the community from infection whenever possible. The manual also serves as a tool to enhance surveillance for the Infection Prevention and Control Practitioner (ICP).

LTCHs and RHs should develop and maintain an Infection Prevention and Control program that provides a safe, sanitary, and comfortable environment to help prevent the development and transmission of infections.

This program should:

- Obtain and manage critical data and information, including surveillance for infections.
- Develop and recommend policies and procedures.
- Intervene directly to prevent and control infections.
- Educate and train health care workers, patients and non medical caregivers.
- Ensure compliance with specific protocols, and guidelines created from Best Practices.
- Collaborate with the infection prevention and control (IPAC) committee, meeting with the team quarterly
-

General Infection Control Concepts

1. Infection surveillance will be either “whole-house” (i.e. include all residents), or targeted (i.e. toward high risk/high volume). Data should be reported internally on a monthly, quarterly, or other basis (as indicated by the IPCC).
2. A “nosocomial infection” will be defined as any infection that is not present or incubating at the time of admission.
3. “Community-acquired” will be defined as any infection present or incubating at the time of admission.
4. Any infection that demonstrates itself within 72 hours of admission will be considered a “community-acquired infection”.
5. “Chronic infections” are defined as those present at the same site for a period greater than 3 months. These infections will be monitored as all other infections; however, they will be designated as chronic in monthly reports and other statistics, and will only be counted in the month identified.
6. “Critical” definitions of infection will be approved by the IPCC and utilized by the ICP in determining infection rates.
7. An assessment of risk for infection in residents and staff will be performed annually.
8. Environmental cultures will be obtained only if a problem area is identified, or at the direction of federal, provincial or local health unit authorities.
9. Resident cultures will be performed according to facility policy or at the direction of the resident’s attending physician and/or federal, provincial, or local health unit authorities

Direct Care: Providing hands-on care, such as bathing, washing, turning client/patient/resident, changing clothes/diapers, dressing changes, care of open wounds/lesions or toileting (PIDAC, 2012)

* Feeding and pushing a wheelchair are not classified as direct care

Public Health Ontario, Provincial Infection Disease Advisory Committee (PIDAC). Routine Practices and additional precautions in all health care settings, July 2012. Retrieved from http://www.publichealthontario.ca/en/eRepository/RPAP_All_HealthCare_Settings_Eng2012.pdf

The Infection Prevention and Control Professional (ICP)

The ICP, under the direction of the Infection Prevention and Control (IPAC) Committee, is responsible for the quality of resident care as it relates to the investigation, control and prevention of infections. It is important to have one staff member designated as the ICP for the facility in order to coordinate the Infection Prevention and Control Program.

Role and Duties of the ICP:

- Perform surveillance required to identify individual infections in residents and staff, and to identify clusters of infection, in a timely manner.
- Track trends in infection within the facility, and report specific infections/clusters to appropriate staff as well as the MOHLTC and the HNHU.
- Identify infection control issues and make recommendations for corrective action.
- Participate as a member of the IPAC Committee.
- May prepare the agenda and chair the IPAC Committee meetings.
- Monitor infection control practices and employee compliance.
- Develop and revise infection prevention and control policies and procedures, and maintain the (IPC manual) for all departments.
- Conduct outbreak investigations and initiate control measures.
- Provide orientation and continuing education related to infection control for all staff.
- Provide infection control consultation to all departments.
- Actively participate in quality improvement programs.
- Participate in educational programs for personal professional development.
- Review outbreak preparedness within the facility, and obtain supply of culture kits.
- Monitor resident-care practices (i.e. hand washing, routine practices and additional precautions, dressing techniques, and perineal/catheter care).
- Monitor the quantity and accessibility of employee personal protection equipment (PPE) and ensure the appropriate use and maintenance of PPE.
- Identify, follow up, and monitor residents with known or suspected infection.
- Monitor IVs and the IV Program: practices and outcomes as well as staff training.
- Monitor antibiotic use.
- Review all culture reports and resident lab data, and report communicable diseases as required by MOHLTC and the HNHU.
- Monitor Occupational Health and Safety (OHS) programs (hepatitis B vaccination, needle stick and TB program).

-
- Prepare monthly statistics and distribute to administration, DOC, DON, and others as requested. Also present at quarterly IPAC meetings to the IPAC Committee.
 - Review infection control program yearly to assess whether it is functioning as well as possible.
 - When possible use the internet for **timely** infection control resources and **up-to-date** MOHLTC directives, guidelines, policies, protocols, and best practice documents.
 - Be involved in projects for new construction or renovations, and conduct daily rounds during these projects.

The Infection Prevention and Control (IPAC) Committee

Each health care facility should have its own Infection Prevention and Control Committee. The purpose of the Committee is to give structure and administrative power to the Infection Prevention and Control Program, and to provide a means of communication for all parties involved.

Terms of Reference

The IPAC Committee membership is composed of, but not limited to, the following:

- Infection Prevention and Control Professional (ICP)
- Chair (if not the ICP)
- Medical Advisor
- Administration
- Nursing Supervisor
- Pharmacy
- Environmental Services
- Dietary Services
- Laboratory (if on-site)
- Employee Health
- OHS
- The Medical Officer of Health (MOH) or designate from the HNHU

The IPAC Committee should meet quarterly, or as needed, and will make recommendations for appropriate maintenance of a safe, sanitary and comfortable environment for the residents and staff to prevent the development and transmission of disease and infection.

The IPAC Committee should develop and approve policies and procedures for all aspects of the Infection Prevention Control Program, review reported infections and incidents, and aid in determining appropriate corrective action.

Written reports of all committee meetings should be maintained and made available to all departments for review. These records should be retained and utilized for retrospective study.

HNHU representation on the IPAC Committee will establish good communication channels between the health unit and the facility. The health unit is committed to providing consultation and support to all aspects of the facility infection prevention and control program.

As directed by their manager/supervisor under the guidance of the ICP/IPAC Committee, staff members have the responsibility of implementing and adhering to infection prevention and control policies and procedures within the facility, such as hand washing and personal hygiene.

Sample Agenda – Infection Prevention and Control Committee

(Insert Facility Letterhead)

Infection Prevention and Control Committee Meeting Agenda

Date: _____ **Time:** _____ **Place:** _____

1. Meeting called to order
2. Approval of previous meeting minutes
3. Business arising from the previous minutes
4. Communications from regulatory agencies or recalls
5. Medical Advisory report
6. Infection Control report
7. Laboratory /Microbiological report
8. Employee Health report
9. New business
10. New policies/procedures
11. Annual review of policies/procedures
12. Haldimand Norfolk Health Unit report
13. Adjournment
14. Next Meeting

Infection Prevention and Control

The Six Elements of Infection

There are six elements in the cycle of infection, and all six must be present before the transmission of infection can take place.

Element in the cycle of infection	Explanation	Common examples
Infectious Agent	When germs enter the body, they can cause illness, especially in the elderly whose immune system is less responsive	<ul style="list-style-type: none">• Bacteria, virus, fungi, protozoa
Reservoir	Where germs normally live and multiply	<ul style="list-style-type: none">• Humans (i.e. residents/staff already infected)• Contaminated food, water, and equipment• Insects, animals, soil
Portal of Exit	How germs leave the body	<ul style="list-style-type: none">• Respiratory tract• Intestinal tract• Urinary/genitourinary tract• Open wounds• Blood and body fluids
Transmission	How germs are spread	<ul style="list-style-type: none">• Direct contact• Respiratory droplet• Body fluid splashes• Indirect contact• Needle stick Injury• Ingestion of contaminated food and water• Contaminated dust particles and equipment• Insects/animals
Portal of Entry	How germs enter the body	<ul style="list-style-type: none">• Respiratory tract• Intestinal tract• Urinary/genitourinary tract• Open wounds• Mucus membrane, e.g. eye, mouth
Susceptible Host	A person who gets an infection because he/she is unable to successfully fight the infection	<ul style="list-style-type: none">• Infants, elderly and debilitated• Persons who are ill• Persons who are taking certain drugs that lower their defense against germs• Persons with underlying disease conditions that lower their defense against other germs

How to Prevent the Infection: Breaking the Cycle

Studies have shown that breaking the transmission phase of the cycle is one of the most effective ways to prevent infection. The best way to break the transmission phase is thorough and frequent hand washing, and good personal hygiene.

- Shower or bathe daily
- Keep nails neat and trimmed
- No nail polish or false nails
- Jewelry should be kept to a minimum
- Wear a clean uniform daily (change uniform between facilities)

Common Infections

Upper Respiratory Tract Infection (URTI)	
<p>Common cold syndromes/pharyngitis: The resident must have at least 2 of the following:</p> <ul style="list-style-type: none"> • runny nose/sneezing • stuffy nose/congestion • sore throat/hoarseness difficulty in swallowing/dry cough • swollen or tender glands in the neck (cervical lymphadenopathy) <p>Comment: Fever may or may not be present. Symptoms must be new, and care must be taken to ensure that they are not caused by allergies.</p>	<p>Influenza-like illness: Both of the following criteria must be met:</p> <ul style="list-style-type: none"> • Fever (38°C) <p>The resident must have at least three of the following signs or symptoms:</p> <ul style="list-style-type: none"> • chills • new headache or eye pain • myalgias • malaise or loss of appetite • sore throat • new or increased dry cough <p>Comment: This diagnosis can be made only during influenza season.</p>
Lower Respiratory Tract Infections (LRTI)	
<p>Pneumonia: Both of the following criteria must be met:</p> <ul style="list-style-type: none"> • Interpretation of a chest radiograph as demonstrating pneumonia, probable pneumonia, or the presence of an infiltrate. If a previous radiograph exists for comparison, the infiltrate should be new. • The resident must have at least two of the signs and symptoms described under “other lower respiratory tract infections.” <p>Comment: Noninfectious causes of symptoms must be ruled out. In particular, congestive heart failure may produce symptoms and signs similar to those of respiratory infections.</p>	<p>Other (LRTI) bronchitis, tracheobronchitis: The resident must have at least three of the following signs or symptoms:</p> <ul style="list-style-type: none"> • new or increased cough • new or increased sputum production • fever (38°C) • pleuritic chest pain • new or increased physical findings on chest exam (rales, rhonchi, wheezes, or bronchial breathing) • one of the following indications of change in status or breathing difficulty: new/increased (SOB), or respiratory rate >25/min, or worsening mental or functional status <p>Comment: This diagnosis can be made only if no chest film was obtained or if a radiograph failed to confirm the presence of pneumonia.</p>
Urinary Tract Infections (UTI)	
Includes only symptomatic (UTI). One of the following criteria must be met:*	
<p>The resident does not have an indwelling urinary catheter and has at least three of the following signs and symptoms:</p> <ul style="list-style-type: none"> • fever (38°C) or chills, • new or increased burning pain on urination, frequency or urgency • new flank or suprapubic pain or tenderness • change in character of urine • worsening of mental or functional status (may be new or increased incontinence). 	<p>The resident has an indwelling catheter and has at least two of the following signs or symptoms:</p> <ul style="list-style-type: none"> • fever (38°C) or chills • new flank or suprapubic pain or tenderness • change in character of urine • worsening of mental or functional status <p>Comment: * It should be noted that urine culture results are not included in the criteria. Change in character may be clinical (e.g., new bloody urine, foul smell, or amount of sediment), or as reported by the laboratory (new pyuria or microscopic hematuria). For laboratory changes, this means that a previous urinalysis must have been negative.</p>
Eye Infections	
Must not be due to allergy or trauma to the conjunctiva.	

<p>Conjunctivitis: One of the following criteria must be met:</p> <ul style="list-style-type: none"> • Pus appearing from one or both eyes, present for at least 24 hours. • New or increased conjunctival redness, with or without itching or pain, present for at least 24 hours. <p>Comment: Symptoms must not be due to allergy or trauma to the conjunctiva.</p>		
<p>Ear infection One of the following criteria must be met:</p> <ul style="list-style-type: none"> • Diagnosis by a physician of any ear infection. • New drainage from one or both ears. (Non-purulent drainage must be accompanied by additional symptoms, such as ear pain or redness.) 		
<p>Mouth and Peri-Oral infections</p> <ul style="list-style-type: none"> • Including oral candidiasis must be diagnosed by a physician or a dentist. • Sinusitis: The diagnosis of sinusitis must be made by a physician. 		
<p>Skin infections</p>		
<p>Cellulitis/soft tissue/wound infection: One of the following criteria must be met:</p> <ol style="list-style-type: none"> 1. The resident must have four or more of the following signs or symptoms: <ul style="list-style-type: none"> • fever (38°C) • heat • redness • swelling • tenderness or pain • serous drainage 2. Pus present at a wound, skin, or soft tissue site. 		<p>Fungal skin infection: The resident must have both:</p> <ul style="list-style-type: none"> • a maculopapular rash • either physician diagnosis or laboratory confirmation.
<p>Herpes simplex and herpes zoster infection: For a diagnosis of cold sores or shingles, the resident must have both:</p> <ul style="list-style-type: none"> • a vesicular rash • either physician diagnosis or laboratory confirmation. 		<p>Scabies The resident must have both:</p> <ul style="list-style-type: none"> • a maculopapular and/or itching rash • either physician diagnosis or laboratory confirmation. <p>Comment: Care must be taken to ensure that rash is not an allergic reaction or secondary to skin irritation.</p>
<p>Gastrointestinal Tract Infection (GTI) Rule out noninfectious causes of symptoms (i.e. new medications). One of the following criteria must be met:</p>		
Two or more loose or watery stools above what is normal for the resident within a 24-hour period.	Two or more episodes of vomiting in a 24-hour period.	Both of the following: <ul style="list-style-type: none"> • A stool culture positive for a pathogen (Salmonella, Shigelloses, <i>E. coli</i> O157:H7, Campylobacter); or a toxin assay positive for <i>C. difficile</i> toxin. • At least one symptom or sign compatible with gastrointestinal tract infection (nausea, vomiting, abdominal pain or tenderness, diarrhea).
<p>Systemic Infections</p>		

Primary bloodstream infection: One of the following criteria must be met:

- Two or more blood cultures positive for the same organism.
- A single blood culture documented with an organism thought not to be a contaminant, and at least one of the following:
 - fever 38°C or hypothermia < 34.5°C
 - drop in systolic blood pressure of 30 mmHg from baseline
 - worsening of mental or functional status

Comment: Bloodstream infections related to infection at another site are reported as secondary bloodstream infections, and are not included as separate infections.

Fever of Unknown Origin (FUO)

The resident must have documentation in the medical record of fever (38°C) on two or more occasions at least 12 hours apart in any 3-day period, with no known infectious or noninfectious cause.

(McGeer et al., 1991)

Principles of Transmission of Microorganisms

Disease-causing microorganisms (pathogens) are transmitted by many different routes within health care settings.

Contact Transmission

Direct contact transmission occurs when a person acquires pathogens from physical contact with an infected or colonized person directly without an intermediate contaminated object or person. Examples include:

- Blood or body fluids from an infected person enters a susceptible person's body through contact with a mucous membrane or breaks in the skin.
- Mites from a scabies-infested person to another person through ungloved contact with the skin.
- A HCW develops herpetic whitlow on a finger after providing oral care to a resident without using gloves.



Indirect contact transmission involves the transfer of pathogens through a contaminated object or person.

Examples include:

- HCWs' hands may transmit pathogens after touching an infected person or body fluids or a contaminated object, then touch another person without decontaminating or washing hand.
- Resident-care devices (e.g. thermometers, glucose monitoring devices) shared between residents without cleaning and disinfecting in-between.
- Shared activity equipment may become vehicles for transmitting pathogens.
- Clothing, uniforms, gowns used as personal protective equipment may be contaminated after caring for an infected or colonized resident, creating the potential to transfer the pathogens to successive residents.

Some pathogens spread by direct and indirect contact are: rotavirus and Norovirus (also via aerosol), hepatitis B virus, respiratory syncytial virus (RSV), herpes simplex viruses, *Clostridium difficile*, *Staphylococcus aureus* (including Methicillin-Resistant strains – MRSA), and Vancomycin-Resistant Enterococcus (VRE). Additional precautions will be warranted when entering a resident's room.

Droplet Transmission

Droplet transmission occurs through large droplets, generally over five microns in diameter, coming from an infected person's respiratory tract during coughing, sneezing, talking, or during procedures such as suctioning, endotracheal intubation, cough induction by chest physiotherapy and cardiopulmonary resuscitation. These droplets carrying pathogens are propelled a short distance in the air before coming in contact with the mucus membrane of the nose, eyes, and less often the mouth, of a susceptible person. Large droplets do not remain suspended for long, or they lose their infectivity over long distances, so special ventilation is not required. A distance of under 3 feet around the source used to be defined as the area of risk. Recent studies suggest that droplets could reach persons located 6 feet or more from their source.



Some pathogens transmitted by droplets are: influenza virus, adenovirus and rhinovirus (cold viruses), SARS-associated coronavirus (SARS-CoV), *Bordetella pertussis* (whooping cough), group A streptococcus, *Neisseria meningitides*, *Mycoplasma pneumoniae*, rubella, parainfluenza virus, and RSV.

Airborne Transmission

Airborne transmission occurs by spreading of airborne droplet nuclei (particles arising from desiccation of suspended droplets) or small particles in the respirable size range containing pathogens that remain infective over time and distance. Airborne particles fewer than 100 microns can remain suspended in air when air current speeds exceed the settling speed of the particles. Pathogens may be inhaled by susceptible persons some distance away. Special air handling and ventilation systems to contain and safely remove the pathogen are required.



Pathogens of concern include *Mycobacterium tuberculosis*, varicella-zoster virus (chickenpox), localized herpes zoster (shingles) until disseminated infection is ruled out, rubeola virus (measles), variola virus (smallpox – more often spread by droplet and contact but possibly airborne), and *Aspergillus* spores.

Precautionary Measures

Routine Practices (RP): are applied to all residents with suspected or confirmed infections, based on the HCWs' interactions with the resident and the extent of anticipated blood, body fluid, or pathogen exposure. Routine Practices include:

Hand Hygiene

Hand hygiene is the single best preventative measure, when there is evidence of HCW compliance. A multifaceted, multidisciplinary, facility wide hand hygiene program, involving administration, leadership, education, champions and environmental enablers case effect to reduce incidence of HAI.

- Avoid unnecessary touching of surfaces in close proximity to the resident when providing care.
- Sanitize hands with an alcohol-based hand rub **when** hands are not visibly soiled. Less preferably but required when hands are visibly soiled, wash hands with soap and water.
 - Before having direct contact with a resident with suspected or confirmed infections.
 - After contact with blood, body fluids or excretions, mucous membranes, non-intact skin, or wound dressings.
 - After contact with a resident's intact skin (e.g. when taking a pulse or blood pressure or lifting a resident).
 - When hands will be moving from a contaminated body site to a clean body site during resident care.
 - After contact with objects in the immediate vicinity of a resident.
 - After removing gloves and other PPE.
- Wash hands with a plain or antimicrobial soap and water **when** hands are visibly dirty, contaminated with proteinaceous material, or visibly soiled with blood or body fluids, AND when contact with bacterial spores is likely to have occurred.

Use of PPE

PPE is used to prevent transmission of infectious agents from both patient to patient and patient to staff.

- Wear PPE that fit.
- Remove and discard PPE before leaving the resident's room or cubicle using proper technique to avoid contamination.
- Do not reuse disposable PPE as they cannot be adequately cleaned and disinfected.
- Wear **disposable medical examination gloves** for providing direct care to protect the hands from contamination when contact with blood or other potentially infectious materials, mucous membranes, non-intact skin, or potentially contaminated intact skin (e.g. of a resident incontinent of stool or urine) is anticipated. Do NOT wear the same pair of gloves for more than one resident. Change gloves during resident care if the hands will move from a contaminated body site to a clean body site.
- Wear **reusable utility gloves** for cleaning the environment or medical equipment.
- Wear a **gown** for direct resident contact if the resident has uncontained secretions or excretions to protect skin and prevent soiling or contamination of clothing.
- Wear **mouth, nose, and eye protection** to protect the mucous membranes of the eyes, nose and mouth during resident care activities that are likely to generate splashes or sprays of blood, body fluids, secretions and excretions.
- Wear a **face shield** that fully covers the front and sides of the face, or a **mask with attached shield**, or a **mask and goggles** during aerosol-generating procedures (e.g. bronchoscopy, suctioning of the respiratory tract not using in-line suction catheters, endotracheal intubation) in residents not suspected of being infected with an agent requiring respiratory protection.

Respiratory Hygiene / Cough Etiquette

- Applied broadly to all persons (HCWs, residents and visitors) entering the facility with signs of illness including cough, congestion, runny nose, or increased respiratory secretions.

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- Aims to control the source of undiagnosed transmissible respiratory infections.
 - Cover the mouth and nose with a tissue when coughing and dispose of used tissues promptly.
 - Perform hand hygiene after contact with respiratory secretions.
 - Post signs at entrances, elevators, cafeterias, etc. with instructions to anyone with respiratory symptoms to cover their mouths / noses when coughing or sneezing, use and dispose of tissues, and perform hand hygiene after hands have been in contact with respiratory secretions.
 - Provide tissues and no-touch receptacles (foot-pedal operated lid or open, plastic-lined waste basket) for disposal of tissues.
 - Provide resources and instructions for performing hand hygiene in or near common areas; provide conveniently-located dispensers of alcohol-based hand rubs and, where sinks are available, supplies for hand washing.
 - When tolerated and appropriate, offer masks to coughing residents and other symptomatic persons upon entry into the facility, and encourage them to maintain spatial separation, ideally at least one metre, from others in common areas.
 - Educate staff, residents and visitors to contain respiratory secretions, especially during seasonal outbreaks of viral respiratory tract infections.

Resident Placement

- Place residents who might spread infection to others (e.g. uncontained secretions, excretions or wound drainage) in a single room when available.
- Determine resident placement by assessing the route of spread of the known or suspected pathogen, the infected resident's risk for spreading the pathogen, other residents' risk of acquiring infection in the area or room, availability of single rooms, and if residents with the same infection could be cohorted.

Resident Care Equipment and Instrument / Devices (see sub-section on Cleaning and Disinfection)

Environmental Cleaning and Disinfection (see sub-section on Cleaning and Disinfection)

Textile and Laundry (see sub-section on Linen Handling)

Transmission-based Precautions: used in addition to RP when the spread of the pathogen is not completely interrupted by using RP alone, or when infection with epidemiologically-important pathogens are suspected or confirmed. Based on how the pathogens spread, these additional precautions are also known as transmission-based precautions, and they include Contact Precautions, Droplet Precautions, and Airborne Precautions. These precautions must be applied based on the clinical presentation and likely pathogens while waiting for laboratory confirmation. For additional information on the clinical conditions warranting additional precautions before the pathogens are identified, refer to the "Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings, June 2007" by Siegel et al. Efforts must be made to counteract possible adverse effects on the residents, e.g. anxiety, depression and other mood disturbances, perceptions of stigma, reduced contact with staff and fellow residents and visitors.

Contact precautions (CP): intended to prevent spread of pathogens by direct or indirect contact with an infected person and his/her environment. For example, where excessive wound drainage, fecal incontinence, or other bodily discharges could increase the risk of extensive environmental contamination and spread of infection. Discontinue CP after signs and symptoms of the infection have resolved, or according to pathogen-specific recommendations. NOTE: extend the duration of CP for immunosuppressed residents with viral infections due to prolonged shedding of the viral pathogen that may be transmitted to others.

Resident Placement

- For each case, balance infection risks to roommates, the infected person's risk factors that increase the likelihood of spread, and the potential adverse psychological impact on the infected or colonized resident.

Use of PPE

- Don **gloves** upon entry into the room or cubicle when the HCW anticipates touching the resident's intact skin or surfaces and articles in the resident's vicinity.
- Don **gown** upon entry into the room or cubicle when anticipating that clothing will have direct contact with the resident or potentially contaminated environmental surfaces or equipment in the resident's vicinity.
- **Remove PPE** and perform hand hygiene before leaving the resident-care environment and take care to avoid clothing and skin contact with potentially contaminated environmental surfaces.

Resident Transport

- Limit residents transport and movement outside the room to medically-necessary purposes.
- When transport or movement is necessary, contain and cover any infected or colonized areas.
- Remove and dispose of contaminated PPE and perform hand hygiene prior to transporting residents.
- Don clean PPE to handle the resident at the transport destination.

Resident Care Equipment and Instruments / Devices

- Use disposable non-critical resident care equipment (e.g. blood pressure cuffs) or dedicate such equipment to the resident; clean and disinfect common use equipment for multiple residents before use on another resident.

Environmental Cleaning and Disinfection

- Prioritize rooms of residents on Contact Precautions (CP) for frequent cleaning and disinfection (e.g. at least daily), focusing on frequently-touched surfaces (e.g. bed rails, over the bed table, bedside commode, lavatory surfaces in resident bathrooms, doorknob) and equipment in the resident's immediate vicinity.

Droplet precautions (DP): intended to prevent spread of pathogens by close respiratory or mucous membrane contact with respiratory secretions generated during coughing, sneezing or talking. Discontinue DP after signs and symptoms have resolved or according to pathogen-specific recommendations. NOTE: extend duration of DP for immunosuppressed residents with viral infections due to prolonged shedding of the viral pathogen that may be spread to other people.

Resident Placement

- Assess each case by considering infection risks to roommates and available alternatives.
- Single room preferred; cohort if single room not available, keep spatial separation of more than one metre and draw the curtain between resident beds.

Use of PPE

- Don a surgical **mask** upon entry into the resident room or cubicle when anticipating close contact with infectious residents.
- Wearing **goggles or face shield** for close contact with residents who require DP may be helpful.

Resident Transport

- Limit transport and movement of residents outside the room to medically-necessary purposes.
- When transport or movement is necessary, instruct resident to wear a surgical mask and follow Respiratory Hygiene / Cough Etiquette.
- No mask is required for persons transporting residents on DP.

Airborne precautions (AP): designed to prevent spread of pathogens that remain infectious over long distances when suspended in the air. Discontinue AP according to pathogen-specific recommendations.

Resident Placement

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- Preferred placement in airborne infection isolation room (AIIR) with closed door:
 - 6 air changes per hour (existing facilities) or 9 air changes per hour (newly constructed facility), verified at least every 6 months.
 - Negative room air pressure relative to the corridor, verified at least every 6 months.
 - Direct air exhaust to the outside; if air recirculation is unavoidable, the air should be passed through a HEPA filters before being exhausted.
 - When an AIIR is not available, transfer the resident to a facility that has an available AIIR, or mask the resident and place in private room with door closed.
 - When the need for AIIR in the facility exceeds what is available (as in outbreaks):
 - Assess the safety of alternative room that does not meet engineering requirements for an AIIR.
 - Cohort residents presumed to have the same infection in areas of the facility away from other residents, especially those who are at increased risk for infection.

Personnel Restriction

- Whenever possible, non-immune HCWs should not care for residents with vaccine-preventable airborne diseases (e.g. measles, chickenpox, and smallpox).

Use of PPE

- Wear a **fit-tested N95** or higher level respirator on entry into the room of a resident with suspected or confirmed infections of:
 - Infectious pulmonary or laryngeal tuberculosis, or when infectious tuberculosis skin lesions are present and procedures that would aerosolize pathogens (e.g. irrigation, incision and drainage, whirlpool treatments) are performed.
 - Smallpox – vaccinated and unvaccinated HCWs should use respiratory protection due to the risk of a genetically engineered virus not covered by the vaccine, or of exposure to a very large viral load.
- For HCWs presumed to be immune to measles or varicella-zoster, it may be prudent to wear a respirator when caring for residents with known or suspected measles, chickenpox or disseminated zoster, as definite immunity is difficult to establish.
- For susceptible HCWs caring for residents with known or suspected measles, chickenpox or disseminated herpes zoster, it may be prudent to wear an N95 or higher level respirator than a surgical mask.

Resident Transport

- Limit transport and movement of residents outside the room to medically-necessary purposes.
- When transport or movement outside an AIIR is necessary, instruct resident to wear a surgical mask and follow Respiratory Hygiene / Cough Etiquette.
- For residents with chickenpox or smallpox skin lesions, or draining skin lesions of *Mycobacterium tuberculosis*, cover the affected area to prevent aerosolization of the pathogen in the skin lesions.
- HCWs transporting the resident on AP do not need to wear a mask or respirator during transport when the resident is wearing a surgical mask and skin lesions are covered.

Hand Hygiene

Hand hygiene is considered to be the most important measure to prevent the spread of infection!

Hands can play a major role in the indirect transmission of pathogens from surfaces to susceptible hosts. Therefore, hand washing facilities should be adequately located in LTCHs and RHs. “Readily accessible”, although not explicitly defined, means that a HCW must not have to travel through several doorways, halls, stairways, or use doorknobs or handles, in order to access the hand washing area.

Easy access minimizes the amount of time that contaminants remain in contact with skin, reduces the risk of cross contamination, and fosters an attitude of compliance due to accessibility of proper facilities.

Hand hygiene can be done with either plain soaps or antimicrobial products. Hand hygiene with plain soaps suspends microorganisms and allows them to be mechanically removed by rinsing under running water. Liquid, bar leaflet or powdered soap is acceptable for hand hygiene. Hand hygiene with antimicrobial products kills or inhibits the growth of microorganisms. This process is referred to as antisepsis.

Alcohol based hand rub (ABHR) should be located at point of care, to ensure health care providers can perform hand hygiene without leaving the client/resident. ABHRs are the preferred method to routinely decontaminate hands, when they are not visibly soiled, as they provide a quick kill of most transient microorganisms, as well ABHR is less time consuming and easier on skin.

Hands should be cared for so they do not become chapped or irritated. Using lotions can prevent this from occurring. It is important to note that petroleum-based lotions may weaken the integrity of latex gloves.

The Facts on Skin

- The skin of residents and HCWs can function as a reservoir for infectious agents and a vehicle for transfer of infectious agents to susceptible persons.
- The microbial flora of the skin consists of **resident** and **transient** microorganisms.
- **Resident microorganisms** persist and multiply on the skin, and are called the natural skin flora. They are very hard to remove with soap and water and often do not cause disease.
- **Transient microorganisms** are contaminants that usually survive for a limited period of time on the skin, and may be pathogens or disease causing organisms. Hand washing with soap and water is effective in removing many transient microorganisms.

Alcohol Hand Sanitizers

Most alcohol-based hand antiseptics contain ethanol, isopropanol, n-propanol, or a combination of two of these products. Concentrations are often expressed as a percentage by volume. The antimicrobial activity of alcohols results from their ability to denature proteins.

Alcohols have strong killing activity against Gram-positive and Gram-negative vegetative bacteria (including MRSA and VRE), *M. tuberculosis* and a variety of fungi. Unfortunately, they have limited activity against some non-enveloped (non-lipophilic) viruses and virtually no activity against bacterial spores or protozoan oocysts.

Alcohols are not good cleansing agents and their use is not recommended when hands are dirty or visibly contaminated with organic materials. However, when relatively small amounts of organic material are present, ethanol and isopropanol may reduce viable bacterial counts on hands but do not disqualify the need for handwashing with soap and water.

The efficacy of alcohol-based hand hygiene products is affected by a number of factors, including the type of alcohol used, the concentration of alcohol, the contact time, the volume of alcohol used, and whether the hands are wet when the alcohol is applied.

The WHO recommends an alcohol-based formulation for the following reasons:

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- To benefit from its evidence-based intrinsic advantages: fast acting and broad-spectrum activity, excellent killing characteristics against microorganisms, lack of potential emergency of resistance;
 - To overcome the lack of accessibility to sinks or other facilities to perform hand cleansing actions that require the use of water;
 - To improve compliance with hand hygiene by reducing the time required to perform it and the convenience of the method;
 - To reduce costs

Procedure for Hand Washing

- Remove jewelry before washing hands
- Thoroughly rinse your hands under warm running water
- Lather with soap using friction to cover all surfaces of your hands and fingers
- Continue for 10-15 seconds (make sure you get between your fingers and under fingernails)
- Rinse hands with warm running water
- Dry hands thoroughly with paper towel
- Turn off faucet with paper towel, if possible, to avoid re-contamination of your hands
- Use hand lotion from a single use dispenser to put moisture back into skin. This is especially helpful for frequent hand washers such as health care providers.

When to Wash Your Hands (at a minimum):

- When reporting to work, and before going home.
- Before and after eating and drinking.
- After sneezing, coughing, or blowing your nose.
- After touching your hair, face, nose etc.
- Before and after smoking.
- Before and after each resident contact.
- After touching a resident, or handling his or her belongings.
- Whenever hands are visibly soiled.
- After contact with any blood or body fluids.
- After removing gloves.
- After handling any contaminated items (i.e. linens, soiled diapers, garbage, etc.).

Procedure for Using Alcohol Hand Sanitizer

(70% to 90% isopropanol or ethanol or a combination)

1. The hands should be free of dirt and organic materials.
2. Apply enough alcohol-based hand sanitizer (1.5 mL) to cover the entire surface of the hands and fingers, or a drop about the size of a nickel.
3. Rub the solution until dry.
 - The alcohol hand sanitizer may be used routinely for hand hygiene, unless hands are visibly soiled; then soap and water hand washing is required.
 - Always wash hands with soap and water after blood or body fluid exposure.

-
- It is not recommended to routinely wash hands with water after using alcohol hand sanitizer.

When to Use Alcohol Hand Sanitizer (70% to 90% isopropanol or ethanol or a combination)

- Only when hands are not visibly soiled.
- After contact with residents' intact skin (as in taking a pulse, blood pressure or repositioning a resident).
- After contact with inanimate objects (including medical equipment).
- Before donning gloves.
- Before entering a resident's room.
- Before exiting a resident's room.
- Ask residents to use prior to eating or participating in group activities.
- Residents may use alcohol hand sanitizer when hands are not visibly soiled.

Advantages of Alcohol Hand Sanitizer

- Active against all bacteria and most clinically important viruses and fungi.
- Rapidly kills microorganisms.
- Spreads quickly across the skin.
- Evaporates quickly.
- Leaves an emollient on hands which prevents drying and cracking.
- No sink rinse required.

Disadvantage of Alcohol Hand Sanitizer

- Very poor activity against bacterial spores, (i.e. *C. difficile*), protozoan cysts and oocysts, and certain non-enveloped (non-lipophilic) viruses (i.e. Norovirus, hepatitis A virus, rhinoviruses, polioviruses, coxsackieviruses).

Routine Practices and Policies in the IPAC Manual

To prevent and control the spread of microorganisms within a health care facility, policies should be in place to ensure that routine practices are being followed. Under the Occupational Health & Safety Act, R.S.O. 1990, c.O.1, which is enforced by the Ministry of Labour, the employer and the employees have responsibilities regarding the provision of a safe and healthy work environment.

Policies on Routine Practices should outline the following:

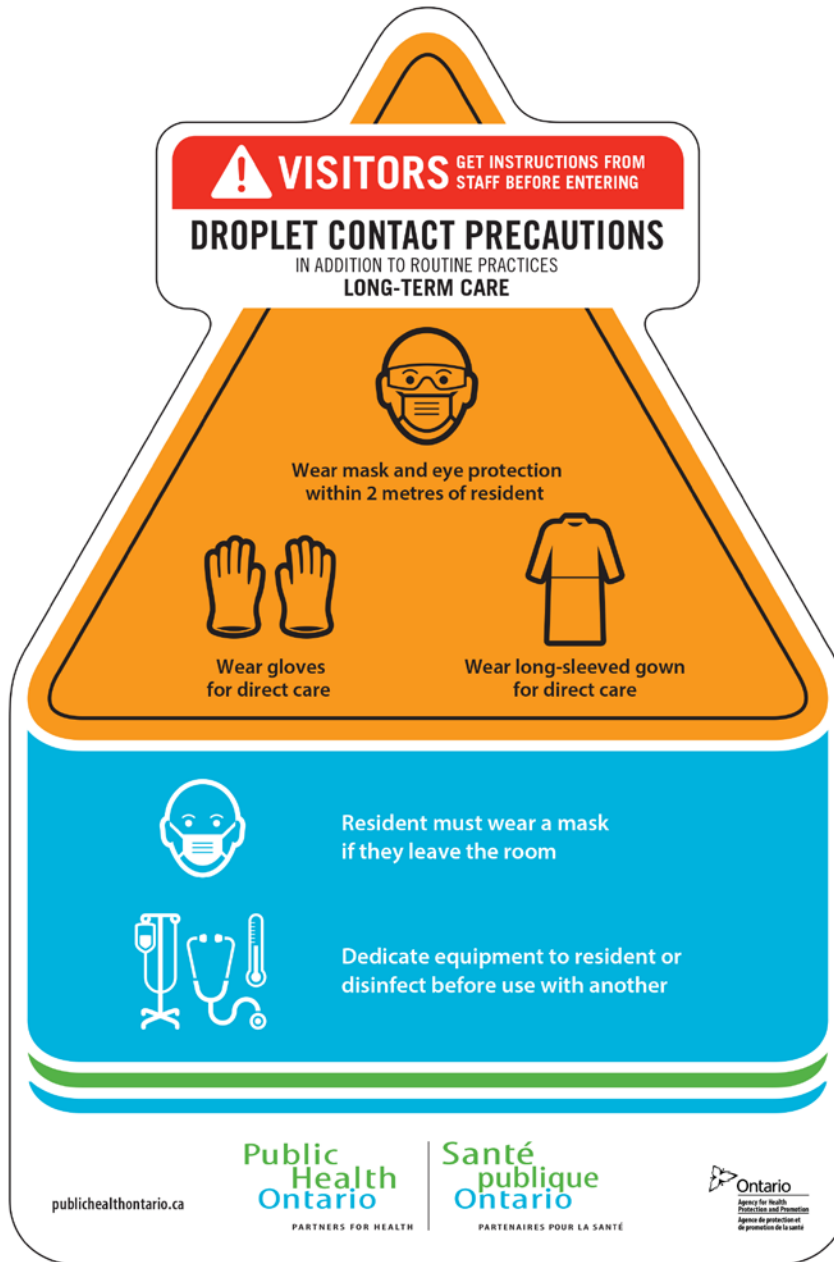
- Hand hygiene with proper hand washing technique is recognized as the most important method in preventing the transmission of infections.
- The use of alcohol hand sanitizer is also recommended before and after any direct contact with a resident.
- The responsibility of the employer of a LTCH and RH is to train employees on when it is appropriate to wear PPE and how to wear and take off PPE correctly.
- The responsibility of all employees to know when/how to wear, and take off PPE.

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- The responsibility of all employees to know where PPE is stored during routine work, as well as during outbreaks, and to understand the importance of notifying others if the inventory is low, or has completely run out.
 - Procedures are developed for all HCWs to understand and review the cleaning and disinfection of resident furniture, washrooms, environmental surfaces, and shared equipment.
 - Gloves (latex, vinyl or nitrile) are considered PPE and must be used when there is a risk of hand contact with a resident's blood, body fluids, secretions, excretions, non-intact skin or mucus membrane.
 - Gloves should be used as an additional measure, not as a substitute for hand hygiene.
 - Fluid resistant or impervious gown/apron is worn if contamination of uniform or clothing is anticipated.
 - The wearing of goggles, face shield and fluid resistant masks when required to protect the mucus membranes in eyes, nose and mouth during procedures and resident care activities likely to generate splashes or sprays of blood, body fluids, secretions or excretions.
 - PPE will be cleaned and disinfected, laundered, and/or disposed of properly (i.e. single use only), as per manufacturer's instructions.⁴

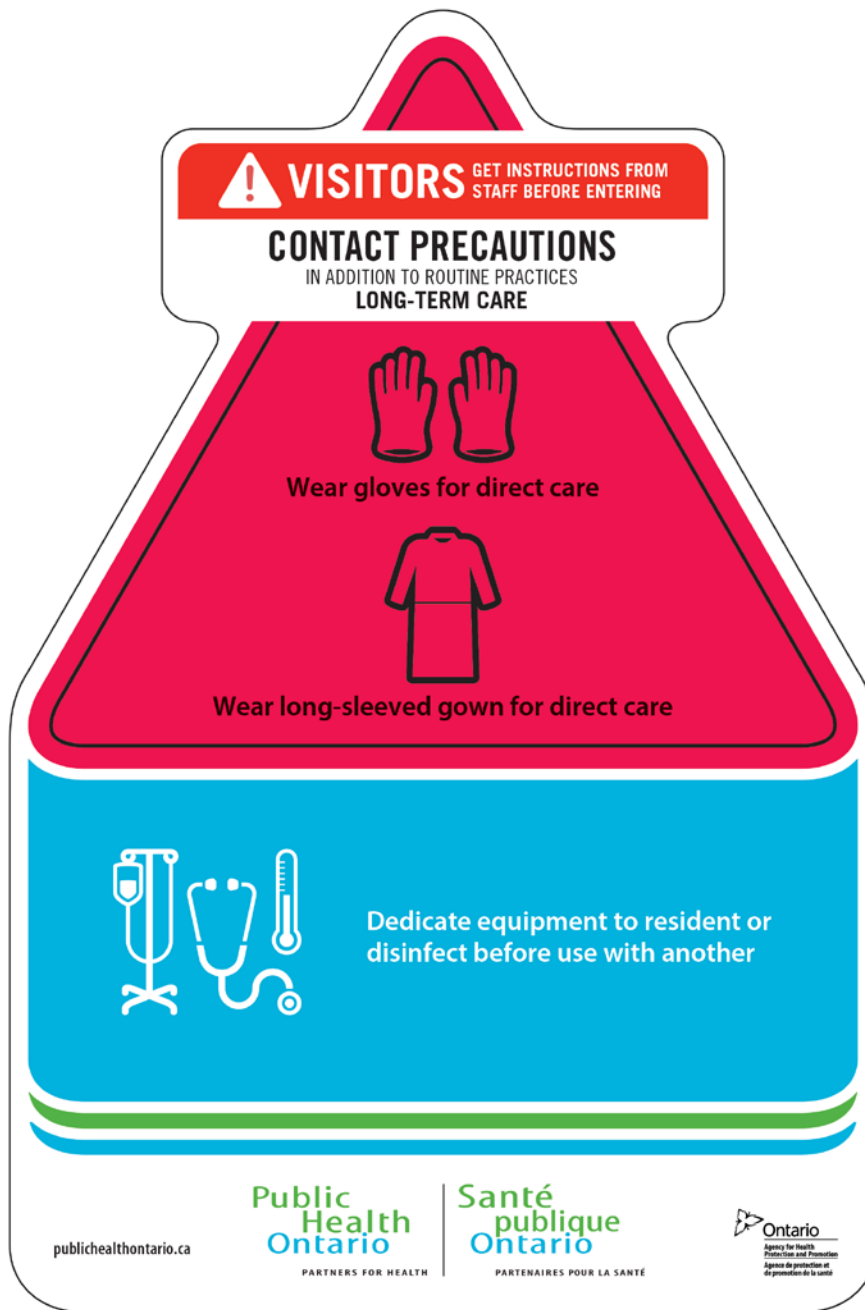
Signage

These signs are provided for reference. Respect for the resident's privacy should be taken into consideration whenever possible.

Droplet Precautions



Contact Precautions



Droplet / Contact Precautions

! VISITORS GET INSTRUCTIONS FROM STAFF BEFORE ENTERING

DROPLET PRECAUTIONS
IN ADDITION TO ROUTINE PRACTICES
LONG-TERM CARE

Wear mask and eye protection within 2 metres of resident

Resident must wear a mask if they leave the room

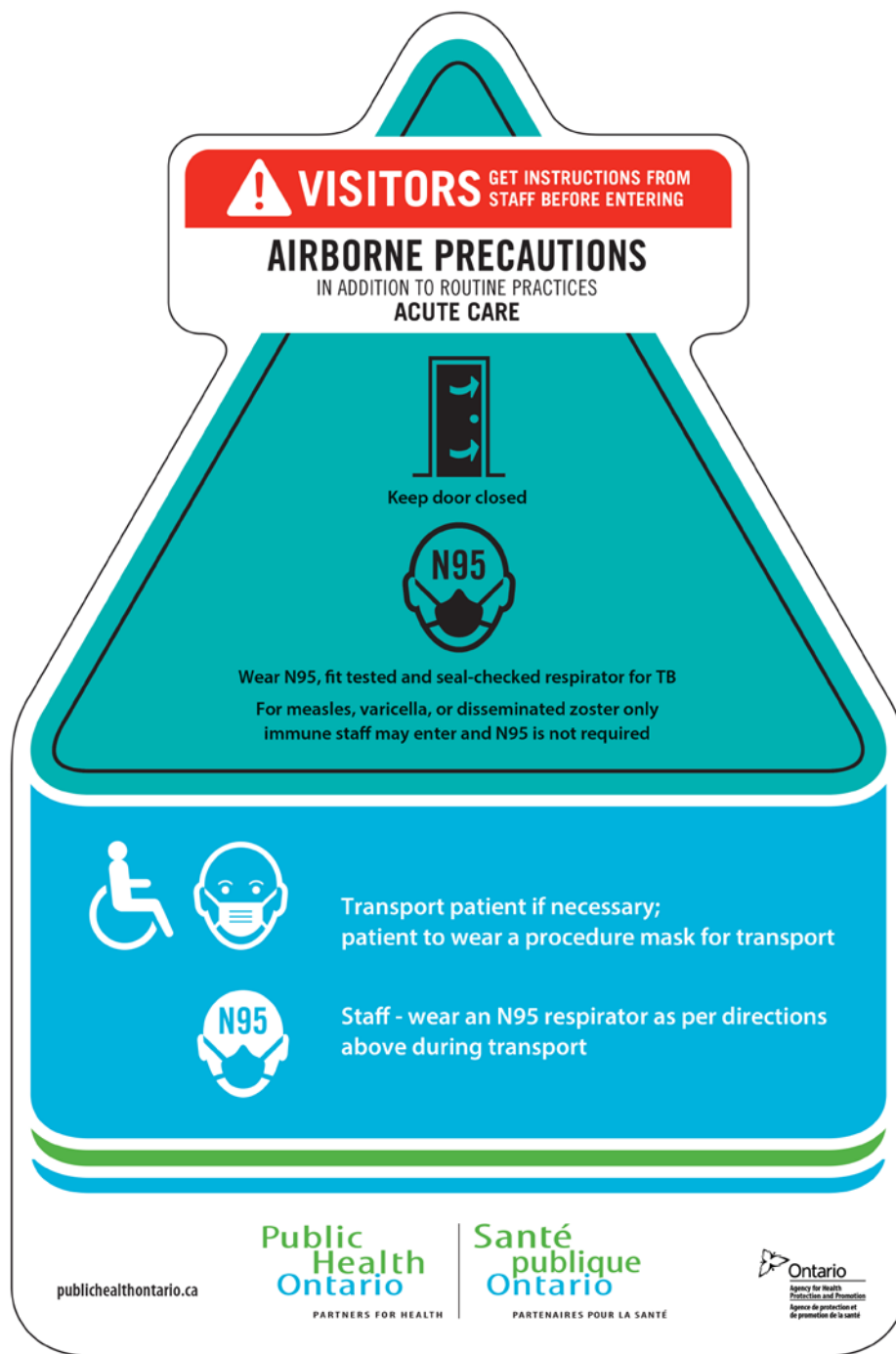
publichealthontario.ca

Public Health Ontario
PARTNERS FOR HEALTH

Santé publique Ontario
PARTENAIRES POUR LA SANTÉ

Ontario
Agency for Health Protection and Promotion
Agence de protection et de promotion de la santé

Airborne Precautions



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

Types of Personal Protective Equipment

Gloves: should be worn when it is anticipated that employees will have contact with blood or other potentially infectious materials. Gloves should be:

- Single use disposable (cannot be washed).
- Removed if torn, punctured, or when their ability to serve as a barrier is compromised.
- Vinyl or nitrile to prevent latex allergies in sensitive individuals.



Types of gloves	Suggested use for:	Not recommended for:
<p>Latex</p> <ul style="list-style-type: none"> • Preferred for tasks with moderate to high risk of exposure to potentially infectious materials and when a non-sterile hand covering is indicated. • Change every 15 to 30 minutes depending on the task or procedure, the amount of blood and fluid exposure and the contact with needles and other sharp instruments. 	<ul style="list-style-type: none"> • Direct resident care involving exposure to potentially infectious materials and for contact with blood and body fluid specimens or items contaminated with blood or body fluids. 	<ul style="list-style-type: none"> • Persons allergic or sensitive to latex and for prolonged contact with high-level disinfectants, such as glutaraldehyde.
<p>Nitrile</p> <ul style="list-style-type: none"> • Preferred for persons sensitive or allergic to latex AND may be at moderate to high risk of exposure to potentially infectious materials. • Typically has better chemical resistance than latex, especially to hydrocarbon-based products (e.g., products containing mineral oil, petrolatum or lanolin). 	<ul style="list-style-type: none"> • Persons allergic or sensitive to latex and who perform tasks involving prolonged exposure to blood, body fluids, chemotherapeutic agents, cleaning solutions and other chemicals. 	<ul style="list-style-type: none"> • Persons allergic or sensitive to nitrile compounds.
<p>Vinyl</p> <ul style="list-style-type: none"> • Appropriate for short-term tasks that involve minimal stress on the glove and low risk of exposure to potentially infectious materials. 	<ul style="list-style-type: none"> • Changing bed linens. • Briefly suctioning endotracheal secretions. • Emptying emesis basins. • Discontinuing an IV line. • Handling and preparing food. 	<ul style="list-style-type: none"> • Moderate to high risk of exposure to blood or body fluids. • Preparing, handling or administering chemotherapeutic agents. • Handling chemicals or other caustic agents. • Performing environmental

		services or housekeeping duties. <ul style="list-style-type: none"> • Persons sensitive or allergic to vinyl compounds.
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Hand hygiene: is recognized as the most important way to prevent the transmission of infection. Hands are to be washed after removing gloves and before taking off other PPE, especially masks and goggles.

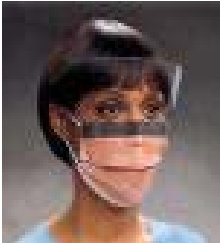
Antimicrobial soap: Soap (i.e. detergent) containing an antiseptic agent.

Alcohol-based Hand Sanitizer: 70% to 90% alcohol. They either contain isopropanol, or ethanol, or a combination of the two products.



They are also known as a waterless antiseptic agent. After applying such an agent, the hands are rubbed together until the agent has dried. Alcohols have very poor activity against bacterial spores, (e.g. *C. difficile*), protozoan cysts and oocysts, and certain non-enveloped (non-lipophilic) viruses (i.e. Norovirus, hepatitis A virus, rhinoviruses, polioviruses, coxsackieviruses).

Eye Protection: such as safety glasses, goggles or face shields to splashes from the side. They are to be worn whenever splashes droplets of blood or other potentially infectious materials may be eye, nose, or mouth contamination can occur. Eye protection single use disposable and/or washable (but must be cleaned before Prescription glasses are not acceptable as eye protection.



must provide a barrier sprays, splatters, or generated, and where equipment may be it can be reused).



Masks: securely cover the nose and mouth. Masks should be resistant to fluids, substantial enough to prevent droplet penetration, and be able to perform for a minimum of 45 minutes. As a guide, the mask should be changed after eight hours, or sooner if it becomes damaged, soiled or breathing becomes difficult. Leave the contaminated area and dispose of the mask. Masks are not necessarily designed for filtration efficiency, or to seal tightly to the face.

Surgical/procedure masks:

- Prevent large particles (droplets) from being expelled into the environment by the wearer,
- Protect the wearer from splashes of blood or other potentially infectious substances.

High efficiency respirators:



















- Protect the wearer from small particles (droplet nuclei) that remain suspended in the air and thus travel long distances.
- HCWs should be educated on the proper way to wear this type of mask and be properly fit tested.

Protective clothing: such as lab coats, aprons, fluid resistant disposable gowns, or similar garments that can protect uniforms as needed.



Personal Protective Equipment

Donning and Doffing PPE

Follow these steps to put on PPE	Follow these steps to take off PPE
<p>1. Hand Hygiene</p>  <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Wash hands with soap and water or alcohol based hand rub 	<p>1. Gloves</p>  <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Grasp outside edge near wrist <input checked="" type="checkbox"/> Peel away from hand, turning glove inside-out <input checked="" type="checkbox"/> Hold in opposite gloved hand <input checked="" type="checkbox"/> Slide ungloved finger under the wrist of the remaining glove <input checked="" type="checkbox"/> Peel off from inside, creating a bag for both gloves <input checked="" type="checkbox"/> Discard gloves  
<p>2. Gown</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Select appropriate type and size <input checked="" type="checkbox"/> Opening is in the back 	<p>2. Gown</p>  <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Unfasten ties <input checked="" type="checkbox"/> Peel gown away from neck and shoulder <input checked="" type="checkbox"/> Turn contaminated outside toward the inside <input checked="" type="checkbox"/> Fold or roll into a bundle <input checked="" type="checkbox"/> Discard or launder 
<p>3. Mask or N95 respirator</p>  <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Select a mask or fit tested N95 respirator <input checked="" type="checkbox"/> Place over nose, mouth and chin <input checked="" type="checkbox"/> Fit flexible nose piece over nose bridge <input checked="" type="checkbox"/> Secure on head with elastic or ties <input checked="" type="checkbox"/> Adjust to fit <input checked="" type="checkbox"/> N95: Perform a fit check – <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Inhale-respirator should collapse <input checked="" type="checkbox"/> Exhale-check for leakage around face 	<p>3. Hand Hygiene</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Prior to touching your face; wash hands with soap and water or alcohol based hand rub 
<p>4. Goggles/Face shield</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Position goggles over eyes <input checked="" type="checkbox"/> Position face shield over face and secure on brow with headband <input checked="" type="checkbox"/> Adjust to fit comfortably  	<p>4. Goggles/Face shield</p>  <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Grasp ear or head pieces with ungloved hands <input checked="" type="checkbox"/> Lift away from face <input checked="" type="checkbox"/> Place in designated receptacle for reprocessing or disposal <input checked="" type="checkbox"/> The front of the goggles are considered contaminated 
<p>5. Gloves</p>  <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Select correct type and size <input checked="" type="checkbox"/> Insert hands into gloves <input checked="" type="checkbox"/> Extend gloves over gown cuffs 	<p>5. Mask or N95 Respirator</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Untie the bottom then top tie <input checked="" type="checkbox"/> Remove from face using strings <input checked="" type="checkbox"/> Discard   

Reference:

Ontario Ministry of Health and Long-Term Care. Provincial Infectious Disease Advisory Committee. Routine Practices and Additional Precautions In All Health Care Settings. August,2009

6. Hand Hygiene

- Wash hands with soap and water or alcohol based hand rub



Linen Handling

Clean Linen

Clean linen should be handled carefully. Hold it away from your body or uniform. If clean linen should come in contact with anything that is contaminated (i.e. the floor, another resident), place it directly into a soiled linen hamper so that it can be rewashed.

Clean linen cart covers should be in place and used at all times to protect clean linens from contamination. Carts should not be placed near soiled linen hampers. A good rule of thumb is to have the carts at least one metre apart, which is the width of a doorway or hallway. Only the exact amount of clean linen required should be brought to a resident's room or ward. Do not store extra linen in the resident's room.

Soiled Linen

Soiled linen can be a source of infection and should be handled carefully.

- Gloves should be worn when handling grossly contaminated laundry.
- Wash hands before beginning every new task. Wash when you remove gloves and before going on to the next task.
- When collecting soiled laundry from the units, remove gloves whenever touching high use objects (i.e. doorknobs, handles, key codes).
- Soiled linen should be held away from the body and uniform.
- Deposit soiled linen immediately into the soiled linen hamper and replace cover.
- Minimize sorting or unnecessary handling of soiled linen.
- Never shake out dirty linen; this may cause germs to become airborne.

When handling soiled linen, laundry department workers should wear PPE, including gloves, and gown or apron to protect the body and uniform. Remove PPE when the task is completed and wash or discard as per facility policy.

Environmental Cleaning and Disinfection

Health care settings are complex environments that contain a large diversity of microbial flora, many of which constitute a risk to the residents, staff and visitors. Transmission of microorganisms within a health care setting is intricate and very different from transmission outside health care settings. High-touch environmental surfaces of the health care setting hold a greater risk than do public areas of non-health care organizations, due to the nature of activities performed.

It is recommended that ALL health care settings refer to the PIDAC Best Practices for Environmental Cleaning for Prevention and Control of Infections, as well as the RICN Environmental Tool Kit for particular direction and information. All policy and procedures within a facility should be based around these two documents.

In the long-term care setting, the role of environmental cleaning is important because it reduces the number and amount of infectious agents that may be present and may also eliminate routes of transfer of microorganisms from one person/object to another, thereby reducing the risk of infection.

Each long-term care facility should have policies and procedures in place to ensure that:

- Cleaning and disinfecting is a continuous event in the facility.
- Cleaning and disinfecting standards, frequency and accountability for cleaning and disinfecting are clearly defined.
- Cleaning and disinfecting schedules ensure that no area or item is missed from routine cleaning.
- Long-term care homes' requirements are met in relation to:
 - Safe disposal of clinical waste.
 - Safe handling of linen.
 - Food hygiene.
 - Pest control.

All long-term care facilities must devote adequate resources to environmental services that include:

- One individual with assigned overall responsibility for the care of the physical facility.
- Adequate human resources to thorough and timely cleaning and disinfection.
- Priority for cleaning and disinfecting given to resident care areas rather than to administrative and public areas.
- Procedures for environmental cleaning during an outbreak and provision for additional environmental cleaning capacity during outbreaks.
- Education and continuing education of cleaning staff.
- Monitoring of environmental cleanliness and results reported back appropriately to staff.
- Supervision of cleaning staff by those who are trained and knowledgeable in cleaning standards and practices.
- Ongoing review of procedures.

Finishes and Surfaces in Areas Where Care is Delivered

If you can't clean it....Don't buy it !!

Long-term care settings should have policies that include criteria when choosing furnishings and equipment for resident care areas. This includes donated furnishings and other donated items in the Health Care setting. Donated items must meet IPAC requirements for cleaning and disinfection. The ease of cleaning is an important consideration in the choice of materials for floors, ceilings, walls, equipment and furnishings. Materials and finishes must be able to withstand detergents, cleaners and disinfectants. Important characteristics of surfaces include:

- Ease of maintenance and repair

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- Cleanability.
 - Inability to support microbial growth.
 - Surface porosity.
 - Absence of seams.

Care and Storage of Cleaning & Disinfecting Supplies

All chemical cleaning agents and disinfectants should be appropriately labeled and stored in a manner that eliminates risk of contamination, inhalation, skin contact or personal injury. An automated dispensing system should be used to ensure integrity of dilution ratios and to eliminate the need for decanting. Calibration of the dispensing system should be regularly monitored. If a refillable bottle is filled with a disinfectant solution, it should never be topped up with fresh disinfectant. Always use a clean, dry appropriately-sized bottle, label the product and date it. The product should be discarded when past the expiry date for stability.

Cleaning equipment requires attention to avoid cross-transmission of microorganisms and proliferation in dirty environments. Tools and equipment used for cleaning and disinfecting must be cleaned and dried themselves between uses. Mop heads should be laundered daily. Cleaning carts should be equipped with a locked compartment for storage of hazardous substances and each cart should be locked at all times when not attended.

Equipment used to clean toilets (e.g. brushes) should not be carried from room-to-room. If feasible, the toilet brush should remain in the room or be one-time use disposable. In multi-bed rooms, a system should be developed for replacement of toilet brushes on a regular basis or as required. When choosing a tool for cleaning toilets, consideration should be given to equipment that will minimize splashing.

Sufficient housekeeping rooms/closets should be provided throughout the facility to maintain a clean and sanitary environment, with at least one room/closet per resident floor. In general, a housekeeping room/closet should be or have:

- A dedicated room, not used for other purposes.
- Maintained in accordance with good hygiene practices.
- Should have appropriate personal protective equipment (PPE) available
- Appropriate water supply and a sink/floor drain.
- Well ventilated.
- Suitable lighting.
- Easily accessible.
- Locks fitted to all doors.
- Allow for proper ergonomic movement within the room/closet.
- Never contain personal clothing or grooming supplies, food or beverages.
- Chemical storage that ensures chemicals are not damaged and may be safely accessed.
- Free from clutter to facilitate cleaning.
- Designed so that, whenever possible, buckets can be emptied without lifting them

Routine Cleaning

Cleaning: The physical removal of foreign materials such as dust, soil or organic material like blood, secretions, excretions and microorganisms. Cleaning physically removes, rather than kills, microorganisms. It also reduces the number of organisms and removes foreign materials (i.e. organic residue and inorganic salts) that interfere with sterilization or disinfection. It is accomplished with water, detergents and mechanical action. Thorough and meticulous cleaning is required before any equipment/device may be decontaminated, disinfected and/or sterilized.

Fomites: Objects in the inanimate environment that may become contaminated with microorganisms and serve as vehicles of transmission.

High-Touch Surfaces: High-touch surfaces are those that have frequent contact with hands. Examples include doorknobs, telephones, keyboards, light switches, and wall areas around the toilet.

Hotel Clean: A measure of cleanliness based on visual appearance that includes dust and dirt removal, waste disposal and cleaning of windows and surfaces. Hotel clean is the basic level of cleaning that takes place in all areas of a health care setting.

Hospital Clean: The measures of cleanliness routinely maintained in resident care areas of the health care setting. Hospital clean is 'Hotel Clean' with the addition of disinfection, increased frequency of cleaning, auditing and other infection control measures in resident care areas.

Low-Touch Surfaces: Surfaces that have minimal contact with hands. Examples include walls, ceilings, mirrors and window sills.

Resident Environment: In long-term care, this includes a resident's individual environment such as bed space and bathroom and personal mobility devices such as wheelchair and walker.

Health care facilities may be categorized into two components for the purposes of environmental cleaning: the hotel component and the hospital component. The hotel component is the area of the facility that is not involved in resident care; this includes public areas such as lobbies, common areas, offices, corridors, and elevators and stairwells. The hospital component is the area of the facility that is involved in resident care; this includes resident units (including nursing stations); procedure rooms; bathrooms; and diagnostic and treatment areas.

Environmental cleaning of these two component areas must be resourced differently in terms of cleaning priority, intensity, frequency and manpower. ***From a resident safety and staff safety perspective, hospital clean is the most important cleaning and resource priorities should be centred here.***

Components of Hotel Clean

- Floors and baseboards are free of stains, visible dust, spills and streaks
- Walls, ceilings and doors are free of visible dust, gross soil, streaks, spider webs and handprints
- All horizontal surfaces are free of visible dust or streaks (includes furniture, window ledges, overhead lights, phones, picture frames, carpets etc.)
- Bathroom fixtures including toilets, sinks, tubs and showers are free of streaks, soil, stains and soap scum
- Mirrors and windows are free of dust and streaks
- Dispensers are free of dust, soiling and residue and replaced/replenished when empty
- Stains
- Waste is disposed of appropriately
- Items that are broken, torn, cracked or malfunctioning are replaced

Components of Hospital Clean

Hotel Clean

+

- High touch surfaces in resident care areas are cleaned and disinfected with hospital disinfectant
- Non-critical medical equipment is cleaned and disinfected between residents

+

Cleaning practices are periodically monitored and audited with feedback and education

*Frequency of hospital clean should be determined by a risk assessment

Frequency of Routine Cleaning

The frequency of cleaning and disinfecting in a particular area or department depends on:

- Whether surfaces are high-touch or low-touch.
- The type of activity taking place in the area and the risk of infection associated with it (e.g. care area vs. meeting room).
- The vulnerability of residents housed in the area.
- The probability of contamination based on the amount of body fluid contamination surfaces in the area might have or be expected to have.

Using these criteria, each area or department in a health care setting may be evaluated and assigned a risk score for cleaning purposes. For more information on the risk stratification matrix to determine frequency of cleaning, see the

Best Practices for Environmental Cleaning for Infection Prevention and Control in All Health Care Settings, 2012. (Appendix B)

http://www.oahpp.ca/resources/documents/pidac/Environmental%20Cleaning%20BP_ENGLISH_FINAL_2012-07-15.pdf

Disinfection

Disinfection: The inactivation of disease-producing microorganisms. Disinfection does not kill high levels of bacterial spores. Medical equipment/devices and surfaces must be cleaned thoroughly before effective disinfection can take place.

Disinfectant: An antimicrobial agent capable of destroying microorganisms on inanimate surfaces. A disinfectant without specified target organisms on the container label is regarded only as a bactericide.

High-level Disinfectant: A disinfectant that destroys vegetative bacteria, mycobacteria, fungi, viruses, but not necessarily bacterial spores.

Low-level Disinfectant: A disinfectant that kills most vegetative bacteria, some fungi and enveloped (lipid) viruses. Low level disinfectants do not kill mycobacteria or bacterial spores.

Chemosterilant: An antimicrobial agent capable of destroying all forms of microorganisms (including bacterial spores) on inanimate surfaces.

Sporicide: An antimicrobial agent capable of destroying bacterial spores.

Virucide: An antimicrobial agent capable of destroying viruses.

Bactericide: An antimicrobial agent capable of destroying bacteria, but not necessarily bacterial spores or mycobacteria.

Germicide: Synonymous with disinfectant.

Fungicide: An antimicrobial agent capable of destroying fungi, including their spores.

Mycobactericide: An antimicrobial agent capable of destroying mycobacteria.

Tuberculocide: Synonymous with mycobactericide.

Disinfectants rapidly kill or inactivate most infectious agents. When choosing a disinfectant, the following factors should be considered:

- disinfectant must have a drug identification number (DIN) from Health Canada
- nature of the item to be disinfected
- innate resistance of expected microorganisms to the inactivating effects of the disinfectant
- amount of organic soil present
- type and concentration of disinfectant used
- duration of contact time required for efficacy at the usual room temperature of the long-term care setting
- occupational health considerations
- environmental protection

Low level disinfectants for environmental disinfection use in all health care settings:

- Alcohols
- Chlorine
- Phenolics
- Quaternary Ammonium Compounds (QUATs)
- Iodophors
- Accelerated Hydrogen Peroxide (AHP)

Note: New term for AHP is: Hydrogen Peroxide Enhanced Action Formulation (HP-EAF). Definition: a formulation of hydrogen peroxide that contains surfactants, wetting agents and chelating agents. The resulting synergy makes it a powerful oxidizer that can rapidly achieve broad spectrum disinfection for environmental surfaces and non-critical devices.

Reference:

Best Practices for Environmental Cleaning for Infection Prevention and Control in All Health Care Settings, 2012.
http://www.publichealthontario.ca/en/eRepository/Best_Practices_Environmental_Cleaning_2012.pdf

Reprocessing of Medical Equipment and Devices

Medical equipment/device: Any instrument, apparatus, appliance, material, or other article, whether used alone or in combination, intended by the manufacturer to be used for human beings for the purpose of diagnosis,

prevention, monitoring, treatment or alleviation of disease, injury or handicap; investigation, replacement, or modification of the anatomy or of a physiological process; or control of conception.

Reprocessing: The steps performed to prepare used medical equipment/devices for use (e.g. cleaning, disinfection, sterilization).

Single patient use: Medical equipment/device that may be used on a single resident and may be reused on the same resident, but may not be used on other residents.

Single-use/disposable: Medical equipment/device designated by the manufacturer for single-use only. Single-use equipment/devices must not be reprocessed.

It is strongly recommended that catheters, drains, and any other medical equipment with small lumens be designated single-use and not be reprocessed and reused. Needles must be single-use.

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

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

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

- A corporate strategy for dealing with single-use medical equipment/devices.
- Adequate review when new equipment is being considered for purchase.
- Centralized area for reprocessing.
- Training of all staff who do reprocessing.
- Written policies and procedures for each type of medical equipment/device that is reprocessed.
- Validation of cleanliness, sterility and function of the reprocessed equipment/device.
- Continual monitoring of reprocessing procedures to ensure quality.

Factors Affecting the Efficacy of the Reprocessing Procedure

Many factors affect the efficacy of reprocessing, particularly when chemical reprocessing is used. These factors include:

- Cleanliness of the surface of the equipment/device.
 - Many chemical disinfectants are inactivated by organic material.
 - The greater the bioburden, the more difficult it is to disinfect or sterilize the equipment/device.
- Type and concentration of the product.
 - Products must be mixed according to manufacturer's recommendations.
 - Equipment should be dried after cleaning but before immersing in disinfectant to prevent dilution of the disinfectant.
 - Discard solutions on or before expiry dates.
 - Use chemical test strips to assess the efficacy of all disinfectants.
 - Some microorganisms are more resistant to germicidal chemicals.
- Duration and temperature of exposure to the product.
 - Do not exceed the manufacturer's recommendations for maximum exposure time as some chemicals may cause damage to the medical equipment/device.
 - All surfaces of the article must be in direct contact with the disinfectant.

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- Physical and chemical properties of the equipment/device being reprocessed or the surrounding environment.
 - Water hardness can affect some disinfectants.
 - Excessive humidity may compromise sterile wrappings.
 - The pH of the solutions may be important as extremes of acidity or alkalinity can limit growth of microorganisms or alter the activity of disinfectants.
 - Materials such as rubber and plastic may require special treatment.
 - Hinges, cracks, crevices, clamps, valves, joints, leur locks and surface pores on the equipment/device may impede successful disinfection.
 - Devices not readily dismantled (arthroscopy forceps) may be difficult to clean

Transportation and Handling of Clean and Contaminated Medical Equipment/Devices

Clean medical equipment/devices should be transported throughout the long-term care facility in a manner that prevents contamination prior to use on a resident. If cleaning cannot be done immediately following use, the medical equipment/device should be submerged in tepid water and/or detergent to prevent organic matter from drying on it. Gross soil should be removed immediately at point of use if the cleaning process cannot be completed immediately after use. Soiled medical equipment/devices should be handled in a manner that reduces the risk of exposure and/or injury to staff and residents, or contamination of environmental surfaces. This can be achieved by:

- Using closed carts or covered containers with easily cleanable surfaces for handling and transporting clean and soiled medical equipment/devices.
- Transporting soiled equipment/devices by direct routes to areas where cleaning will be done.
- Cleaning containers or carts used to transport soiled items after each use.
- Disposable sharps shall be disposed of in an appropriate puncture resistant sharps container at point of use, prior to transportation

Sterilization of Reusable Medical Equipment/Devices

Sterilization is the elimination of all disease-producing microorganisms, including spores (e.g. Clostridium and Bacillus species). Prions are not susceptible to routine sterilization. The preferred method for heat-resistant equipment/devices is steam sterilization (pre-vacuum sterilizers are preferred). For items that cannot withstand heat sterilization, certain chemical products are available to achieve sterilization. Boiling, ultraviolet radiation, microwave ovens, and glass bead sterilizers are not acceptable methods of sterilization. Chemiclaves, which use chemical-vapours to sterilize, are not recommended due to the environmental and occupational risks associated with them.

The sterilization process requires testing, monitoring and auditing including:

- Mechanical monitoring – time, temperature, pressure is recorded.
- Chemical monitoring – each pack must have external chemical indicators that change colour upon exposure to the appropriate sterilant.
- Biological monitoring – spore-laden strips or vials are used to ensure sterility is reached.
- Specific monitoring for specific sterilizers – various sterilizers will require additional quality assurance measures.

Sterility must be maintained until point of use. The shelf life of a sterile package is event related rather than time related. Event related shelf life is based on the concept that items that have been properly decontaminated, wrapped, sterilized, stored and handled will remain sterile indefinitely, unless the integrity of the package is compromised (e.g. open, wet, dirty). Medical equipment/devices purchased as sterile must be used before the expiration date if one is given. Sterile packages that lose their integrity must be re-sterilized prior to use.

Reprocessed medical equipment/devices shall be stored in a clean, dry location in a manner that minimizes contamination or damage. Containers used for storage of clean equipment/devices should be moisture-resistant and cleanable (e.g. cardboard should not be used). Store equipment/devices in a clean, dry, dust-free area (closed shelves), not at floor level, and at least one meter away from debris, drains, moisture and vermin to prevent contamination.

Reference:

Best Practices for Environmental Cleaning for Infection Prevention and Control in All Health Care Settings, 2012.

http://www.publichealthontario.ca/en/eRepository/Best_Practices_Environmental_Cleaning_2012.pdf

Animals in Long-Term Care Homes and Retirement Homes

Domestic animals may be present in LTCHs and RHs as pets or as partners in pet therapy. Wild animals may occasionally enter the facility by accident. Persons in LTCHs and RHs may receive conflicting medical advice about keeping pets, as animals may pass germs or parasites to people (especially those with a weakened immune system). However, residents may have already developed immunities to their pets' germs, so keeping pets may not actually cause significant health risks. The important point is to encourage and educate residents and staff about hygiene (i.e. hand washing) and sanitary practices after handling pets. The same Routine Practices that help protect against communicable diseases from other humans also apply to pets.

Diseases acquired from pets

Animal diseases can spread to people in LTCHs, RHs and other facilities via bites, scratches, aerosols, parasites on their bodies, accidental ingestion, or contact with contaminated soil, food or water. While domesticated animals such as dogs and cats tend to have fewer risks for disease transmission because of their long histories of living with humans, they can still harbour pathogens such as VRE and MRSA. To reduce the risks of transmitting animal diseases to humans, consider the following: obtain the pet from a reputable domestic source; seek regular veterinary care including recommended vaccines and preventive medications; provide an animal diet of uncontaminated food and water; and provide flea and tick control for the animal. Wild (exotic) animals, even if born in captivity, can present greater health risks to humans because they have less predictable behaviors, there may be fewer effective vaccines, and they may have germs not usually encountered by persons in Ontario or Canada.

Precautions around resident animals

Some LTCHs and RHs are adopting more home-like environments for residents, including allowing residents to keep animals on site. Issues that must be considered before embarking on such a program include:

- Whether the animals will come into direct contact with residents and/or be allowed to roam freely in the facility.
- How the staff will provide care (including feeding) for the animals.
- How to manage residents' allergies, asthma, and phobias.
- Measures to restrict the animals from areas where food is prepared, handled, stored or served, except for service animals which are allowed to access areas where food is served.
- Precautionary measures to prevent bites and scratches.
- Measures to properly manage the disposal of animal feces and urine, hence preventing environmental contamination.

How to avoid getting sick from your pet

The risk of acquiring diseases from pets can be reduced by paying attention to the following:

- Before selecting a pet, find out from the veterinarian which diseases the animal might be susceptible to. Ask about worms and parasites. Describe to the veterinarian all the environments where a pet will spend time, and other animals with which it will interact.
- Make sure to take good care of the pet and its environment, manage its behaviour, and provide for regular veterinary checkups.

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- Ensure that the pet remains healthy, has all vaccinations and preventive medications as needed, and has effective flea and tick control. Ontario owners are required by law to vaccinate their cats and dogs against rabies.
 - Don't put anything that the pet has had contact with into the mouth (this includes hair, scales, feathers, droppings or body fluids). That means no licks of the ice cream cone!
 - Avoid inhaling the pet's secretions (no sleeping nose-to-nose), dried droppings (which can become airborne dust), litter dust, or water sources. All aquariums should have properly fitted lids.
 - Wear disposable gloves and a mask, if necessary, when cleaning up areas soiled by pets. Use cleaning solutions and disinfect the area with an appropriate disinfectant. Dispose of cleaning debris in a plastic bag that is securely fastened.
 - Wash hands thoroughly after contact with the pet, its faeces or body fluids, or items it has touched.

Precautions around pet therapy animals

All LTCHs and RHs should develop a policy for pet therapy. This type of program should only be instituted after careful consideration of resident allergies, physical constraints of the building to provide all the pet's needs, and potential fears of residents and staff of particular pets.

It is recommended that:

- All resident, staff or visitor pets that visit the facility, as part of the pet therapy program, be cared for under supervision of a licensed veterinarian. As such, pets should be in good health, be up-to-date with vaccination according to provincial regulations and preventive medications (e.g. heartworm prevention) as determined by a licensed veterinarian. The animals should also be free of any parasites (e.g. fleas and ticks) and should have no sutures, open wounds, or obvious dermatologic lesions that could be associated with bacterial, fungal, or viral infections or parasitic infestations.
- All pets that are invited into the facility should be friendly, not aggressive, and well behaved. They should also be clean (e.g. bathing within 24 hours of a visit) to remove allergens in saliva, dander and/or urine and well-groomed to remove dead hair to minimize allergic responses.
- Some reptiles or amphibians (i.e. snakes, turtles, salamanders etc.) are not appropriate for pet therapy as they are known carriers of *Salmonella* bacteria that are easily transmissible on hands.
- Using non-human primates as therapy animals is not encouraged due to concerns over potential disease spread from and unpredictable behaviour of these animals
- Rodents, exotic species, wild/domestic animals (i.e. wolf-dog hybrids), and wild animals whose behaviour is unpredictable should be excluded from pet therapy.
- Incorporating young animals (under 1 years of age) into the pet therapy program is not encouraged because of issues regarding unpredictable behaviour and fecal/urinal elimination control. Also, the immune systems of very young puppies and kittens are not completely developed, placing the health of these animals at risk.
- No pets are allowed in areas where food is being prepared or served.
- Pets belonging to the facility must have someone assigned to care and maintain regular visits to a veterinarian. Visiting pets should be supervised by persons in good health who know the animals and their behaviour, and who are trained in the activities.

Concerns around service animals

A service animal is an animal trained to provide assistance to a person (an employee, a visitor, or a resident) because of a disability and is not considered a pet. In Ontario, a service animal is an animal for a person with a disability if it is readily apparent that the animal is used by the person for reasons relating to his/her disability, or if the person provides a letter from a physician or nurse confirming that the person requires the animal for reasons relating to the disability. Providers of goods or services are required by law to ensure that a person with a disability accompanied by a service animal is permitted to enter the premises with the animal and to keep the animal with him/her unless the animal is otherwise excluded by law.

There is no evidence to suggest that service animals pose a more significant risk of transmitting infection than people, as long as the animal is healthy, clean, vaccinated, well-behaved and well-trained. Service animals should, therefore, be allowed to enter areas where HCWs, visitors and residents can access without taking additional precautions to prevent disease transmission. Similarly, if a resident with weakened immune system is able to receive visitors without using protective garments or equipment, exclusion of service animals from this area would be unnecessary.

In determining if and when a service animal should be excluded from a particular area, the facility needs to assess if the animal poses a significant risk to the health or safety of other persons in a particular area that cannot be mitigated or eliminated by modifying policies, practices or procedures. Such assessments should be based on the actual behaviour of the particular animal, not on speculation about how the animal might behave. Consider also the nature of the risk (duration and severity), the likelihood that injury will occur, and whether reasonable modifications of policies, practices or procedures will mitigate the risk. The person with a disability should contribute to the risk assessment. Remember that a person with a disability is entitled to independent access, and a service animal cannot be excluded just because the facility perceives a lack of need for the animal.

While care of the service animal remains the responsibility of the person with the disability, the facility should discuss with the person around an alternate plan of care for the animal in the event the person is unable or unwilling to provide that care. After a service animal leaves the facility, standard cleaning procedures are sufficient for areas occupied by a service animal. For spills of animal urine, feces, or other body substances, follow the facility's procedure for cleaning up blood/body fluid spills for humans.

How to protect yourself from wild animals

It is inevitable that wild animals may come on to the property. Protection from injuries and serious infections can be achieved by paying attention to the following:

- Prevent pets from having contact with wild or sick animals.
- Don't let pets run free. Keep them indoors at night.
- Stay away from unknown dogs and cats and all wildlife, including bats.
- Do not attempt to trap wild animals that are causing damage to the property. Instead, contact a professional animal control officer to remove nuisance animals.
- Do not trap or transport wild animals to a new location. This could spread disease.
- Do not keep wildlife as pets. It may be against the law.
- Report any animals behaving strangely to your local animal control office.
- Do not try to nurse sick animals to health.
- Do not touch dead or sick animals except to bury or dispose of them. Do so carefully, wearing protective gloves and making sure pets cannot get at the carcasses.
- Take measures to discourage wild animals from taking up residence on the property. Cover up potential entrances such as uncapped chimneys, loose shingles, and openings in attics, roofs and eaves. Contact a professional for advice.
- If you come in contact with any wild animals, please contact HNHU Health Connection at 519-426-6170 or 1-877-298-5888.

What should I do if I'm bitten or scratched by any animal?

- Wash the wound immediately with soap and water and contact your family physician.
- If human exposure to a rabid animal is suspected, consult with a doctor or go to the local emergency health care centre as soon as possible.
- Report any incident to HNHU at 519-426-6170 or 1-877-298-5888 (this is required by Communicable Diseases – General Regulation under the [Health Protection and Promotion Act, R.S.O. 1990, c.H.7](#)). Include as much information as you can about the animal and if possible, the owner's name, address and phone number. Public health inspectors will use this information to contact the owner, check rabies vaccination certificates and decide what other actions are needed.

Section II - Infection Prevention and Control Surveillance

Surveillance is an essential component of an effective IPC program. It is the systematic method of collecting, consolidating, analyzing, interpreting and disseminating data to those that need to know about the distribution and determinants of a given disease or event for the purpose of action.

Surveillance can be used for the following purposes:

- Required for patient safety and mandatory reporting requirements in Ontario
- To detect and investigate clusters or outbreaks.
- To assess the effectiveness of prevention and control measures and interventions.
- To detect and report diseases to the HNHU as required by legislation.
- To identify organisms and diseases of epidemiological importance such as AROs, MRSA, Tb, and *Clostridium difficile*, and prevent their spread.
- To ensure compliance with agency requirements for accreditation.
- To monitor injuries and identify risk factors for staff.
- To detect an emerging infectious disease.
- To provide data to conduct facility risk assessments.

Surveillance Methodologies

1. Total House Surveillance:

All infections are monitored in the entire population of a LTCH or RH and an overall infection rate is calculated. This total house surveillance infection rate is generally not used as overall rates cannot be adjusted for specific infections or injury risks. It is also not appropriate for measuring trends over time, making comparisons over groups within the facility (or between facilities), or benchmarking.

2. Targeted Surveillance:

This type of surveillance can focus on a particular care area, infections related to medical devices (i.e. urinary tract catheters), or an organism of epidemiological significance (i.e. MRSA). Targeted programs usually focus on **high-risk, high volume** procedures and on those health care-associated infections and adverse outcomes that are potentially preventable.

3. Combination Surveillance Strategy:

In practice, many IPCPs utilize a combination of targeted and modified total house surveillance. An example would be monitoring house wide laboratory reports to detect: MRSA, VRE, reportable diseases, and clusters that may indicate an outbreak or breakdown of IPC practices.

Choosing Indicators (Events) to Monitor

One of the most important steps in designing a surveillance program is the selection of appropriate health related indicators to monitor. A surveillance program should monitor a variety of processes, outcomes, and events that focus on residents and staff.

Process Indicators: Include medication errors; influenza vaccination rates in HCWs and residents; hepatitis B immunization rates in HCWs; and HCWs' compliance with protocols, such as routine practices, additional precautions, and hand hygiene.

Outcome or Event Indicators: Include occurrences of reportable diseases, nosocomial (facility-acquired) infections (i.e. urinary tract, pneumonia, upper respiratory tract, local IV site, or wounds); admission of residents with AROs, resident and HCW infection or colonization with a specific organism (i.e. *C. difficile*, MRSA, VRE, RSV or rotavirus); resident falls; influenza or tuberculin skin test conversions; or incidents involving HCWs such as sharps injury and blood/body fluid exposures.

Rates: When selecting an event and a population for study, both the number of cases (i.e. persons who have the condition), and the number of the total population at risk for the condition must be identified, if rates are to be calculated. Rates, rather than raw numbers, must be used to accurately track trends over time.

Incidence Density: Calculates the number of cases (or events) per total person-time at risk.

Example:

June 2015	Resident Falls
1 – 10 th	12
11 – 19 th	9
21 – 30 th	8

The number of resident-days for the month of June is calculated as follow:

$$(12 \times 10) + (9 \times 10) + (8 \times 10) = 290$$

If there were 2 resident falls in that LTCH in June, the calculation for the fall rate would be:

$$\text{Fall Rate} = \frac{\# \text{ of falls in a LTCH in June}}{\# \text{ of resident - days in LTCH in June}} \times 1,000 = \frac{2}{290} \times 1,000 = 6.9$$

The rate is expressed as 6.9 falls per 1000 resident-days in the LTCH in June

Determining Time Period for Observation

Surveillance data for each indicator should be collected consistently and for a defined period such as a month, quarter, or year. It is difficult to interpret rates for events that rarely occur or procedures that are infrequently performed. If this is done, it is necessary to use an observation period that is long enough to accumulate a sufficient number of events in order for the measurement to be valid.

Identify Surveillance Criteria

Surveillance criteria (e.g. case definitions) must be consistently used to accurately trend surveillance data over time within a facility. An example of a surveillance case definition is:

Clinically compatible signs and symptoms

+

Laboratory confirmation (culture or serology)

OR

An epidemiological link to a lab-confirmed case

This would allow for the tracking of health care-associated infections, occurrences of an event, or compliance with a process. If a case definition is changed, then this should be noted in the surveillance report because the number of cases identified will likely change, which would affect the rate.

Ontario Hospital Association, Ontario Medical Association Joint Committee on Communicable Disease Protocols. Influenza surveillance protocol for Ontario hospitals. Toronto: Ontario Hospital Association; 2005 (revised 2014)

Policy for Infection Control Surveillance

There should be a written policy within the facility to closely monitor all residents who exhibit signs/symptoms of infection. All HCWs should notify the IPCP of suspected infections and nursing staff record the information on an Infection Control Surveillance Form (See example below). If this is an unusual infection or if the resident's condition is considered critical, the ICP should be notified immediately, as well as the Director of Nursing. The physician and the resident's family should also be notified of any change in the resident's condition.

Procedure for Infection Surveillance

When a resident exhibits signs/symptoms of a suspected infection, the nursing staff should:

- Record the resident's name, room number, medications ordered, date started, and any cultures done.
- Follow procedures for notifying the attending physician and family, and begin close monitoring of vital signs, intake and output.
- Document in the narrative nursing progress notes on every shift of the presence or absence of symptoms (i.e. "no cough noted this shift" or "resident c/o burning on voiding x3 this shift"). Continue this documentation until 48 hours after symptoms have subsided, or until 48 hours after the last dose of medications.
- The ICP will gather further data for infection tracking and reporting, and provide consultation and education as needed. Completed Infection Control reports should be presented at quarterly Infection Control meetings and Medical Staff meetings, and can also be available to all staff for review upon request.

Association for Professionals in Infection Control and Epidemiology. APIC tool kit: infection control manual for long-term care facilities. Washington, DC: Association for Professionals in Infection Control and Epidemiology; 2003 (revised 2013)

Sample Form: Infection Control Surveillance

Month

Unit

Supply the following information each month for any resident who:

- You suspect of having an infection
- Has medications prescribed
- Has had a culture obtained or ordered

Month			Unit		
Site	Resident Name	Room #	Medication Rx	Date Initiated	Culture Site
Upper Respiratory					
Lower Respiratory/ Pneumonia					
Urinary Tract					
IV Associated					
Skin					
Surgical Wound/ Pressure Ulcer					
Eye					
Gastrointestinal					
Other					

Sample Form: Monthly Infection Control Report

Average Daily Census	Month:	Year:
-----------------------------	---------------	--------------

By Site of Infection	Unit	Unit	Unit	Unit	Total %
Upper respiratory infections					
Lower respiratory infections					
Urinary Tract infections					
Catheter-associated UTI					
IV-associated infections					
Skin infections					
Eye infections					
Gastrointestinal					
Other (Sepsis, Vaginal, GU, etc.)					
Total # community –acquired infections					
Total # of chronic infections					
Total # of nosocomial infections					
Unit Census					
Total acute nosocomial infections per 1,000 resident days					

Comments

General:

Nursing Department:

Housekeeping Department:

Laundry Department:

Maintenance Department:

Submitted by: _____ Infection Prevention and Control Professional

Preventing Acute Respiratory Infections (ARIs)

Influenza Immunization.

- Health care and other service providers in facilities and community settings who, through their activities, are potentially capable of transmitting influenza to those at high risk for influenza complications should be immunized annually.
- All health care settings should have staff immunization policies.

Case Finding/Surveillance

- All health care settings should ensure that they have the ability to identify cases of ARI and to detect clusters or outbreaks of ARIs (see attached screening tool).
- Once cases are identified, staff should be aware of the need to initiate and maintain IPC practices.

Preventive Practices

- Ensure that staff and residents are educated in preventing the spread of ARI, hand washing, staff illness reporting and PPE.
- Maintain routine cleaning and disinfection practices using approved detergents and disinfectants.

Reporting

- Establish procedures for proper notification and reporting.
- HCWs who develop ARI symptoms must report to Occupational Health and Safety (OHS) or delegate.
- OHS will report any staff clusters (non-nominally) to IPCP.
- IPCP will alert OHS if ARI clusters are in residents so staff are then monitored.
- Employers must report to Joint Occupational Health and Safety Committee or delegate any occupational infection.
- Employers must report to the Ministry of Labour if a staff member acquired an occupational infection.
- Employers must also report to the Workplace Safety and Insurance Board (WSIB) within 72 hours if a staff member acquires an occupational infection.
- Health care settings must report to the medical officer of health (MOH) of the HNHU any residents with a new cough, fever and travel history to a country with a health alert or any contact with someone who has traveled to a country with a health alert.
- Health care settings are legally required to report to the local MOH when:
 1. The etiology of an acute respiratory infection is a reportable disease.
 2. There is an outbreak or cluster of ARI in the facility.

Evaluation

- Compliance with influenza immunization, case finding/surveillance, prevention practices and reporting requirements should be evaluated regularly through a measurable auditing process.

Public Health Ontario's *Annex B: Best Practices for Prevention of Transmission of Acute Respiratory Infection in all Health Care Settings* (Revised 2013). Retrieved from http://www.publichealthontario.ca/en/eRepository/PIDAC-IPC_Annex_B_Prevention_Transmission_ARI_2013.pdf

Sample Form: Acute Respiratory Infection Surveillance Form

Resident Name:	Date:
1. Do you have new/worse cough or shortness of breath? if NO stop here (no further questions) if YES continue with next question	
2. Are you feeling feverish*, or have you had shakes or chills in the last 24 hours? if NO take temperature ;if > 38°C, continue with next question, otherwise stop (no further questions) if YES , take temperature and continue with next questions. *NOTE: Some people, such as the elderly and people who are immunocompromised, may not develop fever. If the answer to both questions (1) and (2) is "YES", or if the answer to question 1 is "YES" and the recorded temperature is >38°C, initiate droplet precautions, and notify IPCP	
3. Is any of the following true? Have you traveled within the last 14 days? Where**? _____ or Have you had contact in the last 14 days with a sick person who has travelled? Where**? _____ ** For a current list of countries with health alerts, please see the Public Health Agency of Canada website: http://www.phac-aspc.gc.ca/tmp-pmv/notices-avis/index-eng.php IPCP should notify HNHU by phone when: case has a positive travel history and/or there is a possible cluster/outbreak	
Staff Member: _____	Date: _____

Staff Illness Reporting

The Ontario Hospital Association states “HCWs have a responsibility to their residents and colleagues regarding not working when ill with symptoms that are likely attributable to an infectious disease. This includes staff with influenza-like illness, febrile respiratory illness, gastroenteritis and conjunctivitis” (MHLTC,2014).

All employees should be educated on the importance of reporting illness (including colds, influenza, diarrhea or when the cause is unknown etc). Staff should be reminded that staying home will reduce the spread of infection within the facility. All employees are responsible for promptly reporting any infections they have, or may have, come into contact with to their supervisor. This step is very important in preventing the infection from spreading to residents.

Ministry of Health and Long Term Care. (Revised 2014). A Guide to the Control of Respiratory Infection Outbreaks in Long-Term Care Homes. Retrieved from http://www.health.gov.on.ca/en/pro/programs/publichealth/flu/docs/resp_infectn_ctrl_guide_ltc_2014_en.pdf

Acute Respiratory Infections –Staff Requirements for Reporting

All health care settings should establish a clear expectation that staff do not come into work when ill with an ARI, and support that expectation with appropriate attendance management policies.

Attendance management policies must reinforce, rather than act, as a disincentive to staff fulfilling this responsibility. Health care settings should ensure that they:

- Provide sick leave benefits for all staff (either in the form of paid sick days for full-time staff or compensatory wage rates in lieu of benefits to part time staff).
- Avoid reward programs for staff that have no sick days.
- Actively exclude ill staff (i.e. send staff home that arrive at work ill).
- Health care institutions should have established procedures for notifying the IPCP of any clusters of ARI in either staff or residents. (To protect employees’ rights to confidentiality, OHS will report staff clusters non-nominally to the IPCP.)

The purpose of reporting to the IPCP is to ensure that the appropriate precautions are taken to protect residents and staff, and to monitor or manage any possible outbreaks.

- HCWs that develop ARI symptoms should call in and report their condition to OHS or delegate.
- IPCP will alert OHS about any ARI clusters in residents, so OHS can monitor staff. OHS will alert (non-nominally) IPCP of any clusters of ARI among staff.
- Employers are required to report to the Joint Occupational Health and Safety Committee or delegate any occupationally acquired infection.
- If a HCW develops an occupational infection, the employer must report the illness to the Ministry of Labour in accordance with occupational health and safety legislation.
- If a HCW develops an occupational infection, the employer must report the illness to the WSIB within 72 hours.

Health care setting administrators, laboratories and community/attending physicians should report to the local MOH when:

1. The etiology of an ARI is a reportable disease
2. There is an outbreak or cluster of ARI in any health care facility.

The purpose of reporting to the health unit is to identify any potential outbreaks or emerging illnesses early, so public health measures can be implemented to prevent and manage transmission.

All LTCHs and RHs should track staff illnesses as a preventive strategy to provide ongoing surveillance for potential outbreaks or increased incidences that would indicate a pandemic or other unknown illness in the community. A tracking tool should be created and designed to ensure that staff illness information can be used to identify and follow potential cases of infection and be communicated and shared appropriately, while safeguarding the right to confidentiality.

Public Health Ontario’s *Annex B: Best Practices for Prevention of Transmission of Acute Respiratory Infection in all Health Care Settings* (Revised 2013). Retrieved from http://www.publichealthontario.ca/en/eRepository/PIDAC-IPC_Annex_B_Prevention_Transmission_ARI_2013.pdf

Sample Form: Employee Screening Tool to Report Acute Respiratory Infections and Other Potential Communicable Diseases

Employee Screening Tool to Report Acute Respiratory Infections and Other Potential Communicable Diseases		
Name of Employee:	Case ID Number:	Department:
Date:	Shift:	
Symptoms:		
<p>1. Do you believe you acquired this illness at work? <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p style="margin-left: 40px;">If "YES" please complete an employee incident report and forward it to Human Resources</p>		
<p>2. Do you have a new/worse cough or shortness of breath? <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p style="margin-left: 40px;">If "NO" (no further questions) If "YES" continue with the next question.</p>		
<p>3. Are you feeling feverish*, or have you had shakes or chills in the last 24 hours?</p> <p style="text-align: right; margin-right: 100px;"><input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p style="margin-left: 40px;">If "NO" ask to take temperature _____ if >38°C, continue with next question, otherwise stop (no further questions). If "YES" ask to take temperature _____ and continue with next questions.</p> <p style="margin-left: 40px;">* Note: Some people, such as the elderly and people who are immunocompromised, may not develop a fever.</p> <p>If the answer to both questions (1) and/or (2) and (3) is "YES", or if the answer to question (2) is "Yes" and the recorded temperature is >38°C, employee should stay home and procedure for notifying Infection Prevention and Control and OHS should be followed.</p>		
<p>4. Are any of the following true?</p> <p style="margin-left: 40px;">Have you traveled within the last 14 days? <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p style="margin-left: 40px;">Where? _____</p> <p>or</p> <p style="margin-left: 40px;">Have you had contact in the last 14 days with a sick person who has traveled? <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p style="margin-left: 40px;">Where? _____</p> <p style="text-align: center; margin-top: 10px;">**for a current list of countries with health alerts see: http://www.phac-aspc.gc.ca/</p> <p style="text-align: center; margin-top: 10px;">Infection Prevention and Control should notify HNHU by phone when: case has positive travel history and/or there is a possible cluster/outbreak</p>		
<p>Staff Member Completing Screening: _____ Date: ___/___/___</p>		

Section III - Respiratory Outbreak Guidelines

Purpose

The purpose of this chapter is to provide information and resources that will assist in the early recognition and control of outbreaks associated with respiratory illness within your facility.

This chapter is organized to address the following topics:

1. Outbreak Process
 - Determining the existence of an outbreak
 - Defining a case and creating a line list
 - Declaring the outbreak, notification responsibilities and instituting outbreak controls
 - Declaring the outbreak over
2. Recommended Precautions
3. Recommendations on Admission and Re-admission
4. Antiviral Prophylaxis
5. Resources
 - Respiratory Outbreak Guideline
 - Filling in a Respiratory Outbreak line list
 - Nasopharyngeal Collection Technique
 - How to complete: Public Health Laboratory Test Requisition
 - Respiratory Outbreak Management Checklist

Respiratory Outbreak Process

1. Determining the existence of an outbreak

Suspect an outbreak whenever there are **two or more cases identified within 48 hours in one geographic area with an acute respiratory tract illness** which may include:

- abnormal temperature
- dry cough (new)
- productive cough (new)
- runny nose / sneezing
- nasal congestion / stuffy nose
- sore throat
- hoarseness / difficulty swallowing
- chills
- myalgia
- malaise
- headache
- decreased appetite

Criteria for a **confirmed** influenza or respiratory outbreak caused by other organisms:

- Two cases of acute respiratory tract illness (ARI) within 48 hours, one of which is laboratory confirmed
OR
- Three cases of ARI occurring within 48 hours in a geographic area (eg. Unit or floor)
OR
- More than two units having a case of ARI within 48 hours.

Criteria for **confirmed influenza** outbreak in a hospital:

- Two or more cases of nosocomially- acquired ARI (i.e., influenza) occurring within 48 hours on a specific unit, with at least one lab confirmed case of influenza.

Criteria for **suspect respiratory** outbreak:

- Two cases of ARI occurring within 48 hours in a geographic area (e.g., unit, floor) **OR**
- More than one area having a case of ARI within 48 hours

Criteria for **suspect influenza** outbreak:

- One laboratory confirmed case of influenza **OR**
- Two cases of ARI occurring within 48 hours in a geographic area (i.e. unit, floor) **OR**
- More than one unit having a case of ARI within 48 hours

*Confirmation via laboratory testing is **not required** to determine an institutional respiratory outbreak confirmed.

2. Defining a case and creating a line list

In collaboration with HNHU, develop a working case definition to classify exposed persons as cases or non-cases. A “case definition” can be developed on the data collected from case symptoms using simple clinical criteria: the most common are identified on the line list.

The case definition should include at a minimum:

- Clinical signs and symptoms
- Time of onset of illness
- Location of residents/staff in the home

A case definition example:

“A resident or staff 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”

While each respiratory outbreak requires its own definition, the following general case definitions can be used for reference:

Agent	Clinical case definition for respiratory tract infection
Upper respiratory tract illness – includes common cold, pharyngitis	The resident must have at least 2 of the following (new) symptoms: <ul style="list-style-type: none">• runny nose or sneezing• stuffy nose (i.e. congestion)• sore throat or 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
Pneumonia	All of the following criteria must be met: <ul style="list-style-type: none">• interpretation of a chest x-ray as pneumonia, probable pneumonia, or presence of infiltrate• the resident must have at least 2 of the signs and symptoms described under other lower respiratory tract infection (see below)• other non-infectious causes of symptoms, in particular congestive heart failure, must be ruled out
Lower Respiratory Tract Infection (bronchitis, tracheobronchitis)	The resident must have at least 3 of the following: <ul style="list-style-type: none">• new or increased cough• new or increased sputum production• abnormal temperature for the resident, or a temperature between $\leq 35.5^{\circ}\text{C}$ 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:<ul style="list-style-type: none">○ new/increased shortness of breath○ respiratory rate over 24 per minute○ worsening functional or mental status (deterioration in resident's ability to perform activities of daily living or lowering of their level of consciousness)

If a cluster of pneumonia or lower respiratory infection cases is suspected, steps must be taken to determine a common causative agent. i.e. Chest x-ray, serology, NP swabs, urine for Legionella antigens, sputum smear/culture etc.

Line List

A line list should be initiated as soon as an outbreak is suspected, include those who are ill with respiratory symptoms, based on information collected through the LTCH's surveillance program. The line list allows for rapid assessment of the extent and nature of the suspected outbreak. A separate line

list should be established for residents and staff. Residents and staff are to be line listed when they meet the case definition.

Confirm the population at risk in the home, which 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 particular unit(s)/floor(s), the number of staff at risk in the outbreak unit/floor need to be identified by the OMT
- For large LTCHs, keeping a separate line list for each unit affected by the outbreak may be effective

The following information should be captured on the line list for all residents and staff who are determined as a case by case definition:

Resident

- Name of resident
- Age
- Location in home such as unit, room, bed number
- Date of onset of symptoms
- Case defining signs and symptoms
- Treatment given such as antibiotics or antiviral medication
- Diagnostic tests such as x-rays
- Samples taken including date and results in known (e.g. nasopharyngeal swab)
- Immunization history for influenza and pneumococcal vaccine
- Hospitalization – date and location
- Death – date and cause
- If the resident was isolated, the start date of isolation
- Date illness resolved
- Date on which antiviral prophylaxis was started (if applicable)
- Complications (e.g. pneumonia)

Staff

- Initials of staff
- Work assignments in the home including assigned work areas (units/floors)
- Date of onset
- Case defining symptoms and signs
- Antiviral medication given for treatment
- Influenza immunization history
- Any diagnostic tests including results if available
- Last day of work of ill staff member
- Whether they work at another facility
- Ill household contacts
- Date of recovery
- Date returned to work

3. Instituting outbreak controls, Declaring outbreak, and outbreak monitoring

Control Measures

As soon as an outbreak is suspected, control measures should be implemented. All staff should be made aware of the outbreak as soon as possible and all necessary supplies should be made available. All residents who meet case definition including ARI should be placed on droplet/contact precaution in

addition to routine practices as soon as possible following symptom onset. Those residents who are asymptomatic should be cased for as usual with routine practices and carefully monitored for changes related to the outbreak.

Declaring a Respiratory Outbreak

If an outbreak is suspected or confirmed the following steps should be taken:

- The local MOH, health unit designate or on-call inspector must be notified

Contact numbers:

Assigned Health Unit Liaison for the Facility:

(weekdays between 0830 hours – 1630 hours) 519-426-6170 or 905-318-6623

After hour's on-call line:

(weekdays between 1630 hours – 0830 hours and weekends): 1-877-298-5888

- A discussion between the MOH or designate and the facility should take place to determine the location of the outbreak (facility wide vs unit specific)
- Lab confirmation is not necessary to declare an outbreak. Once an outbreak is declared the facility should start pulling together the Outbreak Management Team (OMT) with appropriate representation from the facility as well as public health
- The MOHLTC needs to be notified of the outbreak through the Critical Incident System and/or by contacting the local service area office (as per section 107 of O.Reg. 79/10 under the *Long Term Care Homes Act, 2007*)

Additional tasks:

- The facility should provide the health unit with an updated line list daily.
- A point person/ICP should be assigned to take responsibility for the outbreak investigation and their information should be shared with public health. The facility should assign a point staff to be responsible for the outbreak management at all times, including weekends, holidays and vacation.
- Initial control measures that were put into place should be reported to public health
- Public health will provide an 11 digit outbreak number that needs to be kept with all related outbreak material
- Discuss with health unit representative how specimens will be collected, stored and submitted to the lab.
 - Always ensure the facility has outbreak specimen items that are not expired in house
 - Ensure all specimens are properly labelled, with the outbreak number and two identifiers for the client (client's name and date of birth)
 - The lab requisition associated with the specimens should include:
 - The facility's name and address
 - The outbreak number
 - Client name
 - Date of Birth (DOB)
 - Health Insurance Number (HIN)
 - Date the specimen was collected
 - Sufficient test request information (specific to the test/specimen collected)
- The initial case definition should be reviewed as the outbreak develops and adjusted to fit the clinical presentation, timeframe of onset, location of outbreak, etc.

Outbreak Monitoring

The assigned staff within the facility should be monitoring the outbreak on a daily basis, which involves updating the list with new information and communicate the changes to the health unit on a daily basis. In addition to updating the line list, outbreak monitoring also includes:

- Ongoing surveillance to identify new cases
- Monitor the status of symptomatic residents and staff
- Ongoing monitoring of IPAC measures
- Reporting any significant changes in the nature of the outbreak (e.g. deaths, hospitalizations, etc.)

The review of the information noted above is used to look at: ongoing transmission, effectiveness of IPAC measures and prophylaxis.

8. Declaring the outbreak over

The facility OMT in consultation with the medical officer of health or designate shall determine when to declare an outbreak over. The etiologic agent and the epidemiology of the outbreak will help determine when an outbreak may be called over.

To declare an outbreak over, the facility must not have had any new cases of infection in residents, who meet the case definition for the established period of time; usually the length of time is based on the incubation period and the period of communicability. The common rule for viral respiratory outbreaks is if no new cases have occurred in 8 days from the onset of symptoms of the last resident case the outbreak can be declared over.

Recommended Precautions

Residents

Ill residents (cases) should be on droplet and contact precautions as well as encouraged to self-isolate in their room for 5 days from 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 standard of 5 days could be applied to outbreaks caused by respiratory viruses other than influenza. Homes may be requested to isolate ill residents longer than 5 days if current epidemiology suggests a longer period of communicability. All will be completed in consultation with the health unit and the OMT.

For residents who are not accommodated in a single room, they will require bed space isolation with the use of a privacy curtain and appropriate signage identifying droplet and contact isolation. Residents may leave their room in this circumstance if they are able to comply with the expected requirements of hand hygiene (HH) and wear a surgical mask.

Staff, students, volunteers

Reporting

Staff, students, volunteers or contracted service workers experiencing ARI should not enter the facility; their symptoms should be reported to their supervisor who will report the information to the point person responsible for the outbreak (ICP, DOC, etc) or employee health.

Exclusion

Staff, students and volunteers with any respiratory symptoms are to be excluded from work for at least 5 days after the onset of acute illness or until symptoms have resolved, whichever is shorter.

For confirmed influenza outbreaks, ill staff, students or volunteers taking antiviral medication for treatment (not prophylaxis) shall be excluded from work for at least 5 days (period of communicability) from onset of symptoms..

Working at other Facilities

During **non-influenza outbreaks**, staff, students and volunteers should be advised not to work at any other facility until after the completion of one incubation period.

During **influenza outbreaks**, as long as there is not a known significant influenza vaccine drift, staff who are either vaccinated or taking antiviral have no restrictions on their ability to work at other facilities. Those unimmunized staff not receiving prophylactic antivirals must wait one incubation period (3 days) from the last day they worked at the outbreak facility/unit prior to working in a facility not in outbreak. Unimmunized staff who are on antiviral prophylactic therapy who wish to work at another facility are able to do so, as long as 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 those would supersede the general direction of this guide
- This does not conflict with direction provided by the health unit

If there is an identified “drift” or difference between the annual vaccine strains and circulating strains, all staff will be required to start prophylactic antiviral therapy (regardless of immunization status) in order to work between facilities.

Any staff, student or volunteer experiencing respiratory symptoms or fever should not work/provide care in any facility.

Staff Cohort

During a non-influenza outbreak, attempts should be made to reduce staff, student or volunteer movement between units/areas within the facility. Consideration should be given to the idea of assigned staff to those ill residents and other staff to those well residents, as well as maintaining staff who are designated to only one unit (if possible) to reduce staff movement, especially from outbreak areas to non-outbreak areas. These restrictions are not necessary during influenza confirmed outbreaks as all staff are either immunized or on appropriate antiviral prophylactic therapy.

Unimmunized staff exclusion

During a confirmed influenza outbreak, only those staff that has had their immunization at least two weeks prior to the declaration of the outbreak, or those wearing masks if allowed as per the facility’s policy, should be working within the facility. Unimmunized staff may return to work as soon as they are taking antiviral prophylaxis, and it is advised that the facility has a policy requiring proof the staff member is taking the prescribed antiviral medication. Additional options should be discussed with the OMT, if issues present.

Visitors

Visitors should be encouraged to be immunized for vaccine preventable diseases such as influenza and pneumonia as this provides the residents with additional protection as some may not be vaccinated or have a waning protection from the immunization. Signage posted at all entrances of the facility indicating an outbreak will provide visitors with the awareness of the outbreak and they should be advised of their risk of acquiring illness as well as potentially infecting the home with illness if they choose to visit during an outbreak. Facilities may notify families of the outbreak and discuss the visitation restrictions.

Visitors who are ill are not permitted in the home, unless under extenuating circumstances. When these circumstances occur, visitors must wear appropriate PPE, perform HH when entering the facility, as necessary during their stay and when leaving the residents room as well as the facility. Visitors should be restricted to only visit one individual (s) and not visit throughout the entire facility.

Well visitors who choose to visit during an outbreak should be asked to:

- Perform hand hygiene when entering the facility, before and after leaving the resident's room
- Visit the individual in their room and avoid communal areas
- If possible, visit only one resident and leave the facility following the visit; if visits to multiple residents is required it is recommended to visit those healthy individual(s) first
- Avoid mingling with other residents
- Wear appropriate PPE when providing any direct care

Signage should be placed on the ill residents' door or when entering the unit/floor directing all visitors to check in at the nursing station before entering the resident's room.

Communal Activities

During an outbreak the following should occur:

- Communal meetings/activities on the affected unit/floor should be rescheduled
- Group outings from the affected floor/unit should be stopped
- Restricting meetings or activities in the entire facility should be discussed with the OMT if two or more units/floors are involved
- Any outside groups (entertainers, community groups, etc.) should not be permitted to visit
- Conduct on-site programs as one on one in the resident's room, visiting those who are ill last and ensuring proper precautions are taken.

Admission and Re-admission Recommendations

During an outbreak, it is recommended that the number of residents exposed to the outbreak is limited and that the potential for other illnesses to be introduced to the facility is reduced. The following recommendations are made with reference to: The Ministry of Health and Long-Term Care/Public Health Division and Long-Term Care Homes Branch. [A guide to the control of respiratory infection outbreaks in long-term care homes](#). Ministry of Health and Long-Term Care; 2014

Commonly, as a control measure associated with the outbreak, the health unit would advise against admission of new residents into a facility or unit/floor experiencing an outbreak. Health units will need to be attentive to admissions and the return of residents who are absent to ensure the facility is practicing due diligence in order to protect all residents within the facility and those returning or being admitted. Admissions and returns should be decided in consultation with the health unit.

A new admission or return from hospital requires a comprehensive approach to consider a variety of factors and careful judgment focusing on the risk to the resident(s) returning as well as the larger context of individuals across the health care sector. Restricting admissions leads to potential backlog in emergency departments or acute care, which poses as risk to individuals within that system. Additionally, admission of an unexposed resident into a facility during an outbreak could put that individual at risk and may lengthen the duration of the outbreak and have an impact on the entire facility including the larger resident population.

The causative agent, severity of illness, extent of the outbreak and the physical layout of the facility, admission restrictions may or may not be applied to an area, floor or the entire facility as per the MOHLTC Respiratory Guide and all need to be considered as per the health unit's consultation.

1. New admissions

New admissions of new residents to the **affected unit** during the outbreak is generally not permitted. Where the facility as an entity has declared an outbreak, no new admissions are

recommended. If the outbreak is localized and only a specific unit is under additional precautions, then new admissions to un-affected units may be considered in consultation with HNHU.

2. Readmission of cases

The re-admission of residents who met case definition prior to leaving the facility is permitted provided appropriate accommodation and care can be provided.

3. Readmission of non-cases

The re-admission of residents who did not meet case definition prior to leaving the facility is not generally permitted during an outbreak. Changes to this outbreak measure can be made with consultation with HNHU; all readmissions of non-cases should be assessed case by case. Some factors that would need to be in place prior to re-admission would be: confirmation by discussion between HNHU and the facility that:

- i) The outbreak is under control
- ii) The resident's attending physician has agreed to the re-admission based on a review of the current health status of the resident in hospital
- iii) Adequate staff are available at the Long-Term Care Facility to care for the re-admitted resident
- iv) If the outbreak is due to influenza, the resident is protected from influenza by vaccination and/or an anti-viral drug
- v) Appropriate accommodation is available for the returning resident
- vi) The patient/resident or their substitute decision-maker has given informed consent for the return.

4. Transfers to hospital/other health care facilities

When it is necessary to transfer a resident, case or non-case, it is the responsibility of the facility to inform the receiving health care facility and the Provincial Transfer Authorization Centre (PTAC) or alternate transportation service of the facility outbreak status. It is recommended that an outbreak transfer letter be used to communicate information to the receiving ICP to ensure that infection control measures are in place for the resident's arrival.

5. Transfers to other Long-Term Care Facilities

Resident transfers from anywhere in the outbreak facility to another facility is not recommended. Possible exceptions should be done in consultation with HNHU.

6. Moves within the facility

It is recommended that moves within the outbreak facility from unit to unit be discouraged until the outbreak is under control. Special consideration should be made when a resident is to be moved from an unaffected unit to an affected unit. All moves during an outbreak should be done in consultation with HNHU.

Appendix 10 - Outbreak Transfer Notification

Sample only

Please be advised that _____ (name of resident) is being transferred from a facility where there is a **potential** OR **confirmed** influenza outbreak. Please ensure that appropriate isolation precautions 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 11 - Sample Transfer & Return Algorithm for Use During Outbreaks

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

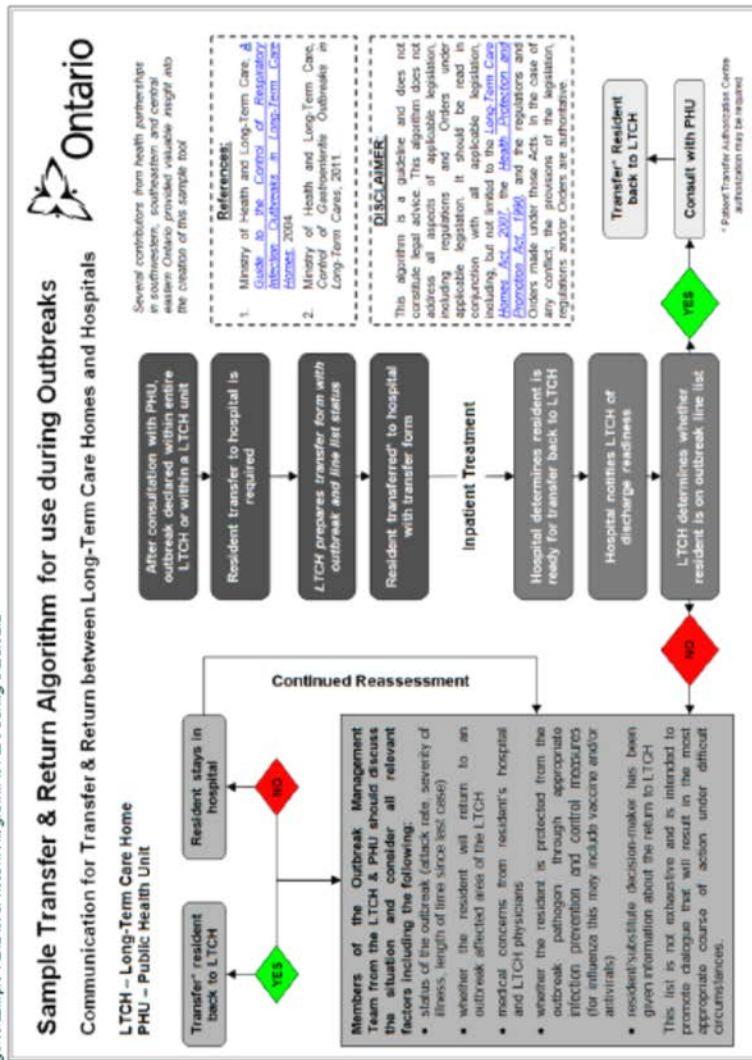
The return of residents to a long-term care home (LTCH) during outbreaks is generally restricted in an effort to protect susceptible individuals from being exposed to respiratory infections such as influenza, and gastrointestinal infections such as norovirus. Returns to LTCHs are not automatically prohibited. 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 Regional Infection Control Network and public health unit, or see the [Guide to the Control of Respiratory Infection Outbreaks in Long-Term Care Homes](#).

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



Several contributors from health partnerships in southwestern, southeastern and central western Ontario provided valuable insight into the creation of this sample tool

Appendix 12 - 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
 - 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.

Prophylactic Use of Amantadine and Oseltamivir (tamiflu)

The MOHLTC states that the H3 and H1 influenza subtypes currently circulating in Ontario are resistant to amantadine but susceptible to oseltamivir (Tamiflu) and zanamivir (Relenza). These antivirals appear to be equally effective in the treatment and prophylaxis of influenza during institutional influenza outbreaks. Oseltamivir is the drug of choice for both treatment and prophylaxis for residents of long term care homes.

Oseltamivir works by preventing the replication of the influenza virus. It is not effective against respiratory infections other than influenza. Therefore, it should only be used for laboratory confirmed influenza infection. Antiviral prophylaxis should not replace annual influenza vaccination.

Health care and other service providers in facilities and community settings who, through their activities, are potentially capable of transmitting influenza to those at high risk for influenza complications should be immunized annually. This group includes emergency responders and those who provide home care.

Vaccination remains our primary tool for the prevention of influenza infection and illness.

When to use oseltamivir (tamiflu)

NACI recommends that neuraminidase inhibitors may be used prophylactically for:

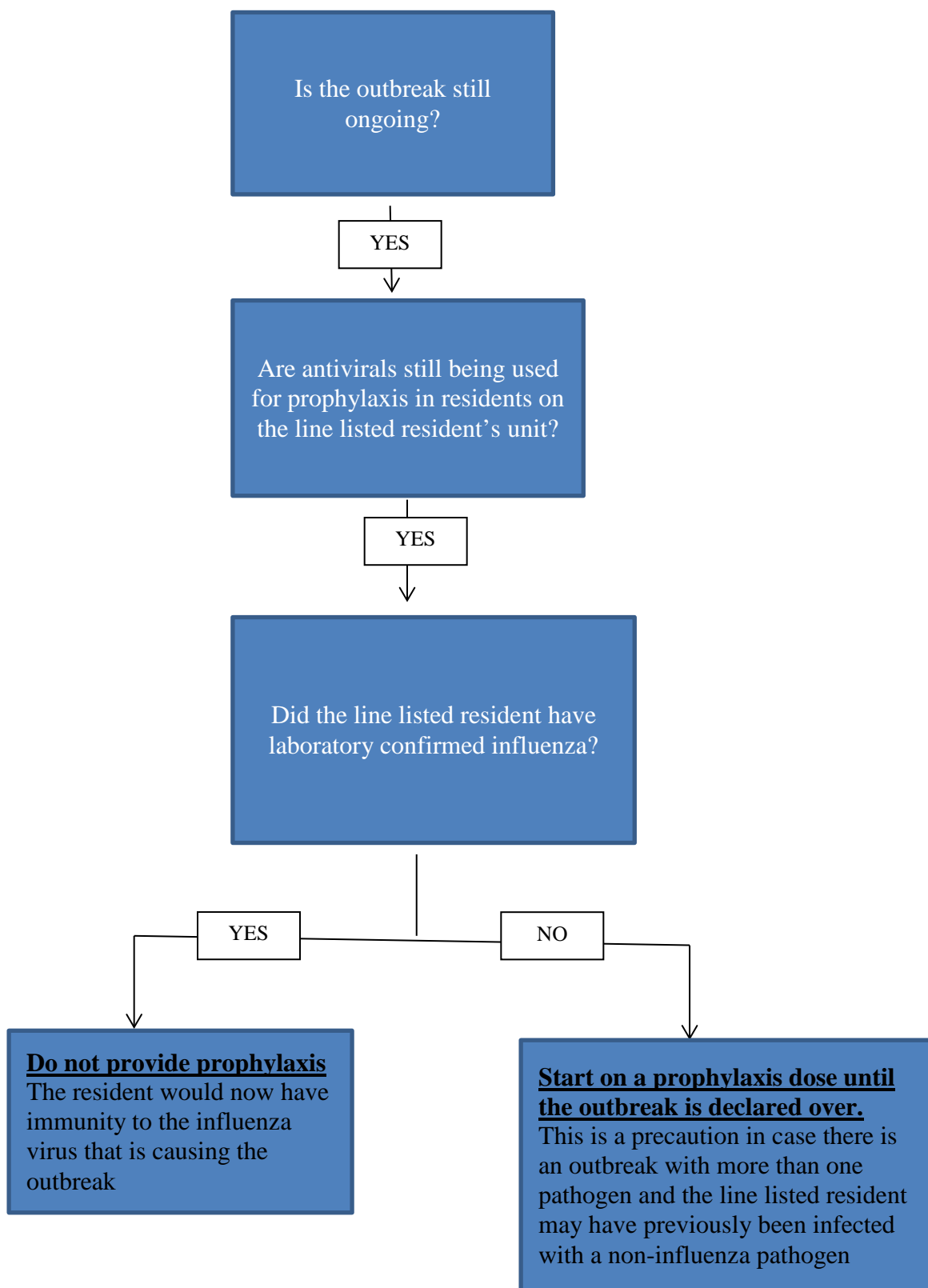
- The control of influenza outbreaks among high-risk residents of institutions.
- Unvaccinated people who provide care for people at high risk during an outbreak.
- The prophylaxis of non-institutionalized people at high risk during an outbreak when vaccine is unavailable, contraindicated, or unlikely to be effective because of a poor match between the vaccine and the circulating viral strain.
- High-risk people receiving late vaccination.
- Antiviral post-exposure prophylaxis in non-vaccinated household contacts of index influenza cases.

During a **respiratory outbreak where influenza has been identified**, Tamiflu as prophylaxis is recommended for the following:

- Asymptomatic residents regardless of vaccination status.
- Unvaccinated staff.
- Staff regardless of vaccination status when the vaccine is considered a poor match to the circulating strain

Prophylaxis should continue until the outbreak is declared over; there are no recommended minimum days of prophylaxis.

Diagram 2: Antiviral Prophylaxis Recommendations in Influenza Outbreaks for Line Listed Cases after Completion of Treatment with Antiviral Medication



[A guide to the control of respiratory infection outbreaks in long-term care homes.](#) Ministry of Health and Long-Term Care; 2014

Table 1: Oseltamivir (Tamiflu®) Prophylaxis and Treatment Recommendations

PROPHYLAXIS ¹		
Adults (\geq 13 years of age) <ul style="list-style-type: none"> with no known renal disease OR	75 mg orally once daily	14 days or until the outbreak is declared over ²
<ul style="list-style-type: none"> renal disease and creatinine clearance > 30–60 mL/min 	30 mg once daily	10 – 14 days
Adults (\geq 13 years of age) <ul style="list-style-type: none"> with known renal disease and creatinine clearance of 10-30 mL/min 	30 mg orally every other day	Until the outbreak is declared over
Adults (\geq 13 years of age) <ul style="list-style-type: none"> undergoing hemodialysis or whose creatinine clearance <10 mL/min OR	Initial dose of 30 mg administered prior to start of dialysis. To maintain plasma concentration 30 mg after alternate dialysis session.	10 – 14 days
<ul style="list-style-type: none"> undergoing continuous ambulatory peritoneal dialysis or whose creatinine clearance <10 mL/min 	Initial dose of 30 mg administered prior to start of dialysis. Followed by 30 mg administered every 7 days.	10 – 14 days
Children (1 to 12 years of age)	\geq 15 kg: 30 mg orally once daily > 15 kg – 23 kg: 45 mg orally once daily > 23 kg – 40 kg: 60 mg orally once daily > 40 kg: 75 mg orally once daily	
TREATMENT		
Adults (\geq 13 years of age) <ul style="list-style-type: none"> with no known renal disease OR	75 mg orally twice daily	5 days
<ul style="list-style-type: none"> renal disease and creatinine clearance > 30-60 mL/min 	30 mg twice daily	5 days
Adults (\geq 13 years of age) <ul style="list-style-type: none"> with known renal disease and creatinine clearance of 10-30 mL/min 	30 mg orally once daily	5 days
Adults (\geq 13 years of age) <ul style="list-style-type: none"> undergoing hemodialysis or whose creatinine clearance <10 mL/min OR	Initial dose of 30 mg administered prior to start of dialysis To maintain plasma concentration 30 mg after alternate dialysis session.	5 days
<ul style="list-style-type: none"> undergoing continuous ambulatory peritoneal dialysis or whose creatinine clearance <10 mL/min 	A single 30 mg dose prior to start of dialysis	Single dose
Children (1 to 12 years of age)	\geq 15 kg: 30 mg orally once daily > 15 kg – 23 kg: 45 mg orally once daily > 23 kg – 40 kg: 60 mg orally once daily > 40 kg: 75 mg orally once daily	5 days

Oseltamivir: Additional Important Information

Available Format	30 mg, 45 mg, 75 mg capsule ³ . Powder for oral suspension (12 mg/mL or 6 mg/ml when reconstituted) ⁵
Drug Interactions	Probenecid may increase concentrations of one of the active metabolites of oseltamivir
Contraindications	None
Potential Side-effects	Nausea and vomiting occurs in approximately 2.5-10% of all people. It is usually associated with the first dose. It can be effectively minimized by giving oseltamivir with a snack or immediately after a meal.
Pregnancy and Lactation	Oseltamivir should be used during pregnancy and lactation only if the potential benefit justifies

	the potential risk to the fetus or nursing infant. There is insufficient data currently available regarding possible toxic effects on the fetus. One study suggests that both oseltamivir and oseltamivir carboxylate are detectable in human breast milk. ¹⁰
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Table 2: Zanamivir (Relenza®) Prophylaxis and Treatment Recommendations

PROPHYLAXIS		
Persons ≥ 7 years of age	Two 5 mg inhalations (10 mg) once daily	For institutional outbreaks: minimum of 2 weeks, including in vaccinated persons, and up to 1 week after the last known case was identified. ⁸
		For community outbreaks: 28 days ⁹
TREATMENT		
Persons ≥ 7 years of age	Two 5 mg inhalations (10 mg) twice daily	5 days

Zanamivir: Additional Important Information

Available Format	5 mg powder for inhalation in blister pack Zanamivir must be used with a Diskhaler device. Do not use for nebulization. MAY RESULT IN FATALITY. One disk contains 4 puffs (2 doses). Each disk is inserted into the Diskhaler device that punctures the disk, dropping the powder into a well, which is then ready for inhalation.
Drug Interactions	No known drug interactions
Contraindications	May exacerbate wheezing in asthma or chronic obstructive pulmonary disease (COPD). Many long-term care residents have difficulty coordinating the inhalation required. Anyone who has wheezing immediately after a dose should discontinue therapy.
Potential Side-effects	Dosage adjustment is not required in the elderly. No dosage adjustment is recommended for persons with impaired kidney function, given a 5-day course of treatment.

Reference: Appendix A. Oseltamivir (Tamiflu) and Zanamivir (Relenza) Prophylaxis and Treatment Recommendations. MOHLTC, Public Health Division, Public Health Protection and Prevention Branch. December 13, 2010

Ensure to indicate the population

Ensure the Outbreak Type is identified

Outbreak number provided by the HNHU

Appendix 1

ENTERIC/RESPIRATORY/OTHER OUTBREAK LINE LISTING FORM

Outbreak #: 2234-

" Staff Line Listing

" Residents Line Listing

Name of Facility: _____

Facility Contact: _____

Outbreak #: _____

Cases to be entered sequentially

Start with the onset date of the index case and sequentially number until outbreak is over

Only indicate the days the case remains symptomatic (NOT isolation days)

CASE IDENTIFICATION				SYMPTOMS										SPECIMENS			TREATMENT				ISOLATIONS											
NAME	Gender	D.O.B. (y/m/d)	Ward	Room #	Fever	Cough	Runny Nose	Stuffy Nose	Diarrhea	Vomiting	Chills	Cramps	Fatigue	Nausea (consent)	Sore Throat	Other	Nasopharyngeal (m/d)	Results	Enteric	Results	Flu Vaccine (y/m/d)	Pneumovax (y/m/d)	Antiviral Start date (m/d)	Stop date (m/d)	Day (m/d) & Time	Days	Days	Pneumonia	Hospitalization			

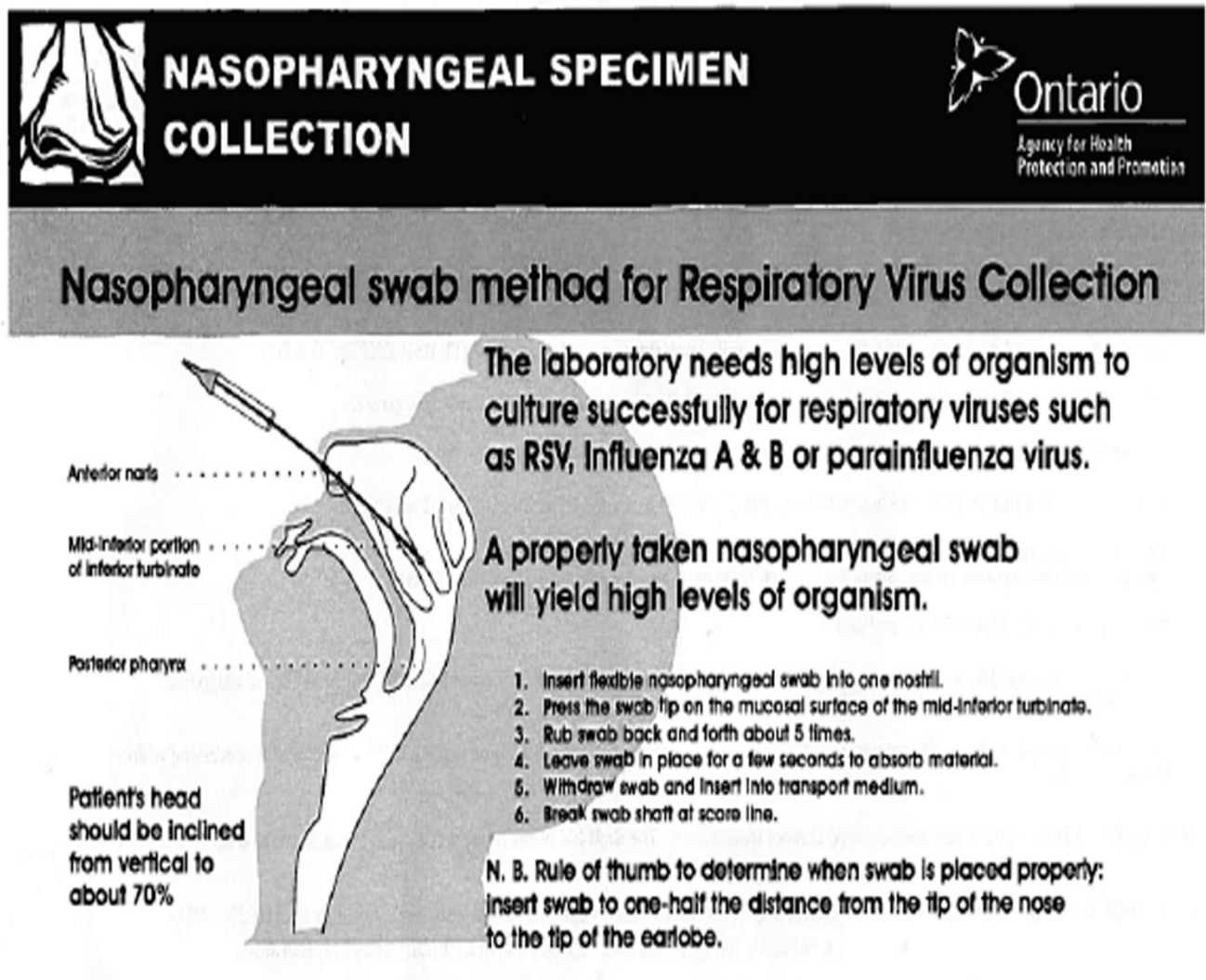
Initial case definition: _____

Revised June 2009

Nasopharyngeal Swab Method for Respiratory Virus Detection

Appendix 2 - How to Take a Nasopharyngeal Swab³³

Figure 1: How to Take a Nasopharyngeal Swab



Virus Respiratory Kits (6 Packs)

Instructions follow for the collection and transportation of clinical specimens for virus culture and direct antigen testing. The laboratory needs high levels of an organism to culture successfully for respiratory viruses such as RSV, Influenza A & B or Para influenza virus. A properly taken nasopharyngeal swab will yield high levels of organism.

The Virus Respiratory kit consists of: 6 vials of transport media with nasopharyngeal swabs, 6 biohazard bags and 6 Public Health Laboratory Requisitions.

1. Apply appropriate PPE(gloves, gown, mask and face shield) prior to specimen collection
2. Open the sealed pack and aseptically remove the sterile swab from the package - **DO NOT USE EXPIRED KITS.**
3. Collect the specimen from the nose as early as possible following the onset of symptoms.
4. Aseptically remove cap from vial and insert swab in medium.
5. Break swab shaft evenly at the scored line to fit in tube well below the cap and replace cap to vial closing tightly.

6. Label specimen container with resident's full name and date of collection of sample. (Two identifiers are required on the resident sample, and these must also appear on the requisition sheet).
7. Place specimen in the biohazard bag and seal bag.
8. Complete the PHL requisition including the PHL test code, source of specimen, date of onset and collection, two resident identifiers, physician name and clinical diagnosis. Insert the completed requisition in the pocket on the outside of the biohazard bag.
9. To maintain optimum viability, the specimen should be stored and transported at 2 - 8°C or on wet ice to the laboratory for processing within 48 hours of collection.
10. **STORAGE** - Kits should be stored at 2-25°C until used. Improper storage will result in a loss of efficacy.

Reference

[A guide to the control of respiratory infection outbreaks in long-term care homes.](#) Ministry of Health and Long-Term Care; 2014

How to Complete: Public Health Laboratory Test Requisition

OC- IDT- 2e



Public Health Laboratories

General Test Requisition

ALL Sections of this Form MUST be Completed

Date received: yyyy / mm / dd OPHL No. _____

1 - Submitter

Courier Code _____

Provide Return Address to: Haldimand-Norfolk Health Unit I.D. Team
12 Gilbertson Drive, PO Box 247
Simcoe, ON N3Y 4L1
 Postal Code _____

Clinician Initial / Surname and OHIP / CPSO Number _____

* After Hours Tel. # _____
 Tel: 1-877-298-5888 Fax: _____

2 - Patient Information

Health No. * _____ Sex _____ Date of Birth: yyyy / mm / dd

Medical Record No. _____

* Patient's Last Name (per OHIP card) _____ * First Name (per OHIP card) _____

Patient Address _____

* Nursing Home Name and Address _____

Postal Code () _____ Patient Phone No. () _____

Submitter Lab No. _____

* Public Health Unit Outbreak No. 2234 - - (see OC- IDT- 2b)

3 - Test(s) Requested (Please see test codes on reverse)

CODE	DESCRIPTION
* V23	Influenza A, B institutional respiratory outbreak
Hepatitis Serology	
	<input type="checkbox"/> Immunity <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> Diagnosis <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C

Specimen Type and Site

blood / serum faeces Nasopharyngeal
 sputum urine vaginal smear
 urethral cervix BAL
 other - (specify) _____

Patient Setting

Physician Office/Clinic ER (not admitted)
 Inpatient (ward) Inpatient (ICU) Institution

4 - Reason for Test

diagnostic immune status Date Collected: * yyyy / mm / dd
 needle stick follow-up
 prenatal chronic condition Onset Date: * yyyy / mm / dd
 immunocompromised
 post-mortem other - (specify) _____

Clinical Information

fever gastroenteritis respiratory symptoms
 STI headache / stiff neck vesicular rash
 pregnant encephalitis / meningitis maculopapular rash
 jaundice
 other - (specify) _____

influenza high risk - (specify) _____
 recent travel - (specify) _____

Laboratory Result For laboratory use only

Important: On each nasopharyngeal swab vial, ensure it is labelled with:

- Exact patient name as above
- Health Unit Outbreak Number

further report to follow

Date reported: yyyy / mm / dd Checked by: _____ Specimen(s) transferred to: _____ Date transferred: yyyy / mm / dd

For HIV, please use the HIV serology form. - For referred cultures, please use the reference bacteriology form.
 To re-order this test requisition contact your local Public Health Laboratory and ask for form number 97- 44 (09/2009)
 Current versions of Public Health Laboratory requisitions are available at www.oahpp.ca/labrequisition



Respiratory Outbreaks

Respiratory Outbreak Management Checklist		Date Initiated yy/mm/dd
1.	Notify members of facility Outbreak Management Team (OMT) and facility medical advisor.	
2.	Health Unit notification – ID team, Simcoe or Caledonia	
3.	Respiratory precautions: a) Immunizations rates – staff/residents b) Patient/resident placement – (private room if possible) discuss isolating positive cases to rooms c) Hand-washing – staff/volunteers and residents/visitors - review use of hand sanitizers d) Masking (for staff exposure to respiratory secretions) e) Patient/resident movement within the facility – for essential purposes only – patient/resident should wear mask, as tolerated.	
4.	Identify cases and high risk patients/residents/staff Start Respiratory Line List (separate lists for resident/staff cases).	
5.	Cohort nursing/patients, as a facility is able.	
6.	Exclude ill staff members. Exclusionary period to be reviewed with health unit. Have ICP discuss with symptomatic or unimmunized employee the issue of exclusion from working in other facilities.	
7.	Discuss deferring admissions, readmissions and transfers. (pg. 33 of guide 2004)	
8.	Notify relatives. Restrict or limit visiting. Educate visitors re precautions. Post signage indicating outbreak.	
9.	Notify local hospital – Infection Control Practitioner, Emergency Department - CCAC, Nursing agencies, LTC Compliance Advisor.	
10.	Contact Patient Transfer Authorization Centre (for LTCHs and acute care hospitals only).	
11.	Cancel social activities and community meetings/functions.	
12.	Thorough cleaning/sanitizing of equipment (especially respiratory equipment).	
13.	Specimen collection: Number of kits on site _____ Expired? <input type="checkbox"/> Yes <input type="checkbox"/> No Call ID Team for arrangement of pick-up of specimens.	
14.	Complete documentation – i.e. Line Listing. Daily update of new and resolved cases to be faxed to health unit – ID Team.	

Reviewed with _____ by: _____

Date: _____ yy/mm/dd

Copy faxed to facility Yes No



Section IV - Enteric Outbreak Guidelines

Purpose

The purpose of this chapter is to provide information and resources that will assist in the early recognition and control of outbreaks associated with gastrointestinal illness within your facility.

This chapter is organized to address the following topics:

1. Outbreak Process
 - Determining the existence of an outbreak.
 - Defining a case and creating a line list.
 - Declaring the outbreak, notification responsibilities and instituting outbreak controls.
 - Confirming the diagnosis.
 - Organizing the data in terms of time, place and person.
 - Developing a hypothesis.
 - Determining who is at risk.
 - Declaring the outbreak over.
2. Recommended Precautions
3. Resources
 - Enteric Outbreak Guideline
 - Enteric line list residents
 - Enteric line list staff
 - Enteric Outbreak Management Checklist
 - Stool collection technique
 - Enteric outbreak kit

Enteric Outbreak Process

1. Determining the existence of an outbreak

Suspect an outbreak whenever there are **two suspected cases of infectious gastroenteritis in a specific area, such as home, unit or floor within a 48-hour period, with no evidence of a non-infectious cause** (such as laxative use, change in tube feed or medication).

Outbreak Definition:

- **Three or more cases of infectious gastroenteritis in a specific area within a four-day period**
- **OR**
- **Three or more units/floors having a case of infectious gastroenteritis within 48 hours, with no evidence of a non-infectious cause.**

2. Defining a case and creating a line list

In collaboration with HNHU, develop a working case definition to classify exposed persons as cases or non-cases. A “case definition” can be developed on the data collected from case symptoms using simple clinical criteria; the most common are identified on the line list.

A case definition example:

“Any resident or staff exhibiting two episodes of either diarrhea or vomiting, OR, one episode of diarrhea and one episode of vomiting”

To be defined as a case of infectious gastroenteritis **at least one** of the following must be met:

- Two or more episodes of diarrhea or watery stool (takes the form of its container) within a 24-hour period, or two or more episodes of vomiting within a 24 hour period, or
- One episode of diarrhea or watery stool (takes the form of its container) and one episode of vomiting within a 24 hour period, or
- Laboratory confirmation of a known gastrointestinal pathogen and at least one symptom compatible with gastrointestinal infection (e.g., nausea, vomiting, diarrhea, or abdominal pain or tenderness)

3. Declaring the outbreak, notification responsibilities and instituting outbreak controls

It is the decision of the facility, with the support of HNHU, to declare an outbreak. Once this decision has been made, signage needs to be put up at all facility entrances. A possible kitchen inspection may be arranged at the discretion of HNHU and the Outbreak Management Team (Infection Control Team).

Notification needs to be initiated to:

- i) HNHU – either assigned investigator during regular office hours or the on-call investigator. It is the responsibility of HNHU to notify ambulance services and the public health laboratory. As soon as HNHU has been notified, control measures will be reviewed as outlined in the resource: “Enteric Outbreak Management Checklist”.
- ii) Local hospitals – when transfers are necessary. Advise paramedics that the facility is under outbreak precautions.
- iii) Nursing agencies and volunteer staff who assist at the facility.
- iv) LTC Compliance Advisor.
- v) Ministry of Labour (in the event of staff illness)

The facility is required under subsection 27(2) of the Health Protection and Promotion Act, R.S.O. 1990, c.H.7 to report outbreaks to HNHU.

4. Confirming the diagnosis

Once the outbreak has been declared, your facility will be assigned an outbreak number that will be used to identify all lab specimens collected for testing.

The outbreak number is: Health Unit – year – outbreak number
2234 – 201x – three digit number

It is best to collect specimens as early as possible from at least five residents to identify the causative agent. The Public Health Lab will accept specimens from up to 15 cases. Only five specimens will be tested for norovirus and if two cases test positive for norovirus, no further testing will take place. Stool collection technique is reviewed in the resource: “Stool Collection Technique”.

Correct labeling of specimens is needed to ensure testing by the Public Health Lab. These are identified in the resource: “Labeling an Enteric Outbreak Kit”.

5. Orienting the data in terms of time, place and person

Create a histogram (epidemic curve) to help identify whether the outbreak is **common** or **propagated source**:

- **Common source (point source) outbreak:** Exposure of a group of persons to a noxious influence that is common to the individuals in the group. When this occurs over a relatively brief period of time and all who fall ill do so within one incubation period. It results in a sudden rise in the number of cases and the classic example is a food poisoning at a common meal.
- **Propagated source:** New cases of disease occur over a long period, indicating persistence of the disease source. The epidemic curve is characterized by a plateau. This outbreak is usually a person to person or continuing exposure from a single source spread of a disease in the community, or health care setting.

Place: Provides information on the geographic extent of the problem but also demonstrated clusters or patterns that provide clues to the causes of the outbreak. Clustering of cases in a section of the facility is consistent with a focal source or person to person spread, whereas scattering of cases throughout the facility is more consistent with a disseminated vehicle or common dining hall or the air circulation system.

Person: Strongly related to exposure and risk are the factors of age, sex and occupation.

6. Developing a hypothesis

Organizing the information above may provide information that can suggest:

- The most likely type of illness
- The most likely vehicle involved
- Where and how the vehicle might have become contaminated
- Other possible causal relationships

7. Determining who is at risk

With the above hypotheses, identify what population is at risk of disease and emphasize good hand hygiene.

8. Declaring the outbreak over

The HNHU in collaboration with the Outbreak Management Team will declare the outbreak is over in your facility based on the transmission risk. The specific period is often set as:

- No new cases after one infectious period plus one incubation period. For example, the most common type of enteric illness in LTCHs is Norovirus. As per "Control of Gastroenteritis Outbreaks in Long-Term Care Homes" Appendix 14-Position Statement advises that outbreaks of Norovirus can be declared over when there are no new cases after five days (one incubation period (2 days) plus one period of communicability (3 days)."
OR
- 48 hours after the symptoms of the last case have resolved and all appropriate precautions were taken, there was no confirmed etiological agent, norovirus was not suspected and Kaplan's Criteria was used.

Kaplan's Criteria:

1. Vomiting in more than half of symptomatic cases, and

-
2. Mean (or median) incubation period of 24 to 48 hours, and
 3. Mean (or median) duration of illness 12 to 60 hours, and
 4. No bacterial pathogen isolated from stool culture

Prevention and Control Measures

Environmental cleaning

- Increase routine cleaning and disinfecting of all high-touch surfaces within the home such as door handles, railings, elevator buttons, dining tables and counters. Also, cleaning/disinfecting should be done from “clean to dirty” areas (i.e. items not frequently touched by the resident first to soiled washrooms) and from “top to bottom”.
- Increase routine cleaning and disinfecting of all surfaces in the ill resident’s immediate environment such as call bell, over-bed table, bed railing and commode and start from “clean to dirty” areas and from “top to bottom”.
- Disinfectant solutions should be applied directly to and saturating cleaning cloths rather than spraying or squirting onto the surfaces. Change cleaning cloths frequently. If a bucket is used, do not double dip the cloths.
- Soiled surfaces should be cleaned of all visible material, and then disinfected with an appropriate disinfectant. Dispose of faeces and vomitus in the toilet. If splashing is likely to occur, cleaning staff should wear utility gloves, a mask or face shield, and gown or other garment to protect clothing.
- Follow manufacturer’s instructions on preparation, use, reuse, storage and the recommended contact time for the disinfectant product.
- Soiled linens should be handled as little as possible and with minimal agitation. Laundry should be bagged and machine washed with detergent at the maximum cycle length, and machine dried.

Accommodation

Whenever possible, the ill resident should be placed in a single room with dedicated toileting facilities. Affected residents may be cohorted under the direction of the Infection Control Team. If the resident must remain in a multi-bed room/unit, signage must indicate that precautions are in place; a supply cart with PPE should be easily accessible; a laundry hamper placed as close to the resident’s bed space as possible; and a commode chair should be dedicated for the resident’s use.

Contact precautions

In addition to routine practices, initiate contact precautions as soon as possible for residents with diarrhea. Signage indicating that contact precautions are in place should be posted on the door of the resident’s room. Initiate droplet/contact precautions for residents with vomiting. Personal protective equipment must be donned by all persons prior to entering the room and discarded appropriately upon exit of room.

Hand hygiene

Hand washing with soap and water for 10-15 seconds is required for the prevention of transmission. Alcohol-based hand gels may be used on hands after glove removal; however, soap and water is preferable wherever possible. Remember not to use the resident’s designated sink as this will re-contaminate the healthcare worker’s hands.

Do not discontinue enteric precautions until the resident has been symptom-free for 48 hours and only with consultation with the HNHU Infection Disease Team.

Recommended Precautions

Residents

Restrict cases (ill residents) to their room until 48 hours symptom-free. Transfers and returns between Long-Term Care Homes and Hospitals during outbreaks are not recommended however they are not automatically prohibited. They must be considered carefully with respect to resident safety and quality of life, as well as system capacity.

Re-admission of cases who already met case definition prior to transfer is permitted with HNHU consultation. Non-urgent medical appointments made before the outbreak should be rescheduled. Where it is necessary to keep the appointment, consultation and notification should be made with HNHU.

Both transportation services and the receiving facility must be notified that the resident is on contact precautions prior to the transport. All equipment (i.e. stretcher, bed, wheel chair) used for the transfer should be cleaned before use with another resident.

Staff, students, volunteers

All staff, students, volunteers who experience gastrointestinal illness (vomiting and/or diarrhea) need to report this to the ICP and should be excluded from work until they have been symptom-free for 48 hours.

Exceptions are noted below:

1. **Salmonella typhi and paratyphi:** Confirmed cases of these organisms must be excluded from food handling and resident care activities until:
 - Three consecutive negative stool samples collected at least 48 hours apart AND
 - at least 48 hours after completion of antibiotic treatment (for ciprofloxacin) OR
 - at least two weeks after completion of antibiotic treatment (for ceftriaxone and azithromycin)
 - If treated with another antibiotic or the antibiotic is unknown, discuss with the attending physician
2. **Hepatitis A:** Confirmed cases of Hepatitis A, (food handler or HCW) must remain off work until 7 days following onset of jaundice or 14 days after onset of symptoms whichever comes earlier. Hepatitis A virus vaccine should be given for post-exposure prophylaxis of contacts (including other food handlers) as soon as possible and preferably within 14 days of exposure to the case. Administration of immune globulin (IG) is recommended for immunocompromised contacts as well as healthy adults >50 years of age who may not respond fully to the vaccine.
3. **Norovirus (Norwalk-like Disease):** Persons with symptoms or circumstances suggestive of *Norovirus* disease must remain off work until symptom-free for 48 hours. In outbreaks of *Norovirus*, patient-staff cohorting should be implemented; persons working in the affected unit should not work in other units or facilities until the outbreak is over.
4. **E.coli 0157:H7:** Confirmed cases must be excluded until:
 - The provision of 2 negative stool samples or rectal swabs are collected at least 24 hours apart OR
 - 48 hours following the completion of antidiarrheal or antibiotic therapy
5. **Shigella:** Confirmed cases of *Shigella* must submit stool specimens for culture. If *Shigella* is cultured, the person must be excluded from food handling and patient care activities until:
 - A negative stool sample or rectal swab is collected at least 24 hours after cessation of symptoms OR
 - 48 hours after completion of antibiotic therapy
6. **Non-outbreak status:** Staff, students, volunteers experiencing vomiting and/or diarrhea of a probable infectious nature should be excluded from work until they have been symptom-free for 24 hours.

Where the individual is identified as being a symptom-free for 24 hours or subsequent carrier of: *Campylobacter* sp., *Salmonella* sp. (**excluding** typhi and paratyphi), *E. histolytica*, *Yersinia* and *Giardia*, they may continue to work as long as hand hygiene is assessed to be good by the ICP or designate.

Reference

- Ontario Ministry of Health and Long Term Care, Infectious Diseases Protocol (retrieved March 2015)
http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/infdispro.aspx

Staff working in multiple health care facilities:

“Staff, students, or volunteers, who also work at other health-care facilities, day-care centers and food premises, should advise their employers that they have been working in an institution at which there is an outbreak. They should immediately stop working at all institutions/facilities if they develop symptoms of gastrointestinal illness meeting case definition for the outbreak. Depending on the policies of their employers, staff may be asked not to return to work until 48 hours after their last exposure at the outbreak institution. This period could be modified if the causative agent is known. Staff should change their uniforms between facilities and before leaving the affected facility”

Visitors

Ill visitors shall not be permitted in the home. Visitors who are permitted to visit during an outbreak shall be required to:

- Wash hands on arrival and just before leaving the resident's room.
- Visit only one resident and exit the home immediately after the visit.
- Wear appropriate PPE.

Resources

- Enteric Outbreak Guideline
- Filling in a Enteric Outbreak line list – resident
- Filling in a Enteric Outbreak line list – staff
- Enteric Outbreak Management Checklist
- Stool Collection Technique
- Labeling an Enteric Outbreak Kit

Enteric Outbreak Guidelines

Suspect an outbreak whenever there are **two suspected cases of infectious gastroenteritis in a specific area, such as home, unit or floor within 48 hours, with no evidence of a non-infectious cause** (such as laxative use, change in tube feed or medication).

Steps to effective enteric outbreak management:

1. Staff will notify the ICP of the facility if the above criterion has been met.
2. Create a case definition. (E.g. Any resident or staff exhibiting two episodes of either diarrhea or vomiting, OR, one episode of diarrhea and one episode of vomiting).
3. Start a separate line list for both staff and residents from the information on the line list instructional sheets. *Attachment: "Filling out an Enteric Outbreak line list – resident and staff"*
4. Review and implement outbreak management checklist. This document will guide you along as to what general infection control measures should be followed. *Attachment: "Enteric Outbreak Management Checklist"*
5. The facility Infection Control Team will review surveillance information collected and decide if an outbreak is suspected. It is the responsibility of the facility, in consultation with HNHU to decide if an outbreak is to be declared.
6. The HNHU investigator must be informed if an outbreak is suspected or confirmed. If an outbreak is confirmed, the HNHU will record the case definition and generate an outbreak number.
7. The facility will fax the line list (both resident and staff) and signed outbreak management checklist to the HNHU.

Contact numbers:

Assigned Health Unit Liaison for the Facility:

(weekdays between 0830 hours – 1630 hours) 519-426-6170

After hour's on-call line:

(weekdays between 1630 hours – 0830 hours and weekends): 1-877-298-5888

8. Collect stool samples from a minimum of five residents with the most recent onset of enteric symptoms. Ensure that each specimen is appropriately labeled, and has a multiple specimen collection form included. The PHL will accept specimens from up to 15 residents. Only five specimens will be tested for norovirus. If norovirus is identified in two of the resident cases, no further testing will take place.
9. Once specimens are collected, contact your HNHU investigator to arrange for the transport of the specimens to Hamilton Public Health Lab. Your HNHU investigator will contact you with the results as they are received. Note: The only rapid test available for enteric diseases is for Norovirus. The facility will continue to fax the updated line list to the HNHU investigator in Simcoe: (519) 426-4767 or in Caledonia: (905) 765-8905 daily by noon.
Note: Do not create a new line list each day. Once a person is no longer ill, do not remove their name from the line list or delete symptoms.
Continue to monitor residents and staff at your facility and add the appropriate information to the line list for the duration of the outbreak.
10. Once the outbreak is declared over, complete summary reports with your HNHU investigator.

Reference

- Ministry of Health and Long-Term Care, Control of Gastroenteritis Outbreaks in Long-Term Care Homes. A Guide for Long-Term Care Homes and Public Health Unit Staff. October 2013.
- Public Health Ontario. Laboratory Guide for Gastroenteritis Outbreaks. March 2008.

Having the facility contact take ownership of completing the line list ensures consistent data collection

ENTERIC/RESPIRATORY/OTHER

OUTBREAK LINE LISTING

(-) is used to indicate no symptoms however case remained under isolation precaution on those days.

" Staff Line Listing
 000 _____
 x Residents Line Listing

Name of Facility: H-N Long Term Care Home Facility Contact: Anne Smith Phone #: 555-5555 Fax # 333-3333
 Initial case definition: _____

CASE IDENTIFICATION				SYMPTOMS										SPECIMENS			PROPHYLAXIS/TREATMENT				ONSET DATE OF CASE											COMMENTS													
NAME	Gender	D.O.B. (y/m/d)	Room #	Fever	Cough	Runny Nose	Stuffy Nose	Diarrhea	Vomiting	Chills	Cramps	Fatigue	Nausea (congestion)	Sore Throat	Other	Nasopharyngeal (m/d)	Results	Enteric	Results	Flu Vaccine (y/m/d)	Pneumovax (y/m/d)	Antiviral Start date (m/d)	Stop date (m/d)	Day (m/d) & Time	03/08	03/09	03/10	03/11	03/12	03/13	03/14	03/15	03/16	03/17	03/18	03/19	03/20	03/21	03/22	03/23	Pneumonia	Hospitalization	Death		
	Jones, Barbra	F	S	104					x	x															X	X	-	-																	
Smith, Alivin	M	S	108					x																X	-	-																		X3 episode removed from precaution 03/11	
Green, June	F	S	103					x	x															X	-	-		x	x	-	-													X2 episode vomiting Remove from precaution 03/12 symptom resumed 03/13 ex this time v&d removed from precaution	

This case is only entered once and the residents place on the line list never changes



Enteric Outbreaks

Enteric Outbreak Management Checklist		Date Initiated yy/mm/dd
1.	Notify members of facility Outbreak Management Team (OMT) and facility medical advisor.	
2.	Health Unit notification – ID team, Simcoe or Caledonia	
3.	Enteric precautions: <ul style="list-style-type: none"> f) Patient/resident placement – (private room if possible) discuss isolation of positive cases to rooms and dedicated toileting. g) Hand-washing – staff/volunteers and residents/visitors. <ul style="list-style-type: none"> - review use of alcohol based hand rubs h) Disposable gloves, gowns and masks (if indicated for staff exposure to respiratory secretions); discuss contact precautions. i) Patient/resident movement – for essential purposes only. 	
4.	Identify cases and high risk residents/staff. Start Enteric Line List (separate lists for resident/staff cases).	
5.	Cohort nursing/residents as facility is able.	
6.	Exclude ill staff members. Exclusionary period to be reviewed with health unit. ICP to discuss with symptomatic employee the issue of exclusion from working in other facilities.	
7.	Discuss deferring admissions, readmissions and transfers.	
8.	Notify relatives. Restrict or limit visiting. Educate visitors re precautions. Post signage indicating outbreak in facility.	
9.	Notify local hospital – Infection Control Practitioner, Emergency Department, CCAC, Nursing agencies, LTC Compliance Advisor.	
10.	Cancel social activities and community meetings/functions to prevent mingling of ill and well residents.	
11.	Thorough cleaning/sanitizing of equipment with high level disinfectant.	
12.	Specimen collection: Number of kits on site _____ Expired? <input type="checkbox"/> Yes <input type="checkbox"/> No Call ID Team for arrangement of pick-up of specimens.	
13.	Complete documentation – i.e. Line Listing. Daily update of new and resolved cases to be faxed to health unit – ID Team.	

Reviewed with: _____ by: _____

Date: _____ yy/mm/dd

Copy faxed to facility Yes No

Enteric Outbreak Kits

For the collection and the transportation of stool specimens for virus culture, electron microscopy, PCR, and direct antigen testing: bacterial, parasitic and viral agents may produce gastroenteritis. The enteric outbreak kit has been designed for the investigation of these agents simultaneously at the beginning of an outbreak when the causative agent is unknown. The enteric outbreak kit includes three vials, each with a colour-coded cap (green-bacterial examination, white-viral and toxin examination, yellow-parasitology examination,).

Depending on presentation of symptoms in residents and/or staff, HNHU investigator may request that only the green and white topped containers require processing.

Guidelines for Multiple Specimen Collection:

1. Ensure proper PPE (gloves) is applied prior to specimen collection
2. **DO NOT USE EXPIRED KITS**
3. Collect the specimen(s) as early as possible following the onset of symptoms.
4. Label each specimen container and the biohazard bag with the resident's full name, date of specimen collection and the outbreak number.
5. Place one of the four corresponding kit numbered labels located on the biohazard bag on each of the three vials. Ensure one label is left on the bag for laboratory use.
6. Aseptically remove cap from the vial.
7. Stool specimens that have been in contact with the water in the toilet are unacceptable.
8. Infants/Toddlers not toilet trained: Collect the stool from the soiled diaper or from the potty.
9. It is important to fill every vial with the appropriate quality of stool, see table below.

BACTERIA – GREEN VIAL	VIRAL – WHITE VIAL	PARASITE – YELLOW VIAL
Add two to 3 spoonfuls of stool to the vial. Mix into transport solution. Replace cap on vial.	Add stool to indicated line level. Replace cap on vial.	Add stool to indicated line level. Mix into transport medium. Replace cap on vial

10. Place the vials in the biohazard bag and ensure the bag is sealed.
11. Refrigerate the specimens immediately – **Do Not Freeze.**
12. Call the health unit at 1519-426-6170 or 905-318-5367 to arrange specimen pick up

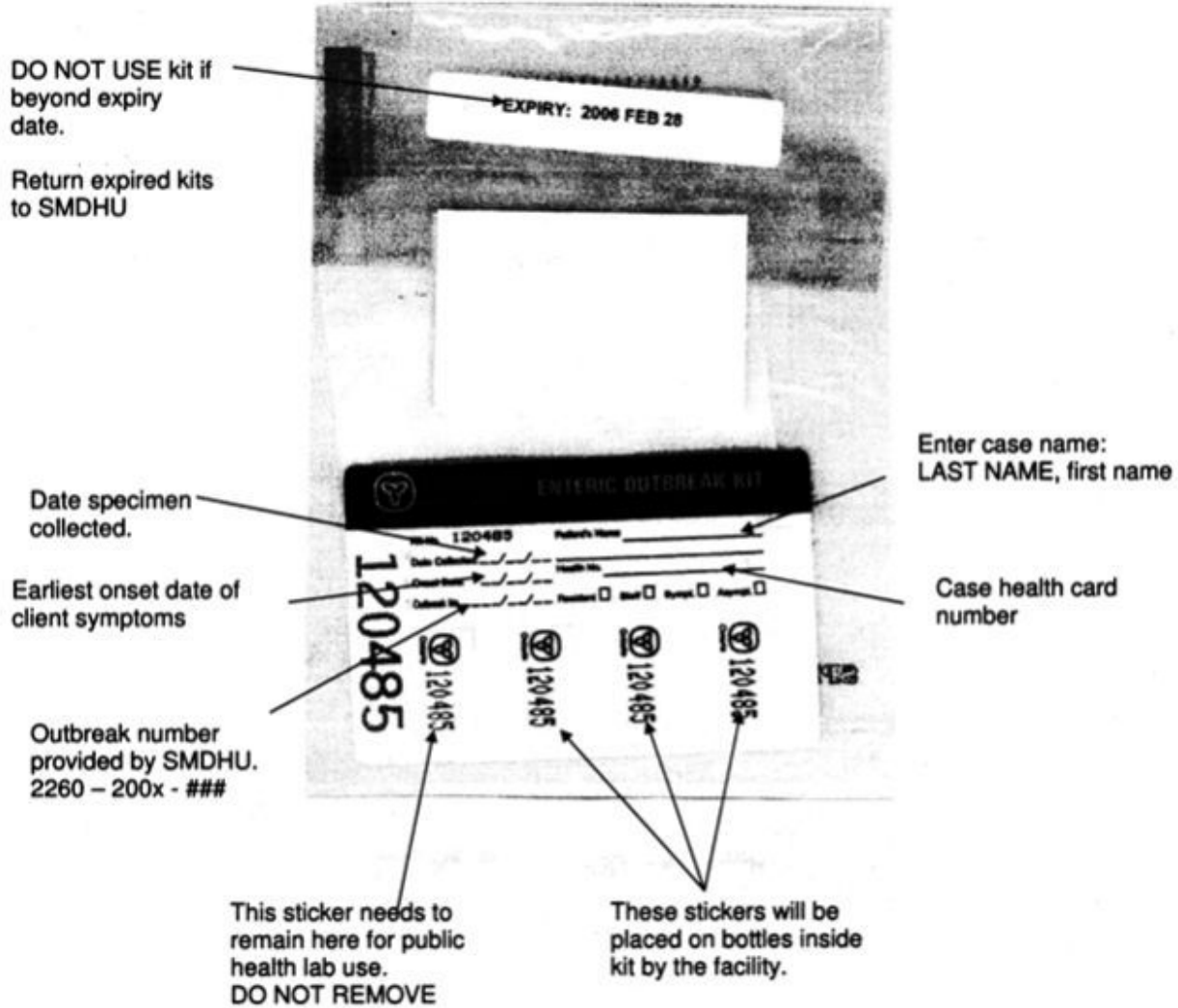
Reference

Public Health Ontario Laboratory Services

- <http://www.publichealthontario.ca/en/ServicesAndTools/LaboratoryServices/>

Labeling and Enteric Outbreak Kit:

Complete all information on big sticker of kit. **DO NOT REMOVE.** This is for public health lab use.



Place the case's filled and labeled bottles in this bag. Seal shut by peeling off the blue strip. Refrigerate package (do not freeze) immediately

ENTERIC and RESPIRATORY OUTBREAK QUICK REFERENCE

Outbreak Definitions

Enteric

Three or more cases of infectious gastroenteritis in a specific area within a four day period and no evidence of a non-infectious cause (e.g. laxative change)

OR

Three or more units/floors having a case of infectious gastroenteritis within 48 hours and no evidence of a non-infectious cause

Respiratory

Two cases of ARI within 48 hours, at least one of which must be laboratory confirmed

OR

Three cases of ARI (laboratory confirmation not necessary) occurring within 48 hours in a geographic area (e.g. unit, floor)

OR

More than two units having a case of ARI within 48 hours

Suspect an Outbreak?

1. Notify the Infection Control Practitioner (ICP) or designate.
2. Create a case definition.
3. Start line lists: one for residents and one for staff.
4. Contact the Haldimand Norfolk Health Unit (HNHU) Infectious Disease Team.
5. Collect specimens on ill residents with recent onset.



<p>HNHU Contact Numbers Business hours (0830-1630): 519-426-6170 After hours (1630-0830 as well as weekends and holidays): 1-877-298-5888</p>
--

6. **Enteric:** Use enteric outbreak stool kit, fill containers provided.
Respiratory: Use Nasopharyngeal Swabs.

7. Fill out appropriate information on lab submission form and obtain an outbreak number from the HNHU.
8. Contact the HNHU for pick up of samples for transport to the Hamilton Public Health Laboratory.
9. Ensure appropriate Personal Protective Equipment (PPE) is available and implement Outbreak Control Measures.

Outbreak Control Measures

- Increase hand hygiene for residents and staff.
- Enhance cleaning and disinfecting of all commonly touched surfaces.
- Post outbreak signage at all entrances to the facility.
- Isolate ill residents in their rooms until:
 - i. **Enteric:** 48 hours symptom free or in consultation with the ICP or the HNHU.
 - ii. **Respiratory:** until 5 days from onset of symptoms or when symptoms have resolved whichever is shorter.
- Exclude ill staff and volunteers from work until:
 - i. **Enteric:** 48 hours symptom free.
 - ii. **Respiratory:** 5 days from onset of symptoms or when symptoms have resolved whichever is shorter.
- Limit visitors and unnecessary personnel from entering the facility or affected unit.
- Use Personal Protective Equipment (PPE) such as gloves, gowns, and masks when entering an ill resident's rooms. Appropriate signage at resident's door should direct staff about use of PPE.
- Cohort staff providing care to ill residents.
- Reschedule non-urgent appointments if possible. Notify receiving facility that your facility is in outbreak.
- Reschedule communal activities and meetings.
- Dedicate resident care equipment to ill residents.
- Provide health teaching to staff and residents

Section V - Reportable Disease Guidelines

Purpose

The purpose of this chapter is to provide information and resources that will assist in the prevention and management of outbreaks associated with reportable diseases within your facility.

Disease Guidelines in this section are driven by Best Practices and are able to steer health care facility protocols. More diseases will be included as information becomes available.

Diseases are collated alphabetically and have a fact sheet followed by a summary of recommendations which provide information geared towards staff in LTCHs. Where possible, teaching and management resources are provided for use by the facility.

Reportable Diseases specified under *Ontario Regulations 559/91* and amendments under the Health Protection and Promotion Act R.S.O. 1990, c.H.7 must be reported to the local Medical Officer of Health.

HNHU is available for consulting with facilities on diseases not included in this section to date.

Included in the Reportable Disease Section:

Reportable Disease	Date developed by Facility
Chickenpox/Shingles	
Streptococcal Disease, Group A invasive (GAS, iGAS)	
Influenza	
Tuberculosis	

Health Protection and Promotion Act, Ontario Regulation 559/91

REPORTABLE DISEASES

Updated December 4, 2013

- Acquired Immunodeficiency Syndrome (AIDS)
- Acute Flaccid Paralysis
- Amebiasis
- Anthrax
- Botulism
- Brucellosis
- Campylobacter enteritis
- Chancroid
- Chickenpox (Varicella)
- Chlamydia trachomatis infections
- Cholera
- Clostridium difficile associated disease (CDAD)
 - outbreaks in public hospitals
- Creutzfeldt-Jakob Disease, all types
- Cryptosporidiosis
- Cyclosporiasis
- Diphtheria
- Encephalitis, including,
 - i. Primary, viral
 - ii. Post-infectious
 - iii. Vaccine-related
 - iv. Subacute sclerosing panencephalitis
 - v. Unspecified
- Food poisoning, all causes
- Gastroenteritis, institutional outbreaks
- Giardiasis, except asymptomatic cases
- Gonorrhoea
- Group A Streptococcal disease, invasive
- Group B Streptococcal disease, neonatal
- Haemophilus influenzae b disease, invasive
- Hantavirus pulmonary syndrome
- Hemorrhagic fevers, including,
 - i. Ebola virus disease
 - ii. Marburg virus disease
 - iii. Other viral causes
- Hepatitis, viral,
 - i. Hepatitis A
 - ii. Hepatitis B
 - iii. Hepatitis C
- Influenza
- Lassa Fever
- Legionellosis
- Leprosy
- Listeriosis
- Lyme Disease
- Malaria
- Measles
- Meningitis, acute,
 - i. bacterial
 - ii. viral
 - iii. other
- Meningococcal disease, invasive
- Mumps
- Ophthalmia neonatorum
- Paralytic Shellfish Poisoning
- Paratyphoid Fever
- Pertussis (Whooping Cough)
- Plague
- Pneumococcal disease, invasive
- Poliomyelitis, acute
- Psittacosis/Ornithosis
- Q Fever
- Rabies
- Respiratory infection outbreaks in institutions
- Rubella
- Rubella, congenital syndrome
- Salmonellosis
- Severe Acute Respiratory Syndrome (SARS)
- Shigellosis
- Smallpox
- Syphilis
- Tetanus
- Trichinosis
- Tuberculosis
- Tularemia
- Typhoid Fever
- Verotoxin-producing E. coli infection indicator conditions,
 - including Haemolytic Uraemic Syndrome (HUS)
- West Nile Virus Illness
- Yellow Fever
- Yersiniosis

Updated January 2014.

Simcoe: 519.426.6170 or 905.318.6623
Caledonia: 905.318.5367
www.hnhu.org • info@hnhu.org



Chickenpox/Shingles – Facts

HALDIMAND-NORFOLK HEALTH UNIT

HEALTHINFO



INFECTIOUS DISEASE SERVICES

Chicken Pox

What is it?

Chicken pox is a contagious rash and is caused by a virus called varicella zoster. Chicken pox is most common in the late winter and early spring. Most cases occur in children under 10 years of age but cases in adolescents and young adults can happen too.

What does it look like?

The illness begins with a mild fever followed by small, fluid filled blister-like spots that show up all over the body. The spots commonly occur in successive crops and scab over in three to four days. Spots can even occur on the scalp, the underarms and in the mouth. There can be many spots or so few that they may not even be noticed.

How is it spread?

The chicken pox virus is spread from an infected person through coughing and sneezing or by touching the spots. A person with chicken pox can spread the disease from one to two days before the rash appears and for not more than six days after the start of the rash, or until the spots have scabbed over. If a person with no immunity comes into contact with the disease, they will usually develop chicken pox in 14-21 days.

If a pregnant woman who has never had chicken pox comes in contact with someone who has chicken pox, she should notify her doctor. Treatment to prevent chicken pox may be needed.

The virus that causes us to get chicken pox when we are young remains in our bodies without causing any problems. However, when we get older or when our immune system becomes weakened, the virus can reappear and cause shingles. Shingles are painful, blister-like spots that usually appear on the skin covering the rib cage. The fluid inside carries the virus that causes chicken pox.

There is a vaccine to prevent chicken pox. To find out more about this vaccination, contact your family doctor.

Recommended Absence:

Students and staff with chicken pox may return to school and/or daycare as soon as they are feeling well enough to attend and the blisters are crusted over and dry.

For more information please contact a member of the Communicable Disease Team.

Simcoe: 519-426-6170
Caledonia: 905-318-5367



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Updated June 2010

HALDIMAND-NORFOLK HEALTH UNIT

HEALTHINFO



INFECTIOUS DISEASE SERVICES

Shingles

(Herpes Zoster)

What is shingles?

Shingles is a painful rash due to the same virus that causes chickenpox. After a chickenpox infection, the virus does not leave the body but hides along the nerve paths of the skin. Shingles occurs when the dormant chickenpox virus becomes active again.

Who can get shingles?

Everyone who has had chickenpox can get shingles. This happens to about one in five people. Why the virus becomes active again in some people and not others is unknown. The risk of shingles increases with advancing age, but it can occur in children. People with weakened immune systems, such as the elderly and those with certain medical conditions, are more likely to get shingles.

What are the symptoms of shingles?

1. Chills, fever, fatigue and upset stomach may occur a day or two before other symptoms.
2. The first symptom is often a tingling feeling on the skin, itchiness or a stabbing pain followed several days later by a rash. The rash is in a line-like pattern that follows the nerve path and is on one side of the body.
3. One or two days later the rash changes to clusters or bands of fluid-filled blisters called "vesicles" that look like chickenpox. When the rash is at its peak, symptoms range from mild itching to extreme and intense pain.
4. About the fifth day, the vesicles dry and scab.
 - The rash and pain usually disappear within three to five weeks.

How is shingles spread?

The virus that causes shingles is in the fluid of the vesicles. It can be passed through direct contact with the vesicle fluid or by direct contact with articles soiled by the fluid of the vesicles. When the virus is moved into the eyes, nose, or throat of someone who has never had chickenpox, that person can get chickenpox. It takes 10-21 days from the time of contact with the virus for chickenpox to appear. Once all the vesicles have scabbed, the person is no longer able to spread the virus.

What can be done to prevent the spread of shingles?

Chickenpox must be prevented in order to prevent shingles. Remember, you can't get shingles if you have never had chickenpox. There is a vaccine to prevent chickenpox. Immunized people are unlikely to develop shingles. However, if a person has already had chickenpox, the chickenpox vaccine will not stop them from getting shingles. Instead, there is now a separate vaccine to prevent developing shingles if you have already had a bout with chickenpox.

Covering the rash and careful handwashing after touching the area or soiled bandages will reduce the risk of spreading the virus.

Recommended Absence:

Students and staff with shingles may return to school and/or daycare as soon as they are feeling well enough to attend and the rash blisters are covered or are crusted and dry.

Updated May 2012.

Contact your local public Health Unit for more information.



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Group A Streptococcal Infections (GAS) – Facts

HALDIMAND-NORFOLK HEALTH UNIT

HEALTHINFO



INFECTIOUS DISEASE TEAM

Group A Streptococcus

What is it?

Group A Streptococcus (GAS) is a bacteria that is naturally found in many people's throats and rarely cause serious invasive disease. Group A Streptococcus can cause a variety of common diseases such as sore throats ("strep throat"), tonsillitis, scarlet fever, and skin infections such as impetigo. Occasionally, the bacteria cause more serious infections such as necrotizing fasciitis ("flesh-eating disease"), inflammation of muscle tissue and streptococcal toxic shock syndrome (STSS). These more serious infections are referred to as "invasive GAS".



How is it spread?

Approximately 10 - 15 % of people carry GAS in their throat without any symptoms. These people are called "carriers". The bacteria may be spread when the nose or throat secretions of either a "carrier" or an ill person come in contact with the nose or mouth of another person. This occurs during activities such as: kissing or sharing of food, cutlery, drinks, water bottles, lipstick, toothbrushes, musical instrument mouthpieces, mouth guards, or cigarettes. This type of sharing should be avoided at all times. The bacteria may also be spread when a person comes into direct contact with infected lesions on the skin, such as impetigo. The bacteria do not spread through the air. Infected persons are generally not contagious after 24 hours of treatment with the appropriate antibiotics.

What are the symptoms?

The early symptoms of toxic shock syndrome include fever, tiredness and a general feeling of unwellness. Early symptoms of necrotizing fasciitis may include fever, and abnormal pain, swelling and redness at the infected area.

Who is considered a close contact?

Close contacts of a person with invasive streptococcal disease are those who are likely to have been exposed to the nose or throat secretions of the sick person. This exposure can result in the spread of disease only if it occurred 7 days or less before the individual became ill and up to 1 day after treatment begins in the ill person. Close contacts include the following:

- those living in the same household as the ill person;
- those who share sleeping arrangements with the ill person; those who have kissed the ill person or shared items with the ill person such as: food, cigarettes, drinks, cutlery, water bottles, lipstick, cigarettes, mouth guards, toothbrushes, or musical instrument mouthpieces;
- those who have performed mouth-to-mouth resuscitation on the ill person
- those with direct skin to skin contact with secretions from infected sores on the ill person
- **Classroom, daycare, workplace and social contacts generally are not considered close contacts**

Can it be prevented in close contacts?

Yes, invasive GAS may be prevented by giving antibiotics to close contacts of a person who is sick with the disease. Close contacts of a person with severe infection have rates of disease slightly higher than the general public, but the risk remains very low.

NOTE: If the case is a resident of a Long Term Care facility, refer to the most current version of the Ontario Nursing Home Association Guidelines for the Management of Residents with Group A Streptococcus Infection in Long-Term Care Facilities.

What is given to close contacts to prevent invasive GAS disease?

When a case of Invasive Group A Streptococcus is reported, Public Health will investigate and obtain names of close contacts who meet the criteria as defined above. It is recommended that close contacts be treated with an antibiotic for 10 days to prevent disease. Haldimand Norfolk Health Unit staff will contact your family physician to review the recommended antibiotic. Close contacts should be watched for the symptoms of invasive GAS disease and seek medical attention immediately if these symptoms develop.

This information is intended to provide general health-related information about Group A Streptococcus. It is not intended to replace medical consultation by your physician and/or other health care professionals.

Adapted with permission of Niagara Region Public Health

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August 2011

Group A Streptococcal Disease

Recommendations on [Public Health Management of Invasive Group A Streptococcal \(iGAS\) Disease](#), by the PIDAC

Surveillance

Group A Streptococci can cause a variety of diseases such as: strep throat, pharyngitis, pneumonia, impetigo, pyoderma, wound infections, scarlet fever, rheumatic fever, erysipelas, cellulites, paronychia, otitis media and conjunctivitis.

A diagnosis of invasive Group A streptococcal disease (iGAS) is confirmed when a specimen from a normally sterile site on culture presents with *streptococcus pyogenes*, or *s. pyogenes*. Only confirmed cases of iGAS disease are reportable to the Haldimand Norfolk Health Unit (HNHU) under the Health Protection and Promotion Act (HPPA) and should be included under facility infectious disease surveillance.

The Canadian Guidelines for the Prevention and Control of Invasive Group A Streptococcal Disease defines a severe case of iGAS as a case of streptococcal toxic shock syndrome (STSS), soft-tissue necrosis (including necrotizing fasciitis, myositis or gangrene), meningitis, GAS pneumonia, other life-threatening conditions or a confirmed case resulting in death.⁽ⁱ⁾ This classification of severe iGAS is important, as close contacts of these severe cases may be recommended chemoprophylaxis (see Management of Contacts section below).

Management of Group A Streptococcal Disease

When a single case of iGAS has been identified and reported, it is recommended that the following occur:

- I. The facility will be contacted by a HNHU investigator and a meeting held with occupational health, infection prevention and control and HNHU in attendance.
- II. Upon recommendation of the Medical Officer of Health and the Infection Control Committee, it may be recommended that the facility initiate an outbreak investigation if any of the following are identified during investigation:
 - i) if in the past 4 – 6 weeks there are culture-confirmed cases of GAS disease and any suggested cases of non-invasive or invasive GAS infection, including skin and soft tissue infections (eg. pharyngitis and cellulites) and excluding pneumonia and conjunctivitis not confirmed by culture,
 - ii) if a potential source of infection from outside the facility can be identified (eg. regular visits from children),
 - iii) if the incidence of GAS infections is higher than normal for the facility.

Long-term care facility outbreak definition	An incidence rate of culture-confirmed invasive GAS infections of >1 per 100 residents per month or at least two cases of culture-confirmed invasive GAS infection in 1 month in facilities with fewer than 200 residents or an incidence rate of suggested invasive or non-invasive GAS infections of >4 per 100 residents per month.
--	---

If there is found to be an excess of GAS infection identified, the following actions need to be considered:

- All patient/resident care staff should be screened for GAS with throat, nose and skin lesion cultures. Where the LTCF has less than 100 beds, all residents should be screened for GAS. In LTCF with 100 beds or greater, screening can be limited to all residents within the same care unit as the infected case and contacts of the case if necessary, unless patient and care staff movement indicate a broader approach.
- Anyone colonized with GAS should receive chemoprophylaxis.
- Non-patient/resident care staff should be asked about possible recent GAS infections. Those with a positive history should be screened for GAS, and those who are positive should be treated with antibiotics.
- All GAS isolates should have further typing done to identify an outbreak strain. Culture for test of cure is indicated for individuals found to have the outbreak-related strain, particularly if there is epidemiologic evidence indicating that contact with the individual is significantly related to illness. Culture for test of cure is not needed for individuals infected with a strain of GAS not related to the outbreak.

- All GAS positive residents and staff should be re-screened, including throat and skin lesions, 14 days after chemoprophylaxis has been started; this should be followed by screening at 2 and 4 weeks after the first re-screening. If the person is found to be positive, a second course of chemoprophylaxis should be offered. If the person remains colonized after the second course of chemoprophylaxis, discontinue chemoprophylaxis unless the facility continues with GAS infection issues.
- Active surveillance for GAS infection should be initiated and continued for 1-2 months.
- Appropriate specimens should be taken for culture when persons are identified by the surveillance program.

If no excess is identified, especially if there is evidence of an outside source of infection for the index case, then active surveillance alone for 2-4 weeks to establish the absence of additional cases is warranted.

Isolation

1. Residents can participate in facility activities after receiving 24 hours of antibiotic treatment. If the resident is symptomatic (runny nose/cough) and is carrying GAS in his/her nose or throat, evaluation of his/her participation should be made until these symptoms have subsided. Consult with your HNHU liaison.
2. Colonized staff can return to work after 24 hours of antibiotic treatment provided all of the following 3 conditions do not exist: ⁽ⁱⁱ⁾
 - iv) one or more residents have an invasive GAS infection; AND
 - v) the staff person has failed to decolonize; AND
 - vi) it has been epidemiologically shown that the staff member is transmitting the GAS to residents and other staff.

Management of Contacts

Once a resident has been diagnosed with iGAS, HNHU and LTCH will work collaboratively to identify close contacts and plan next steps. Where a close contact has been identified, preventative prophylaxis (chemoprophylaxis) must be offered.

To be considered a close contact, any of the following criteria must be met :

- Household contacts of a case that have spent at least 4 hours/day on average (or 20 hours/week with the case) in the previous 7 days preceding the onset of symptoms and up until 24 hours following the start of appropriate antibiotic treatment.
- A person who shared the same bed or had sexual relations with the case from 7 days prior to illness until 24 hours following the start of antibiotic treatment.
- Any person whose nose or mouth has been contaminated with oral/nasal secretions of a case, (eg. Mouth-to-mouth resuscitation, open mouth kissing*) or unprotected direct contact with an open skin lesion of the case.
- Injection drug users who have shared needles with the case.

Direct mucous membrane contact should be **prolonged** for a person to be considered a close contact. This would exclude kissing with closed mouths and sharing of utensils, water bottles or cigarettes.

Patients/residents who share a room with a patient/resident with invasive GAS are not considered exposed and do not need prophylaxis unless they fit close contact requirements.

Chemoprophylaxis should only be offered

- To close contacts of a confirmed severe case, that is, a case of STSS, soft-tissue necrosis (including NF, myositis or gangrene), meningitis, GAS pneumonia, other life-threatening conditions or a confirmed case resulting in death;

AND

- If the close contacts have been exposed to the case during the period from 7 days prior to onset of symptoms in the case to 24 hours after the case's initiation of antimicrobial therapy.

Chemoprophylaxis of close contacts to a severe iGAS should be administered as soon as possible, preferably within 24 hours of case identification but is still recommended for up to 7 days after the last contact with an infectious case.

Close contacts of all confirmed cases (regardless of severity) should be educated to signs and symptoms of invasive GAS disease and be advised to seek medical attention immediately should they develop febrile illness or any other clinical manifestations of GAS infection within 30 days of diagnosis in the index case.

Clinical manifestations of pharyngeal and iGAS infection include:

- influenza-like symptoms (fever, rapid breathing, aches, pains and chills)
- sore throat, localized severe muscle pain
- dizziness, confusion, diffuse rash or abdominal pain.

The purpose of chemoprophylaxis is to eradicate nasopharyngeal colonization of GAS and potentially prevent disease in close contacts and transmission to other people.

Recommended Chemoprophylaxis Regimens for Close Contacts(i)

Drug	Dosage	Comments
First-generation cephalosporins: cephalexin, cephadroxil, cephadrine	First line. Children and adults: 25 to 50 mg/kg daily, to a maximum of 1 g/day in 2 to 4 divided doses × 10 days	Recommended drug for pregnant and lactating women. Should be used with caution in patients with allergy to penicillin. Use of cephalosporins with nephrotoxic drugs (e.g. aminoglycosides, vancomycin) may increase the risk of cephalosporin-induced nephrotoxicity.
Erythromycin	Second line. Children: 5 to 7.5 mg/kg every 6 hours or 10 to 15 mg/kg every 12 hours (base) × 10 days (not to exceed maximum of adult dose) Adults: 500 mg every 12 hours (base) × 10 days	Erythromycin estolate is contraindicated in persons with pre-existing liver disease or dysfunction and during pregnancy. Sensitivity testing is recommended in areas where macrolide resistance is unknown or known to be ≥ 10%.
Clarithromycin	Second line. Children: 15 mg/kg daily in divided doses every 12 hours, to a maximum of 250 mg po bid × 10 days Adults: 250 mg po bid × 10 days	Contraindicated in pregnancy. Sensitivity testing is recommended in areas where macrolide resistance is unknown or known to be ≥ 10%.
Clindamycin	Second line. Children: 8 to 16 mg/kg daily divided into 3 or 4 equal doses × 10 days (not to exceed maximum of adult dose) Adults: 150 mg every 6 hours × 10 days	Alternative for persons who are unable to tolerate beta-lactam antibiotics.

Prevention and Control Measures

1. Staff must wash hands before and after every contact with the resident with GAS; wash hands after leaving the affected resident room; wash hands after glove use. Handwashing must be reviewed with visitors, students and volunteers.
2. Gloves should be worn during dressing changes (skin lesions) and when in contact with blood or other body fluids. Gloves should be changed after contact with infectious material; even with the same resident and should be discarded upon leaving the affected resident's room.
3. Shared equipment must be cleaned with a hospital approved disinfectant between resident use.
4. Unsoiled linen can be placed in the regular laundry hamper. If heavily soiled with body fluids; place items in a plastic bag before placing in laundry hamper.
5. Personnel can reduce the risk of infection by the consistent use of Routine Practices in all direct patient/resident care activities, including wearing a mask and eye protection or face shield when contamination with respiratory droplets is likely.⁽ⁱ⁾
6. In addition to routine practices, apply additional precautions specifically contact and droplet precautions when caring for patients/residents with suspected or known invasive GAS disease until 24 hours of effective antimicrobial therapy has been completed.⁽ⁱⁱ⁾

Health Care Workers (HCWs) are to be encouraged to report illness possibly due to GAS (pharyngitis, impetigo, wound or skin infections, cellulites) and comply with policies regarding not working when ill. An occupationally acquired GAS infection is reportable to the Ministry of Labour and WSIB⁽ⁱⁱ⁾



Pneumococcal Disease

What is Pneumococcal Disease?

Pneumococcal disease refers to a number of different types of infection caused by the bacteria *Pneumococcus* (also called *Streptococcus pneumoniae*).

Pneumococcal infections are most common in children less than 5 years of age and are the leading cause of:

- Otitis media (middle ear infection)
- Pneumonia (lung infection)
- Bacteraemia (infection of the blood stream, referred to as "invasive")
- Meningitis (infection of the lining of the brain)

How is it spread?

The bacteria can often be found in the nose and throat of healthy individuals, especially in young children. You may get strep pneumo by breathing in droplets when an infected person either coughs or sneezes. The bacteria is also spread by touching objects contaminated by these droplets and then touching your eyes, nose or mouth.

What are the symptoms?

Symptoms usually start 1-3 days after being exposed to the bacteria. Symptoms of pneumococcal disease are not specific and depend on the site of infection.

Symptoms of pneumonia are often quite sudden and include chills, fever, shortness of breath or rapid breathing, chest pain that is worsened by breathing deeply and a productive cough.

Symptoms of pneumococcal meningitis include stiff neck, fever, confusion and disorientation, and photophobia (sensitivity to light).

Symptoms of invasive pneumococcal disease are characterized by symptoms similar to pneumonia and meningitis, and include joint pain, fever and chills.

How do I know if I have Pneumococcal Disease?

It is important to be aware of the symptoms of pneumococcal disease. If you develop symptoms there are different tests that your health care provider will use to test for *Streptococcus*

pneumoniae bacteria. Sometimes your blood or cerebral spinal fluid (CSF) will be tested.

What is the treatment for Pneumococcal Disease?

Pneumococcal Disease is treated with antibiotics. Some pneumococcal infections are resistant to commonly used antibiotics.

How do I protect myself and others?

The best way to prevent invasive pneumococcal disease is to ensure you have received all your immunizations. The Prevnar 13 vaccine is publicly funded (free) in Ontario for children up until their 5th birthday. For infants who are just starting their immunization series with Prevnar 13, the majority will receive a 3 dose series, given at 2, 4, and 12 months of age.

Infants with the following high risk conditions will receive a 4 dose series, given at 2, 4, 6, & 15 months of age:

- Chronic respiratory disease (except Asthma, unless treated with high-dose corticosteroids)
- Chronic cardiac disease
- Cirrhosis
- Chronic renal disease or nephrotic syndrome
- Diabetes mellitus
- Asplenia, splenic disorders, sickle-cell disease
- Chronic cerebrospinal fluid leak
- Anyone who is immunosuppressed
- Solid organ transplant recipients
- Cochlear implant recipients


Pneu-P-23 vaccine is publicly funded (free) for all persons 65 years of age and older regardless of medical condition and all residents of nursing homes, homes for the aged and chronic care facilities or wards.

For more information call the Communicable Disease Team: ext. 8809



Tel: 721-7520
Toll free: 1-877-721-7520
www.simcoemuskokahealth.org

Your Health Connection



All persons ≥ 2 years of age with the medical conditions listed below should receive one dose of the Pneu-P-23 vaccine:

- Chronic respiratory disease (excluding asthma, except those treated with high-dose corticosteroid therapy)
- Chronic cardiac disease
- Chronic liver disease (including hepatitis B and C, and hepatic cirrhosis due to any cause)
- Chronic renal disease, including nephrotic syndrome
- Diabetes mellitus
- Chronic cerebrospinal fluid leak
- Chronic neurologic condition that may impair clearance of oral secretions
- Asplenia (functional or anatomic), splenic dysfunction, sickle-cell disease and other sickle cell haemoglobinopathies
- Primary immune deficiency
- Congenital immunodeficiencies involving any part of the immune system, including B-lymphocyte (humoral) immunity, T-lymphocyte (cell) mediated immunity, complement system (properdin, or factor D deficiencies), or phagocytic functions
- Other conditions associated with immunosuppression (e.g., malignant neoplasms, including leukemia and lymphoma)
- Immunosuppressive therapy including use of long-term systemic corticosteroid, chemotherapy, radiation therapy, post-organ transplant therapy, certain anti-rheumatic drugs and other immunosuppressive therapy
- HIV infection
- Hematopoietic stem cell transplant (candidate or recipient)
- Solid organ or islet cell transplant (candidate or recipient)
- Cochlear implant recipients (pre/post implant)

Speak to your doctor about the vaccine. If you do not have a doctor, call the Vaccine Preventable Disease Team at the health unit.

You can also help stop the spread of pneumococcal disease by washing your hands regularly, especially after you cough or sneeze and prior to preparing and consuming food.

Reviewed December 2012

SIMCOE MUSKOKA DISTRICT HEALTH UNIT

HALDIMAND-NORFOLK HEALTH UNIT

HEALTHINFO



INFECTIOUS DISEASE TEAM

Influenza

What is it?

Flu is the short term for influenza. It is a highly contagious respiratory disease caused by a virus. The flu virus attacks suddenly, causing fever, headache, tiredness, muscle aches and pain, runny nose, sneezing or congestion, swollen or tender glands in the throat, sore throat and a dry cough. Sometimes nausea, vomiting, or diarrhea may also occur.

Complications of influenza include pneumonia, bronchitis and tracheobronchitis. For certain persons these complications can be very serious.

How is it spread?

It is spread through the air from the sneeze or cough of an infected person or from direct contact with discharges from the nose or throat of infected persons.

What is the incubation period?

It takes about one to three days from the time a person comes in contact with the infected secretions until they develop symptoms.

What about infectiousness?

The first three days of illness are the most contagious time because there is more virus in nose and throat secretions. Young children are infectious for about seven days because they have more secretions and take longer to make antibodies.

Certain people are at risk for serious complications from an influenza infection.

They are:

- Persons with chronic heart or lung conditions.
- Persons with chronic conditions such as diabetes and other metabolic diseases, cancer, immunodeficiency (including HIV infection), immunosuppression (including transplant recipients), renal disease, anaemia, and blood disorders.
- Children (age six months to 18 years) treated for long periods with acetylsalicylic acid.
- Persons who reside in nursing homes or other chronic care facilities.
- Persons older than 65 years of age.
- Healthy children aged six to 23 months.

- People at high risk of influenza complications embarking on travel destinations where influenza is likely to be circulating.
- Certain persons are capable of transmitting influenza to those at high risk for complications.**



They are:

- Health care providers who work in facilities and community settings (physicians, nurses and emergency response workers).
- Health care personnel and other persons who work or visit in hospitals or long-term facilities.
- Those who provide home care to persons in high-risk groups.
- Those who provide services within closely or relatively closed settings to persons at high risk (e.g., crew on a cruise ship).
- Those providing regular child care to children aged zero to 23 months, whether in or out of the home.
- Household contacts (adults and children) of people at high risk of influenza complications. This includes household contacts of children under six months who are at high risk but for whom there is no vaccine and of children aged six to 23 months, whether or not they have been immunized. Pregnant women, who will deliver during influenza season, should be immunized during their third trimester because they will become household contacts of their newborn babies.

- Persons who provide essential community services.
- Persons directly involved in the culling operation of avian infected poultry.

How can I protect myself and others?

- Get influenza vaccine annually. Each year the strains of influenza virus are different and the vaccine changes in an attempt to match the circulating virus.
- Practice good hand washing.
- Do not visit susceptible persons or facilities if you are experiencing any symptoms that could be symptoms of influenza.
- Talk to you health care provider about the nasal spray form of vaccine available now in Ontario for ages 2 and older.

For more information, please contact a member of Haldimand-Norfolk Health Unit's Infectious Disease Team.

Updated September 2014.



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HALDIMAND-NORFOLK HEALTH UNIT

HEALTHINFO



INFECTIOUS DISEASE TEAM

TB Facts

Tuberculosis: General Information

What is TB?

Tuberculosis (TB) is a disease caused by germs that are spread from person to person through the air. TB usually affects the lungs, but it can also affect other parts of the body, such as the brain, the kidneys, or the spine. A person with TB can die if they do not get treatment.

What Are the Symptoms of TB?

The general symptoms of TB disease include feelings of sickness or weakness, weight loss, fever, and night sweats. The symptoms of TB disease of the lungs also include coughing, chest pain, and the coughing up of blood. Symptoms of TB disease in other parts of the body depend on the area affected.

How is TB Spread?

TB germs are put into the air when a person with TB disease of the lungs or throat coughs, sneezes, speaks, or sings. These germs can stay in the air for several hours, depending on the environment. Persons who breathe in the air containing these TB germs can become infected; this is called latent TB infection.

What is the Difference Between Latent TB Infection and TB Disease?

People with latent TB infection have TB germs in their bodies, but they are not sick because the germs are not active. These people do not have symptoms of TB disease, and they cannot spread the germs to others. However, they may develop TB disease in the future. They are often prescribed treatment to prevent them from developing TB disease.

People with TB disease are sick from TB germs that are active, meaning that they are multiplying and destroying tissue in their body. They usually have symptoms of TB disease. People with

TB disease of the lungs or throat are capable of spreading germs to others. They are prescribed drugs that can treat TB disease.

What Should I Do If I Have Spent Time with Someone with Latent TB Infection?

A person with latent TB infection cannot spread germs to other people. You do not need to be tested if you have spent time with someone with latent TB infection. However, if you have spent time with someone with TB disease or someone with symptoms of TB, you should be tested.

What Should I Do if I Have Been Exposed to Someone with TB Disease?

People with TB disease are most likely to spread the germs to people they spend time with every day, such as family members or coworkers. If you have been around someone who has TB disease, you should go to your doctor or your local health department for tests.

How Do You Get Tested for TB?

There are two tests that can be used to help detect TB infection: a skin test or a special TB blood test. The Mantoux tuberculin skin test is performed by injecting a small amount of fluid (called tuberculin) into the skin in the lower part of the arm. A person given the tuberculin skin test must return within 48 to 72 hours to have a trained health care worker look for a reaction on the arm. The special TB blood test measures how the patient's immune system reacts to the germs that cause TB.

What Does a Positive Test for TB Infection Mean?

A positive test for TB infection only tells that a person has been infected with TB germs. It does not tell whether or not the per-



son has progressed to TB disease. Other tests, such as a chest x-ray and a sample of sputum, are needed to see whether the person has TB disease.

What is Bacille Calmette-Guérin (BCG)?

BCG is a vaccine for TB disease. BCG is used in many countries, but it is not generally recommended in the United States. BCG vaccination does not completely prevent people from getting TB. It may also cause a false positive tuberculin skin test. However, persons who have been vaccinated with BCG can be given a tuberculin skin test or special TB blood test.

Why is Latent TB Infection Treated?

If you have latent TB infection but not TB disease, your doctor may want you to take a drug to kill the TB germs and prevent you from developing TB disease. The decision about taking treatment for latent infection will be based on your chances of developing TB disease. Some people are more likely than others to develop TB disease once they have TB infection. This includes people with HIV infection, people who were recently exposed to someone with TB disease, and people with certain medical conditions.

How is TB Disease Treated?

TB disease can be treated by taking several drugs for six to 12 months. It is very important that people who have TB disease finish the medicine and take the drugs exactly as prescribed. If they stop taking the drugs too soon, they can become sick again; if they do not take the drugs correctly, the germs that are still alive may become resistant to those drugs. TB that is resistant to drugs is harder and more expensive to treat. In some situations, staff of the local health department meet regularly with patients who have TB to watch them take their medications. This is called directly observed therapy (DOT). DOT helps the patient complete treatment in the least amount of time.

Additional Information

CDC. Questions and Answers About TB

<http://www.cdc.gov/tb/faqs/default.htm>

The Lung Association. Tuberculosis.

http://www.lung.ca/diseases-maladies/tuberculosis-tuberculose_e.php

Haldimand Norfolk Health Unit.

<http://www.hnhu.org>



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Updated May 2010

Management of Tuberculosis Infection and Disease

Surveillance

Employees and Volunteers

At the time of employment it is strongly recommended that all HCWs and volunteers have a baseline two step TST, with the exception for those who have documented results of a prior two step TST and/or a previous positive TST.

For those who have positive TST history, a chest xray is recommended for their file upon hire.

Annual screening (TST) for HCWs (with a negative baseline TST) is recommended for those involved with intermediate risk activities in health care settings not considered low risk as well as those involved in high risk activities in all health care settings.

*If the annual risk of infection is shown to be less than 0.5%, annual screening is not necessary every year. Each facility should create the specific criteria for their facility based on their level of risk and incidence rate.

Residents

Recommendations for Tuberculosis (TB) Screening:

All new residents must undergo a history and physical examination by a physician/nurse practitioner **within 90 days prior to admission or within 14 days after admission**. It is recommended that this assessment include:

1. A symptom review for pulmonary TB disease
2. A chest x-ray (posterior-anterior and lateral)
3. If signs and symptoms and/or chest x-ray indicate potential active pulmonary TB disease, the resident should not be admitted until three sputum samples taken at least eight hours apart are submitted to the Public Health Lab for testing (Acid Fast Bacilli and Culture) and the results are negative. *Note: it can take up to 8 weeks for a culture report.*
4. **In addition to the above, for residents <65 years of age** who are previously skin test negative or unknown, a 2-step tuberculin skin test (TST) is recommended. If the TST is positive, treatment of latent TB infection (LTBI) should be considered. A TST is **not** recommended for resident with a previous positive TST.

Tuberculin skin test are not recommended to be done up admission for residents born in Canada before 1955, Aboriginal Canadians, or people born or previously residing in countries with high TB incidence. If a TST was previously done, record the date and result of the most recent TST.

Annual TST is not necessary. The decision to screen annually or otherwise, should be based on the incidence of active TB in the facility's resident population. For example, were there any active TB cases in the past 10 years within the facility?

Recommendations for Residents coming from another facility

Prior to accepting a resident from another facility, the resident should be carefully assessed for signs and symptoms of active TB, which may include review of a chest x-ray previously obtained on admission to the other facility or any other recent radiology. If there is any suspicion of active TB, a repeat chest x-ray, sputum testing and any other necessary investigations should be completed to rule out active pulmonary TB disease before accepting the resident.

Management of Tuberculosis Infection

Treatment for latent tuberculosis infection (LTBI) is undertaken to prevent active disease in infected persons thereby preventing transmission to others. Treatment is completed under the guidance of a physician and is optional depending on the individual's risk factors and potential benefits from treatment. No isolation requirements are needed when the individual has LTBI.

Management of Tuberculosis Disease

Active disease should be considered in symptomatic individuals from the following high risk groups:

- Close contacts of individuals with known or suspected active TB
- Foreign-born individuals from endemic areas who have arrived in Canada within the past two years
- Persons who are homeless or under housed
- Persons with HIV infection and AIDS
- Persons with high risk medical conditions such as transplantation (related to immunosuppression therapy, silicosis, chronic renal failure, diabetes, carcinoma of the head and neck)
- Aboriginal communities with high rates of LTBI or TB disease
- Persons at risk due to occupational exposure (e.g. hospital and shelter staff/volunteers)
- Substance abusers
- Cigarette smokers (1ppd)
- Staff and residents of long-term care institutions (e.g. nursing homes and correctional facilities)
- Individuals with a history of past TB disease
- Elderly people who lived through an era when TB was common or who have come from an endemic country.

Reference: Public Health Agency of Canada. (2014). [Canadian TB Standards](#) 7th edition.

Prevention and Control Measures

- ❖ Notify the Infection Prevention Control Professional of suspected and confirmed cases of tuberculosis **immediately**.
- ❖ **Tuberculosis is a reportable disease and must be reported to HNHU by the next working day. Under the Health Protection and Promotion Act of Ontario, physicians and other health care professionals, including laboratory technicians and infection control practitioners, must report cases or active tuberculosis disease and latent tuberculosis infection to the local Medical Officer of Health in the jurisdiction in which they practice**

Accommodation

If the facility does not have the ability to isolate the resident suspected of active tuberculosis under airborne precautions, provision should be made for rapid transfer of the resident to another health care setting that can provide this:

Where transfer is delayed or not possible, place the resident in a single room with the door and window closed. Limit the number of people entering the room and ensure proper airborne precautions are instituted. Ensure a sign is posted on the resident's door and that N95 respirators/surgical masks are available at the entry.

Precautions

All HCWs should wear an approved fit-tested respirator (N95 mask without valves) when caring for the resident. The resident suspected of tuberculosis should be instructed to cover mouth and nose with tissues when coughing or sneezing and wear surgical masks whenever around other people.

Resident Transfer

Both transportation services and the receiving facility must be notified that the resident is on airborne precautions prior to the transport. Suspected residents should be provided with surgical masks. Elective procedures should be postponed until the resident is deemed non-infectious.

The Canadian Tuberculosis Standards (2014) recommend the following when transporting an individual suspected or confirmed to have respiratory TB:

- HCWs involved with the transfer (sending, transporting and receiving) need to be advised of the individuals infectious state

- The individual being transferred should be escorted by a HCW
- Clients should wear a mask, and HCWs involved in the transport should wear a N95 mask
- Public transportation should not be used to transfer a client
- Where air transport is required, transport HCWs should refer to their organizations policies on airborne infections and medical transportation.

Only discontinue precautions after consultation with Public Health, IPC Team and treating physician.

Contact Follow up

Where it has been confirmed that there has been resident/staff exposure to an individual with active tuberculosis, contacts must be identified and screened. When identifying contacts, all transmission risk factors must be considered. Consultation with treating physician and HNHU tuberculosis staff is recommended.

Screening is initiated as soon as a contact is identified. Where the initial results are negative, final TST is done 8 weeks after the last exposure date. Previous TST negative persons should have a TST immediately and a repeat test 8 weeks after contact. Previous TST positive persons should be followed clinically and advised about symptoms by the IPCP under the direction of a physician. This will usually include a chest x-ray.

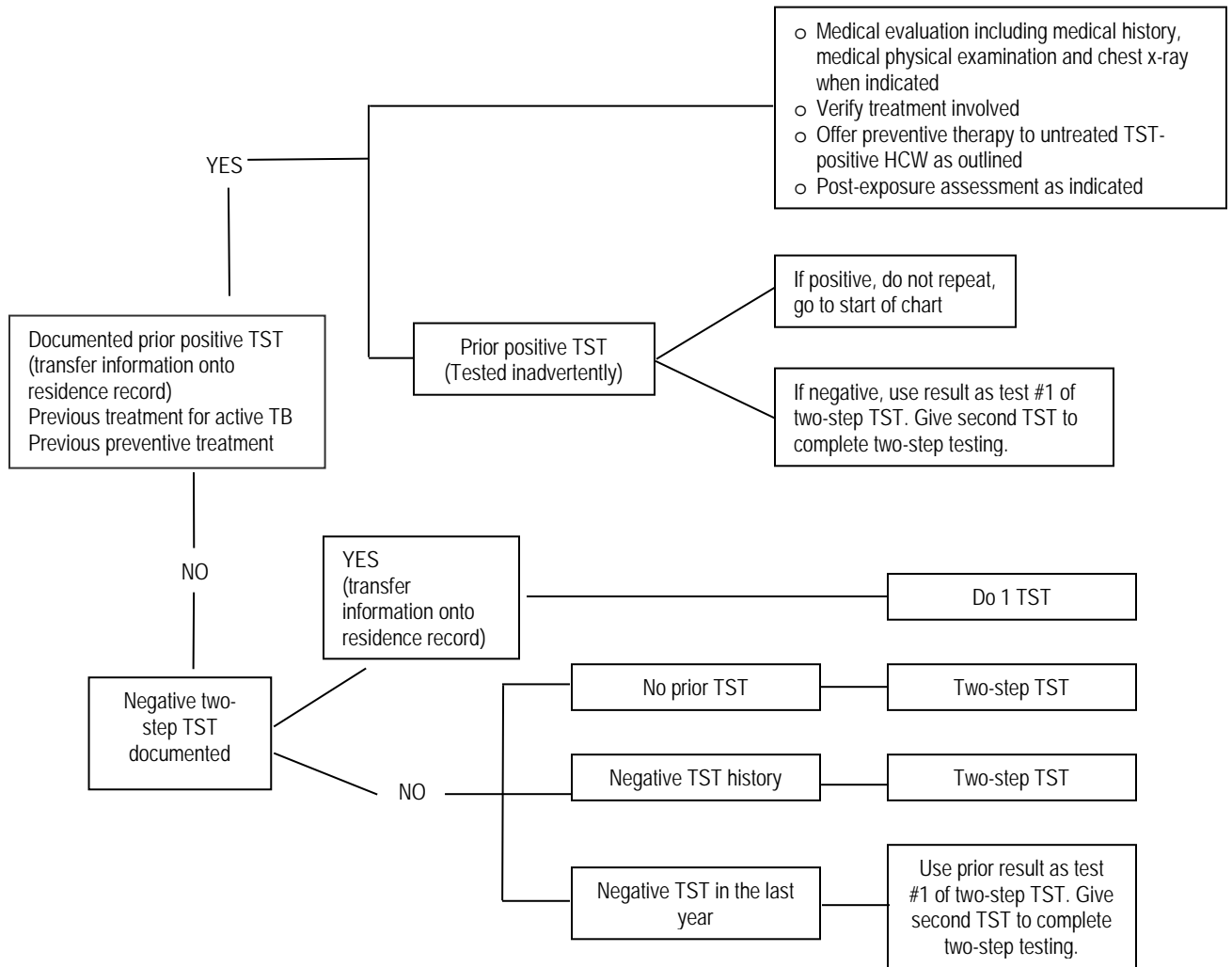
Note: There is no indication for two-step TST in the setting of a contact investigation. TST conversion can occur as early as 3 weeks after the exposure and it will be impossible to differentiate true conversion and booster reaction in the setting of a contact investigation. Any change in TST will be considered a true conversion. Individuals who are found to have converted should be evaluated for active disease. Once active disease has been excluded, treatment for LTBI (LTBI chemoprophylaxis) is recommended for recent converters.

In addition to those suspect and/or confirmed cases of TB, all contacts and converters (individual with a positive should be reported to HNHU. **Under the Ontario Health Protection and Promotion Act, physicians, hospital administrators, superintendents of institutions, school principals, laboratory operators, and practitioners, including chiropractors, dental surgeons, nurses, pharmacists, optometrists and drugless practitioners, must report cases or active tuberculosis disease and latent tuberculosis infection to the local Medical Officer of Health in the jurisdiction in which they practice.**

Reference: Public Health Agency of Canada. (2014). [Canadian TB Standards](#) 7th edition

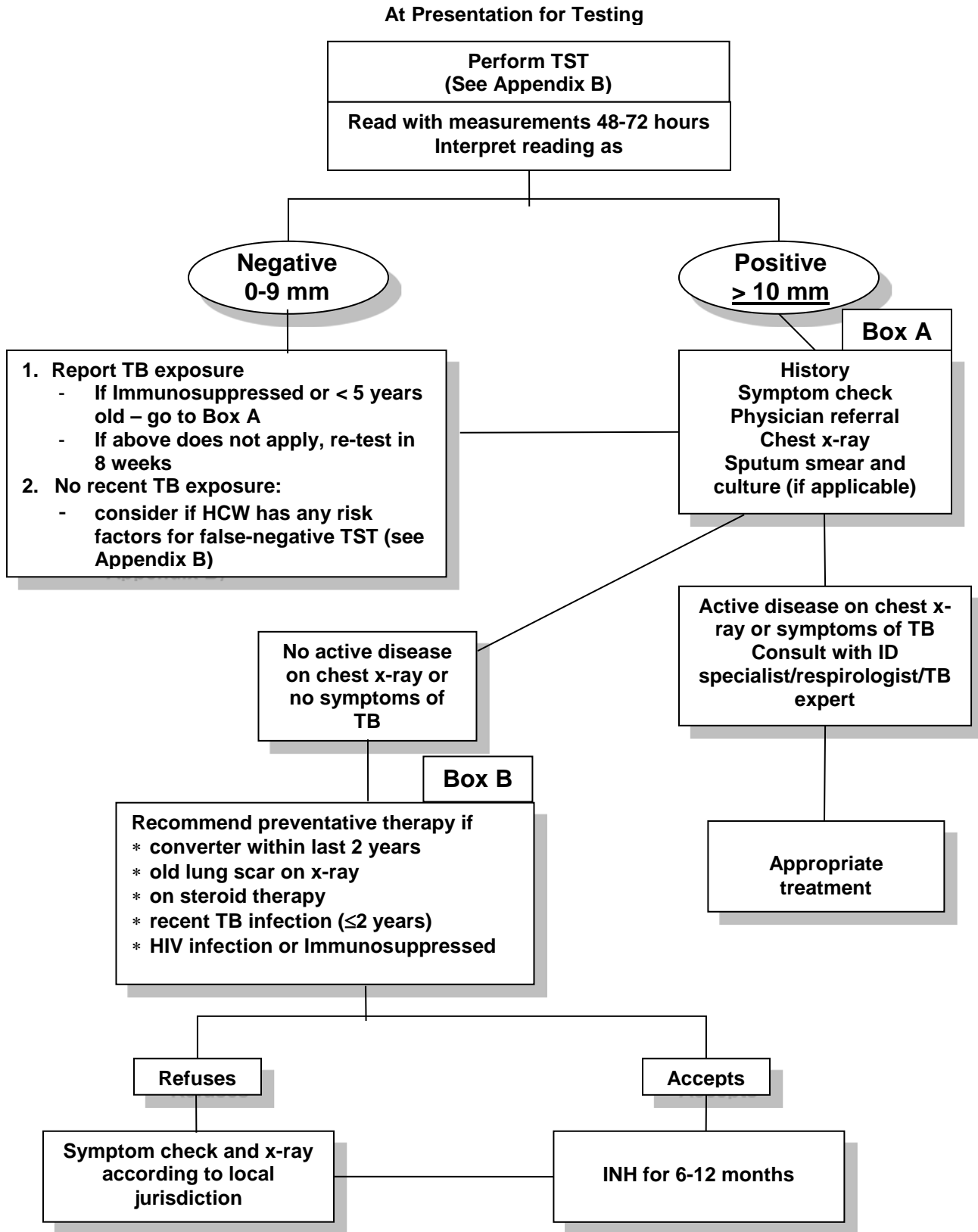
Tuberculosis Chart I

Pre-Placement and Initial Screening Test Flow Chart



Reference: Public Health Agency of Canada (1996). Guidelines for Preventing the Transmission of Tuberculosis in Canadian Health Care Facilities and Other Institutional Settings.

Tuberculosis Figure II - Initial and Ongoing Mantoux Screening



Public Health Agency of Canada (1996). Guidelines for Preventing the Transmission of Tuberculosis in Canadian Health Care Facilities and Other Institutional settings.
Public Agency of Canada (2014). Canadian Tuberculosis Standards (7th Edition)

How to do a Mantoux Skin Test

Preparing for a Skin Test

Prepare for TB skin testing by gathering a 25 or 26 mm needle, a 1.0 mL syringe, alcohol, PPD 5TU solution and ball point pen. Epinephrine Hydrochloride Solution (1:1000) and other appropriate agents should be available for immediate use in case an anaphylactic or acute reaction occurs.

The label on the vial should indicate the expiration date. If it has been open more than 30 days or the expiration date has passed, the vial should be properly discarded and a new vial used. When you open a new vial, write the date and your initials on the label to indicate when the vial was opened and by whom.

To ensure potency and accuracy of tuberculin solution:

- Do not freeze – store in refrigerator between 2 and 8 degrees centigrade.
- Store and transport in the dark and avoid exposure to light.
- Do not use if open more than 30 days.



1. Patient Education

- Discuss why the skin test is given, what is involved in the procedure, and when the individual should return for the test to be read (result provided).
- If the individual cannot return within the 48-72 hour time period, do not administer the test. Instead, schedule another time that allows the individual to come for both the test and the return appointment.

2. Approach the skin at a 5 to 15 degree angle

Cleanse the skin in the area to be tested with alcohol and allow to air dry. Prepare the syringe with 0.1 mL of PPD 5TU solution and clear the syringe of any air. With the bevel up, approach the skin at a 5–15° angle. The intradermal injection should be placed on the palm-side up surface of the forearm, about 5-10 cm below the elbow, slowly and without aspirating.



The wheal (front view)

A wheal, which is elevated about 1 mm above the surrounding skin, is formed with an orange-peel like surface.



The wheal (side view)

The wheal – approximately 6-10 mm in diameter – will usually disappear within 10-15 minutes.



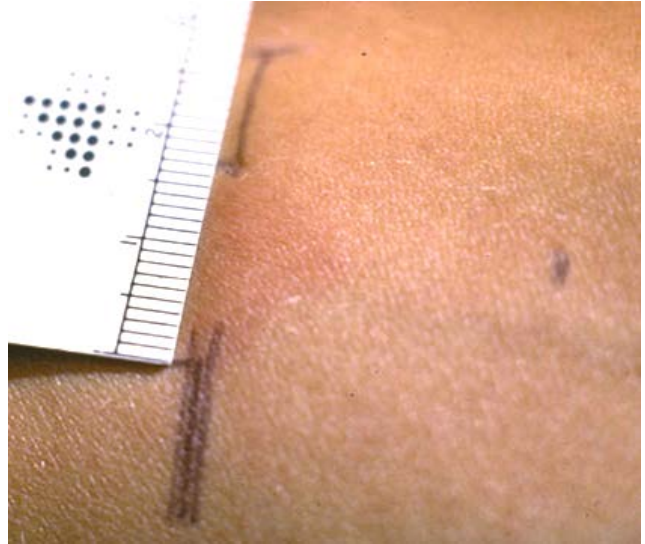
3. Mark the site

Using a pen, mark the test site so that in 48-72 hours the site can be readily located for reading.



5. Taking the measurement

Measure the induration in millimetres, using the transverse diameter to the long axis of the forearm. Record measurement in the individual's chart or record sheet.



4. Reading the TB test

The test must be read within 48-72 hours of administration. Using a ballpoint pen, start from the periphery of the test site and move toward the centre at a 45 degree angle. The pen will usually stop at the edge of the reaction site, making measurement easier. Remember, induration is measured, not the redness.



6. Necrotic pustular reaction

A necrotic pustular reaction resulted when the area tested was covered (note the marks left from the bandage) because of itching. As a result, the reaction was exacerbated.



Notes:

- Follow appropriate hand hygiene before and after the procedure.
- To prevent needle stick injuries, do not recap the used needle and dispose in puncture resistant container.
- If the intradermal implant does not produce a wheal or if a lot of liquid runs out, repeat the test on the opposite arm and make note of the second implant. Site should be at least 10 cm from the previous injection.
- It is normal for a drop of blood to appear at the injection site, even when the needle is inserted properly. Should this happen, lightly blot the blood away with a gauze pad or cotton ball. Do not cover with an adhesive bandage as this will interfere with the test.
- Remember to instruct the individual to avoid scratching the site, keep the site clean and dry, and avoid putting creams, lotions, or adhesive bandages on it. Mild itching, swelling or irritation may occur as normal reactions and usually resolve within a week.³³

Contraindications for Mantoux Skin Test

The following persons should not undergo tuberculin testing:

- Individuals with severe blistering tuberculin reactions in the past.
- Individuals with documented active tuberculosis or a clear history of treatment for TB infection or disease in the past.
- Individuals with extensive burns or eczema.
- Individuals with major viral infections or live-virus vaccinations in the past month, for example, vaccination against mumps or measles. Individuals with a common cold may be tuberculin tested.

The following people can receive tuberculin testing:

- Individuals with a history of BCG vaccine
- Individuals who have a common cold
- Pregnant and/or breastfeeding women
- Those immunized with any vaccine on the same day
- Individuals with a history of a positive TST reaction (other than blistering) that is not documented
- Individuals who are on a low dose steroid therapy

Public Agency of Canada (2014). Canadian Tuberculosis Standards (7th Edition)

How to Interpret a Mantoux Skin Test

Sensitivity to tuberculin may be the result of a previous infection with mycobacteria. This infection, likely due to *Mycobacterium tuberculosis*, may have occurred years ago or may be of recent origin.

- Test should be read 48 to 72 hours after administration of the Tuberculin.
- Induration **not** redness should be measured. Some individuals will have allergic reactions that result in localized redness or rash without induration. This is not an indication of tuberculosis infection. If there is any blistering, this should be noted on the individual's chart/record sheet.
- The transverse diameter (to the long axis of the forearm) should be measured and recorded in **millimetres**. Recordings of "negative", "doubtful", or "positive" are **not** recommended.

Interpretation of tuberculin test

Tuberculin reaction size, mm induration	Setting in which reaction considered significant
0-4	HIV infection with immune suppression AND expected risk of tuberculosis infection is high (e.g., patient is an immigrant from a country where TB is endemic, is a close contact, or has an abnormal x-ray).
5-9	HIV infection Contact of active contagious case Abnormal chest x-ray with fibronodular disease Children suspected of having tuberculosis disease Other immune suppression: TNF-alpha inhibitors, chemotherapy
>10	All others

Since tuberculin reactivity does not indicate the presence of active tuberculosis disease, individuals showing a tuberculin reaction should be referred to a physician for further diagnostic procedures.

Public Agency of Canada (2014). Canadian Tuberculosis Standards (7th Edition)

Section VI - Non-reportable Disease Guidelines

Purpose

The purpose of this chapter is to provide information and resources that will assist in the prevention and management of outbreaks associated with non-reportable diseases within your facility.

Disease Guidelines in this section are driven by Best Practices and are able to steer health care facility protocols.

The Provincial Infectious Disease Advisory Committee (PIDAC) has produced the following resources:

Best Practice Manuals:

- 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 \(updated November 2012\)](#)
 - a. [\(Annex A\) Screening, Testing and Surveillance for Antibiotic-Resistant Organisms in all Health Care Settings \(updated February 2013\)](#)
 - 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](#)

Non-reportable diseases have a fact sheet followed by a summary of recommendations which provide information geared towards Long-Term Care staff.

HNHU is available for consultation with facilities on diseases not included in this section to date.

Included in the Non-reportable Disease Section:

Non-reportable Disease	Date developed
Scabies	
Norwalk-like Illness	
Respiratory Syncytial Virus (RSV)	
Rotavirus	
Human Metapneumovirus	

Scabies – Facts

What is Scabies?

Scabies is an extremely contagious and itchy skin condition. Itching is most intense at night. It is caused by the female mite that burrows under the top layer of your skin. The burrows look like thin, wavy, raised lines that are grayish-white in colour. Burrows or rashes can often be found on the webbing between fingers, skin folds on the wrist, elbow, or knee; genitals, breasts, abdomen or shoulder blades.

Norwegian scabies, also known as crusted scabies, is an uncommon infestation characterized by widespread crusted lesions which may or may not be itchy. It usually occurs in the elderly or immunocompromised persons. When transmitted to HCWs it manifests as *typical* scabies.

The risk of acquiring scabies is much higher with *Norwegian* than *typical* scabies. People with *Norwegian* scabies have thousands of mites compared to those with *typical* scabies, who have about 10-15 mites per person.

How is the mite spread?

Transmission usually occurs directly from person-to-person from prolonged direct contact with infested skin. Health care activities such as sponge bathing, lifting or applying body lotions have been linked to scabies transmission. Casual contact (i.e. handshake or hug) rarely leads to infestation.

Minimal contact with *Norwegian* scabies can result in transmission due to the large number of mites in the exfoliating skin.

Scabies can be transmitted as long as the patient remains infested and untreated, including the time before symptoms develop. First time infestation frequently takes 4-6 weeks for symptoms to develop. During this time period people with no signs of infestation may be actively and unknowingly transmitting mites.

Misdiagnosis and treatment delay have been associated with increased transmission and outbreaks.

Prevention and Control Measures

Diagnosis and Surveillance

Because of the highly contagious nature of scabies, it is essential that suspect cases be examined as quickly as possible. Diagnosis is commonly made by looking at the burrows or rash. A skin scraping may be taken to look for mites or eggs to confirm diagnosis. If a skin scraping returns negative, it is possible that the person may still be infested due the small number of mites present on the body; this makes it easy for an infestation to be missed.

Transmission can be prevented by maintaining a high level of suspicion, early recognition and diagnosis, use of appropriate barrier precautions and adequate treatment of cases.

Prophylaxis and Treatment

HCWs that have been exposed to residents with scabies within the 6 weeks prior to symptoms developing may benefit from prophylactic treatment. For *typical* scabies, an exposure should be considered when a HCW has provided hands on care or has handled infested linen without the use of gloves. Exposure to *Norwegian* scabies should be considered as minimal contact with an infested resident.

Lotions are available for treatment of person infested with scabies. It is important to follow the directions provided by the physician or the directions on the package insert. A second treatment with the same lotion may be needed 7-10 days later. Pregnant or lactating women are often treated with milder scabies medications.

Everyone who requires treatment should be treated at the same time to avoid reinfestation.

Resident Placement

Residents with a confirmed diagnosis of scabies should be isolated for 24 hours after starting treatment.

Additional Precautions to Routine Practices

For suspected or confirmed cases of scabies, signage indicating that contact precautions are in place should be posted outside the residents' room.

Gloves should be worn when entering the room of a resident with suspected or confirmed *Norwegian* scabies and a gown worn when direct contact with the resident or environment is likely.

Gloves and gown should be worn when providing direct care to a patient with suspected or confirmed *typical* scabies.

Gloves should also be worn when handling contaminated linen (bedding, towels, clothing etc.).

Environmental Control

Routine cleaning of the environment will help eliminate the mites. Environmental disinfestation is unnecessary. Thorough cleaning of upholstered furniture and vacuuming of environmental surfaces is recommended after use of a room by a resident with *Norwegian* (crusted) scabies.

Linen

Mites on clothing and linens are killed by regular laundering in the hot cycle of washer and dryer. All linen used from 3 days before the beginning of treatment should be laundered. Mites rarely survive more than 3 days without skin contact. Items that cannot be washed in hot water should be stored in a bag for at least 7 days before reusing.

Visitors

For suspected or confirmed cases of scabies, visitor restrictions should be implemented until residents are effectively treated. If it is believed that the restrictions may cause undue stress to the resident, visitors must be educated on the transmission and contact precautions as required.

Exclusion

HCWs with *typical* scabies should be excluded from work until they have completed one application of effective treatment and undergone post-treatment assessment.

HCWs with *Norwegian* scabies should be excluded from work until after the last application of effective treatment and subsequent post-treatment assessment.

Outbreak Management

An outbreak should be considered when more than one resident and/or staff on the same unit meets the criteria for diagnosis of *typical* scabies.

Consider the likelihood of an outbreak when even only one case of *Norwegian* scabies is identified.

Facility should liaise with the Haldimand Norfolk Health Unit if an outbreak is suspected.

Prophylaxis and/or treatment should be arranged when transmission of scabies has occurred or if an outbreak has been declared. Control of an outbreak can only be achieved by treatment of the entire population at risk.

Reporting Requirements

Suspected or confirmed outbreaks must be reported to the Haldimand Norfolk Health Unit.

References:

1. Pickering, LK editor. Red Book: 2012 Report of the Committee on Infectious Diseases. 29th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2012: 641-643
2. Bolyard EA, Tablan OC, Williams WW, Pearson ML, Shapiro CN, Deitchman SD, et al. Guideline for Infection Control in Health Care Personnel. American Journal of Infection Control: 1998; 26: 315
<http://www.cdc.gov/hicpac/pdf/InfectControl98.pdf>
3. Health Canada. Prevention and Control of Occupational Infections in Healthcare. Infection Control Guidelines. Canada Communicable Disease Report March 2002; 28S1: 96-101
<http://publications.gc.ca/collections/Collection/H12-21-3-28-1E.pdf>
4. Centers for Disease Control and Prevention. Scabies fact sheet (online). 2005 Feb 10 (cited 2006 Sep 5); Available from URL: http://www.cdc.gov/ncidod/dpd/parasites/scabies/factsht_scabies.htm
5. Ontario Hospital Association. Ontario Medical Association Joint Communicable Diseases Surveillance Protocols Committee. Scabies Surveillance Protocol for Ontario Hospitals November 2014.
6. Centers for Disease Control and Prevention. Sexually Transmitted Diseases Treatment Guidelines 2010. MMWR Morbidity and Mortality Weekly Report. December 17, 2010/Vol. 59/No. RR-12: 89-90.

Sample form: SCABIES CASE WORKSHEET – RESIDENT

Resident name _____ Room _____

Symptoms observed: _____

Resident's attending Physician _____

Scabies diagnosed by whom? _____

Diagnosis Method: Skin Scraping Visual Exam

Diagnosis Made: Scabies Query Scabies Other

Bath/shower given, if needed: Date: _____ Time: _____

Scabicide treatment applied: Date: _____ Time: _____

Gown/gloves worn during bath and Rx application? Yes No

Bed linen changed Date: _____ Time: _____

Gown/gloves worn to strip bed? Yes No

Personal clothing washed Date: _____ Time: _____

Adequate hand-washing afterward? Yes No

Signature of nurse _____

12-14 Hour Follow-up

Follow-up bath (soap) Date: _____ Time: _____

Bed Stripped Date: _____ Time: _____

Gown/gloves worn during bath? Yes No

Gown/gloves worn to strip bed? Yes No

Adequate hand-washing afterward? Yes No

Signature of nurse _____

72 Hour Follow-up

Any further symptoms observed or reported? Yes No

Signature of nurse _____

Seven Day Follow-up

Any further symptoms observed or reported? Yes No

Signature of nurse _____

BC Centers for Disease Control. Communicable disease control: scabies. [Online]. 2005; Available from: URL: http://www.bccdc.ca/NR/rdonlyres/41348278-088C-4E58-856D-93EA6FDA6EA3/0/InfectionControl_GF_Scabies_Feb_2005.pdf

Sample form: SCABIES – CONTACT TRACING WORKSHEET

Resident name _____ Room _____

Resident's attending Physician _____

Scabies diagnosed by whom? _____

Diagnosis Method: Skin Scraping Visual Exam

Diagnosis Made: Scabies Query Scabies Other

Symptoms Reported: _____

Possible Contacts (Other patients, Staff): _____

Did the resident come from another facility? Yes No

If yes, where? _____

If yes, was the facility notified? Yes No

Has the resident had problems with skin lesions in the past? Yes No

If yes, Date: _____ Symptoms: _____

Treatment given: _____ Result: _____

- Notification: Attending physician
 Infection Control Practitioner
 Manager
 Pharmacy
 Laundry
 Building Services
 Occupational Health Nurse

BC Centers for Disease Control. [Communicable disease control: scabies](http://www.bccdc.ca/NR/rdonlyres/41348278-088C-4E58-856D-93EA6FDA6EA3/0/InfectionControl_GF_Scabies_Feb_2005.pdf). [Online]. 2005; Available from: URL: http://www.bccdc.ca/NR/rdonlyres/41348278-088C-4E58-856D-93EA6FDA6EA3/0/InfectionControl_GF_Scabies_Feb_2005.pdf

**Sample form: Occupational Health and Safety
Scabies Case in an Employee**

Employee name: _____

Position/department: _____

Name and location of resident contact for scabies: _____

Date(s) employee had contact with resident: _____

Date resident's symptoms first noted: _____

Date resident reported to occupational nurse: _____

If employee has symptoms, describe (what, where, how long):

Has employee seen their doctor? Yes No

If yes, advice given/treatment prescribed: _____

Date seen in OH&S department: _____

Treatment: _____ Date: _____

List other employee's facilities and date treated:

List all areas employee has worked during the six weeks prior to onset of symptoms:

Where is employee currently working: _____

List employee's possible contacts (children, grandchildren in school, family members working in institutions or recently hospitalized):

List any other institution/facility employee works in: _____

Employee signature: _____

BC Centers for Disease Control. [Communicable disease control: scabies](http://www.bccdc.ca/NR/rdonlyres/41348278-088C-4E58-856D-93EA6FDA6EA3/0/InfectionControl_GF_Scabies_Feb_2005.pdf). [Online]. 2005; Available from: URL: http://www.bccdc.ca/NR/rdonlyres/41348278-088C-4E58-856D-93EA6FDA6EA3/0/InfectionControl_GF_Scabies_Feb_2005.pdf

Norovirus Infection - Facts

What is Norovirus infection?

Noroviruses are a group of viruses that commonly cause gastroenteritis in people. An increase of this illness has been recognized during the winter months and has often been referred to as 'stomach flu' or 'Winter Vomiting Disease'. People with medical illnesses, young children, and seniors are most at risk for more severe or prolonged infection. Norovirus infections have been linked to outbreaks of vomiting and/or diarrhea in institutions such as child-care centres, Long-Term Care facilities, camps and schools. Norovirus outbreaks have also been identified on cruise ships and within households.

What are the symptoms of Norovirus infection?

Most individuals with Norovirus will experience 1 to 3 days of nausea, vomiting, cramps and watery diarrhea. Sometimes symptoms can also include headache, fatigue, chills and muscle pain. Severe illness or hospitalization caused by Norovirus infection is uncommon. Most of infected individuals recover in 2 to 3 days without serious or long-term health effects. Diarrhea is more common in children and vomiting is more common in adults.

How soon do symptoms appear?

Symptoms usually appear in 24 to 48 hours after exposure to the virus.

How is Norovirus infection diagnosed?

Your physician may order a stool specimen to diagnose Norovirus infection

How is Norovirus transmitted?

Norovirus is found in an infected person's vomit or diarrhea. It is a very contagious and can spread rapidly from person-to-person. You can acquire the virus in several ways:

- Common hard surfaces such as a doorknob, phone, or handrail have been implicated in the transmission of the disease because they can be easily contaminated by an ill person's unwashed hands.
- Direct contact with an ill person's contaminated hands and not using a proper hand washing technique or cleaning up vomit or diarrhea of an ill person can spread the infection from person to person.
- Also can be transmitted by ingesting food or water that is contaminated with the virus.

What is the treatment for Norovirus?

There is no specific treatment for Norovirus infection. Supportive therapy may be required such as hydration and electrolyte replacement. Seek medical advice if diarrhea is bloody and/or accompanied with a high fever, the symptoms last longer than 72 hours, or you are becoming dehydrated.

What can be done to prevent Norovirus?

- Wash your hands thoroughly for at least 10 seconds with soap and warm water after using the toilet and before preparing any food, before you eat and after touching contaminated surfaces.
- Drink only potable water (treated water) - surface waters (lakes, streams, springs etc.) cannot be considered potable unless treated.
- Wash fruits and vegetables and cook seafood thoroughly as Noroviruses are very contagious
- Cooking temperature for all potential hazardous food items should be at least 74C to completely inactivate Norovirus.
- Do not prepare food for others if you have symptoms of a Norovirus infection such as vomiting and/or diarrhea. Get plenty of rest and stay home until you are no longer infectious to others, which is a minimum of 48 hours.
- Disinfect surfaces (e.g. doorknobs, railings, and toilets) frequently using household disinfectant or a solution of 1 part bleach to 10 parts water.
- Wear gloves when cleaning up vomit or diarrhea

Are there any special concerns about Norovirus infection?

The symptoms of Norovirus infection may be more severe for older individuals, young children and those with underlying medical conditions who may become dehydrated due to vomiting and diarrhea.

For more information please call your HNHU representative for your facility.

References:

1. Heymann DL, editor. [Control of communicable diseases manual: epidemic viral gastroenteropathy. 18th ed.](#) Washington DC: American Public Health Association; 2004. p.227-9.
2. Toronto Public Health. [Norwalk fact sheet](#). [Online]. 2003; Available from: URL: http://www1.toronto.ca/City%20Of%20Toronto/Toronto%20Public%20Health/Communicable%20Disease%20Control/Fact%20Sheets/Files/pdf/N/Norovirus%20FS%20July%2010_2012.pdf
3. Center for Disease Control and Prevention. [Norovirus in Healthcare Settings](#). [Online]. 2013; Available from URL: <http://www.cdc.gov/HAI/organisms/norovirus.html>.

Norovirus Outbreak Management for Institutions

Outbreaks of norovirus are very common and occur in many different institutional and community settings including nursing homes and hospitals, daycare and etc. They have been demonstrated to account for 5-17% of diarrhea occurring in the community. The infectious dose for norovirus is very low (<100 viral particles). This allows the virus to be transmitted directly from person-to-person via droplets or indirectly via environmental contamination or fomites such as clothing, furniture, or soap that is capable of transmitting infectious organisms from one individual to another. Most of outbreaks in healthcare setting are caused by person-to-person transmission due to the high levels of personal and environmental contact in closed spaces. Also, the hygiene of some residents may not be adequate such as those who are physically or mentally impaired.

Norovirus can also be transmitted through contaminated food or water. Prolonged viral shedding can occur among asymptomatic persons, which increases the risk of secondary cases and food-handler transmission. Norovirus is reported to survive relatively high levels of disinfectant and varying temperatures (freezing to 60°C).

Clinical Features

The average incubation period is 24-48 hours and illness lasts 24-60 hours. The symptoms of norovirus infection are usually an acute onset of nausea, vomiting, abdominal cramps and diarrhea. Headache, fever, chills, malaise and myalgia are sometimes reported. Severe dehydration associated with norovirus is rare, but can be fatal (e.g., older persons with debilitating health conditions).

Viral antigen is detectable in stool for up to two weeks, but it is not known whether this represents infectious virus. There are several norovirus strains with incomplete cross protection and no long-term immunity, so repeat infections can occur throughout life.

Diagnosis

Norovirus is confirmed by identification of the virus from stool samples. During a gastroenteritis outbreak, stool samples will be collected and tested with Ridaquick Norovirus Immunochromatographic Test (ICT) which is a rapid screening tool for gastroenteritis outbreak samples. Once Norovirus is detected, it will be reported. If no virus is detected by rapid testing, then further testing (EM, virus culture or Norovirus RT-PCR) will be required. It is a confirmed outbreak if Norovirus is detected from two different samples from the same outbreak, no further outbreak testing will be required.

Due to the delay associated with laboratory testing, and the imperfect sensitivity of the tests, clinical and epidemiologic criteria have been developed for outbreaks of acute gastroenteritis that correlate with the presence of Norovirus:

1. Stool specimens that are negative for bacterial and parasitic pathogens
2. More than 50% of cases with vomiting
3. Mean or median duration of illness of 12-60 hours
4. If available, mean or median incubation period of 24-48 hours.

Specimen Collection for Institutional Outbreaks

Faecal samples in a sterile container should be collected as soon as possible after symptom onset for virus detection (maximum 5 per outbreak), vomitus samples are not acceptable.

A total of 3 sample vials (bacterial, parasite and viral testing) should be collected in one Enteric Outbreak Kit for each patient being tested. Six to eight Enteric Outbreak Kits should be submitted for each facility reporting an enteric outbreak. Enteric Outbreak Kit specimens should be kept refrigerated at 4°C after collection and prior to pick-up, and then transported immediately to the public health laboratory. All Enteric Outbreak Kits should be labeled completely: each separate vial and the specimen submission bag require the label to be completed. A laboratory Multiple Specimen Submission Form must accompany each shipment of enteric kits submitted to the provincial laboratory during an outbreak.

Declare an outbreak

Three or more cases with signs and symptoms compatible with infectious gastroenteritis in a specific unit or floor within a four-day period OR Three or more units/floors having a case of infectious gastroenteritis within 48 hours.

Prevention and Control

Cooking temperature for all potential hazardous food items should be at least 74C to completely inactivate Norovirus. Ready-to-eat foods that require handling but no further cooking pose greater risk than cooked foods.

Waterborne outbreaks are less common. If drinking or recreational water is suspected as being the source, high level chlorination (10 ppm > 30 minutes) might be required for adequate disinfection.

Interruption of person-to-person transmission is challenging due to the low infectious dose, environmental contamination, and convalescent shedding. Patients with Norovirus symptoms may be placed in private rooms or share rooms with other patients with the same infection.

Products used for disinfection of norovirus must have an appropriate virucidal claim. Most QUATs do not have significant activity against norovirus. In some jurisdictions, sodium hypochlorite at 1,000 to 5,000 ppm is recommended. Vacuum cleaning carpets and buffing floors during an outbreak have the potential to re-circulate norovirus and are not recommended.

Cleaning regimens for norovirus should include:

- prompt cleaning of emesis and faeces, including items in the immediate vicinity, followed by disinfection with an appropriate virucidal disinfectant
- increased frequency of bathroom and toilet cleaning and disinfection on affected units
- Routinely clean and disinfect high traffic or high touch areas
- steam cleaning carpet and soft furnishings following regular cleaning, provided they are heat tolerant and at least 60C is achieved by the unit
- Strict adherence to hand hygiene.
 - I. Ill food handlers and health care staff should be excluded

Wear appropriate PPE such as lab coat and gloves when direct skin contact with contaminated materials is unavoidable. Eye protection must be used where there is a known or potential risk of exposure to splashes

Exclusion

Ill food handlers and health care staff should be excluded for at least 48 hours after the resolution of illness. Recent research has identified that *viral antigen can be detected for up to two weeks after recovery from illness*, but the epidemiologic significance is not known. **Staff may return to work 48 hours post symptoms in a Norovirus outbreak only with special emphasis placed on proper hand washing.**

The following measures are currently recommended:

- III. Frequent hand washing with liquid soap and water. The additional use of hand sanitizers may be appropriate during an outbreak.
- IV. Gloves should be worn in addition to hand washing. This will reduce the potential transfer of virus particles from clients to health care worker or from patient-to-patient via health care workers' hands. Gloves must be changed between patient/client/resident contacts and must be followed by hand washing after gloves are removed.
- V. Contact precautions must be taken. Masks, fluid resistant gowns and goggles should be considered for persons who provide personal care in settings where spattering or aerosols of infectious material are present (e.g., vomiting, cleaning soiled bedpans, toilets and laundry, etc.).
- VI. Contact precautions must also be taken by staff that clean areas substantially contaminated by faeces or vomit.

-
- VII. Soiled linens should be handled as little as possible, and with minimum agitation. They should be laundered with detergent at the maximum cycle length and then machine dried.
 - VIII. Environmental surfaces that have been soiled should be cleaned thoroughly, and then disinfected using an appropriate germicidal product with virucidal properties (e.g., 1:10 dilution of household bleach).
 - IX. Signage should be posted for visitors during times of high Norovirus incidence in the community. The signage should advise ill persons not to visit and to encourage all visitors to wash hands upon entering the building.

Declare outbreak over

An outbreaks of Norovirus can be declared over when a minimum of five (5) days from the last resolved resident case (3 days communicability and 2 days incubation period).

<http://www.medscape.com/viewarticle/778880>

References:

1. Heymann DL, editor. [Control of communicable diseases manual: epidemic viral gastroenteropathy, 18th ed.](#) Washington, DC: American Public Health Association; 2004. p.227-9.
2. [Public Health Ontario. Norovirus Outbreak Testing Update. 2010. Available from URL: \[http://www.publichealthontario.ca/fr/eRepository/LAB_SD_016_Norovirus_outbreak_testing_update.pdf\]\(http://www.publichealthontario.ca/fr/eRepository/LAB_SD_016_Norovirus_outbreak_testing_update.pdf\).](#)
3. [Lopman, Ben. Norovirus: Protecting the Vulnerable. 2013. Centers for Disease Control and Prevention \(CDC\), Atlanta, Georgia.](#) Available from URL: <http://www.medscape.com/viewarticle/778880>.
4. [Center for Disease Control and Prevention. Norovirus in Healthcare Settings. \[Online\]. 2013: Available from URL: <http://www.cdc.gov/HAI/organisms/norovirus.html>](#)
5. [Public Health Ontario.](#) Best Practice for Environmental Cleaning for Prevention and Control of Infections in All Health Care Settings – 2nd edition.

RSV – Facts

What is RSV?

Respiratory syncytial virus or (RSV) is a common and very contagious respiratory illness caused by a virus. Anyone can be infected but RSV most often causes serious illness such as pneumonia in infants, young children, elderly, and those with a weakened immune system.

How is RSV spread?

Transmission is usually by direct or indirect contact with nasal or oral secretions from infected people which may involve droplets or fomites. RSV can persist on environmental surfaces for many hours.

What are the symptoms of RSV infections?

RSV causes acute respiratory illness in people of all ages. RSV infections generally occur during fall, winter and spring. Illness begins most frequently with fever, runny nose, cough, headache, fatigue and may progress to wheezing and lower respiratory tract infections such as pneumonia. RSV can cause repeated infections throughout life, usually associated with moderate-to-severe cold-like symptoms; however, severe lower respiratory tract disease may occur at any age, especially among the elderly or among those with compromised cardiac, pulmonary, or immune systems.

How soon do symptoms of RSV infection appear?

Illness usually begins 4-6 days after exposure with a range of 2-8 days.

How is RSV diagnosed?

RSV can be diagnosed by collecting a nasopharyngeal or throat swab. Public Health Laboratories use Multiplex NAAT (nucleic acid amplification technique) testing to detect RSV. Turnaround time for results is up to approximately 2 weeks.

What is the treatment for RSV infection?

There is no specific treatment for RSV infection in the elderly. Treatment is aimed at relieving symptoms.

How do I protect myself and others?

You can help stop the spread of RSV by:

- Covering your cough and sneeze using a single use disposable tissue (then wash your hands) or cough or sneeze into your upper sleeve
- Wash hands frequently and correctly for at least 15 seconds
- Avoid sharing cups and eating utensils with others
- Refrain from kissing others

At this time, there is not a vaccine for the protection of adults.

References:

1. Centers for Disease Control and Prevention: *Respiratory Syncytial Virus*. Retrieved March 18, 2015 at <http://www.cdc.gov/rsv/index.html>
2. Falsey, A. R., Hennessey, P. A., Formica, M. A., Cox, C., & Walsh, E. E. 2005 Respiratory Syncytial Virus Infection in Elderly and High-Risk Adults. *The New England Journal of Medicine*, 352(17), 1749-1759.
3. The Committee on Infectious Diseases American Academy of Paediatrics. (2012). *Red Book: 2012 Report of the Committee on Infectious Diseases* (29th ed.). Illinois: American Academy of Paediatrics.
4. Public Health Ontario Laboratory Services at <http://www.publichealthontario.ca/en/ServicesAndTools/LaboratoryServices/Pages/Specimen-Collection.aspx>

Rotavirus – Facts for Health Care Workers

What is rotavirus?

Rotavirus is a viral infection that causes gastroenteritis. It is more common in children, although adults can also become infected. This virus can cause outbreaks in day care centres, Long-Term Care homes, and recreational camps mainly because individuals are living or spending time together in close proximity to one another.

What are the symptoms of rotavirus?

The main symptoms are watery diarrhea; vomiting and fever which can last three to eight days. These symptoms can become severe and result in dehydration. Usually a person will experience the most severe symptoms during their first infection with rotavirus.

How soon do symptoms appear?

Symptoms begin within 24 to 72 hours after coming in contact with an infected person's feces, vomit, contaminated objects or surface they have touched.

How is rotavirus diagnosed?

Rotavirus is diagnosed by collecting a stool sample from a recently infected individual. Rotavirus is not usually detectable after the eighth day of infection. Rotavirus can be tested by direct antigen testing conducted at the Public Health Lab. Antigen testing (Quick Test) results may be available the same day and viral culture results may take several days. The sample is also sent away for Electron Microscopy. Viruses are known to be difficult to detect in stool. Even though results are negative, rotavirus could be the causative agent for the illness.

How is rotavirus transmitted?

The mode of transmissions is the fecal-oral route. Health care workers can acquire this virus through improper hand washing after coming in contact with the virus. Residents, health care equipment, resident's personal items, bedding, furniture or other commonly touched surfaces such as door knobs or hand rails can be vehicles of transmission if they are contaminated with infected feces or vomit.

Person to person spread can also occur when health care workers do not wash their hands before and after providing resident care. Although rotaviruses do not effectively multiply in the respiratory tract they may be spread in respiratory secretions (from coughing or sneezing). Transmission may also occur from drinking contaminated water. Transmission through respiratory droplets has also been suggested.

Elderlies have higher risk of contracting rotavirus infection, and also adults who travel, take care of children with rotavirus, or are immunocompromised.

The period of communicability is the time period that the virus can be transmitted in a person's stool. This occurs when symptoms are present an average of 3 to 6 days and up to 8 days.

What is the treatment for rotavirus?

There is no specific treatment for rotavirus. Preventing dehydration with fluid replacement is the main supportive measure. Consulting a physician or health care provider is recommended when there are signs of dehydration such as sunken eyes, dry skin, dry mouth or decreased urination.

Health Canada has approved RotaTaq and Rotarix vaccine use in infants from 6 weeks to 24 weeks of age in Canada. Both vaccines are given orally.

What can be done to prevent rotavirus?

Take the following precautions to prevent the spread of rotavirus, including during outbreaks caused by rotavirus:

- Health Care workers should perform hand hygiene before and after each resident's care, as well as routinely throughout the day. Alcohol based hand rub containing 70% isopropyl or ethyl alcohol can be used when hands are not visibly soiled.
- When there is the potential for infectious body fluids such as feces or vomit to be sprayed or splashed, wear disposable gloves, eye protection and a fluid resistant gown to protect the uniform. Fluid resistant face mask can also be worn to prevent splashes or sprays of infectious material from entering the mouth. Care must be taken when removing masks as they too can be a source of infection.
- Dispose of adult incontinent pads and contents in a sanitary manner.

- Clean and disinfect surfaces that are routinely touched with a high-level disinfectant. This includes washrooms, hand rails, door knobs and other commonly touched surfaces within the facility.
- Staff members with an onset of enteric symptoms during an outbreak who are line listed should be excluded from work for 48 hours before returning to work.
- Isolate ill residents in a private room if possible or cohort residents with similar symptoms for 8 days starting from their onset of symptoms or in consultation with the health unit. Cohort staff to care for only those who have similar symptoms to reduce the chance of spreading the virus throughout the facility.
- Staff should not work in other facilities if they are working in a facility with a laboratory confirmed rotavirus. If a staff member waits one incubation period (3 days) from the last day of work at the outbreak facility/unit, after 3 days they may work at another facility.
- If a facility is experiencing a staffing shortage due to the long staff exclusion period, asymptomatic staff may be permitted to return to work sooner in consultation with the health unit. This is assessed case by case with the Medical Officer of Health.
- In the event of a rotavirus outbreak, follow the direction of the Outbreak Management Team for the affected facility or institution and contact the health unit for further guidance.
- Rotavirus has also been shown to be very susceptible to Lysol brand disinfectants (79% ethyl alcohol, 0.1% o-phenylphenol)
- Rotavirus is susceptible to glutaraldehyde (2%); chlorinated disinfectants (>20,000 p.p.m. chlorine); iodinated disinfectants (>10,000 p.p.m. iodine); combinations of quaternary ammonium compounds with alcohols (>40%)
- Rotavirus is also susceptible to heating above 50 °C (for 30 minutes)

When can a facility call an outbreak over?

The facility can declare a suspect or confirmed rotavirus outbreak over after a period of 11 days from the last onset of symptoms in the last line listed case. That is 8 days for one period of communicability and 3 days for one incubation period.

Are there any special concerns about rotavirus?

Routine hand hygiene is important because a person with rotavirus can be infectious and spread the virus to others before they even know they are ill. They can also continue to be infectious after their symptoms have resolved.

For more information, call the Infectious Disease Team at 519-426-6170 or 905-318-5367

References:

1. Centers for Disease Control and Prevention: About Rotavirus. 2014. Available from URL: <http://www.cdc.gov/rotavirus/about/index.html>.
2. Public Health Agency of Canada. Human Rotavirus-Pathogen Safety Data Sheet Infectious Substances. 2011. Available from URL: <http://www.phac-aspc.gc.ca/lab-bio/res/psds-ftss/rotavirus-eng.php>.

Rotavirus – General Enteric Outbreak Recommendations

The information below is provided for guidance on outbreaks where rotavirus has been identified. Each outbreak is unique and the facility should consult with the health unit. The Medical Officer of Health will provide direction on a case by case basis.

Rotavirus

Incubation period: approximately 24 – 72 hours.

Period of communicability: Symptoms last on average 3 – 6 days and rotavirus is not usually detectable after the eighth day of infection.

Prevention and Control

- Cooking temperature for all potential hazardous food items should be at least 74C to completely inactivate Rotavirus.
- Patients with Rotavirus symptoms may be placed in private rooms or share rooms with other patients with the same infection.
- Products used for disinfection of Rotavirus must have an appropriate virucidal claim.
- Rotavirus has also been shown to be very susceptible to Lysol brand disinfectants (79% ethyl alcohol, 0.1% o-phenylphenol)
- Rotavirus is also susceptible to glutaraldehyde (2%); chlorinated disinfectants (>20,000 p.p.m. chlorine); iodinated disinfectants (>10,000 p.p.m. iodine); combinations of quaternary ammonium compounds with alcohols (>40%)

Cleaning regimens for norovirus should include:

- prompt cleaning of emesis and faeces, including items in the immediate vicinity, followed by disinfection with an appropriate virucidal disinfectant
- increased frequency of bathroom and toilet cleaning and disinfection on affected units
- Routinely clean and disinfect high traffic or high touch areas
- Strict adherence to hand hygiene.
- Ill food handlers and health care staff should be excluded
- Wear appropriate PPE such as lab coat and gloves when direct skin contact with contaminated materials is unavoidable. Eye protection must be used where there is a known or potential risk of exposure to splashes

Control measures for residents/patients

- **Duration of precautions:** Contact precautions are initiated and maintained for a period of 8 days from the **onset** of symptoms in the case. Included in the 8 days is the fact that the case must also have their symptoms resolved for 48 hours.

Due to the extended period of communicability, the duration of precautions for rotavirus is different than the recommended duration of precautions for an enteric outbreak where the causative agent is unspecified or is determined to be norovirus.

Control measures for staff

- **Staff exclusions:** Staff members with an onset of enteric illness compatible with the signs and symptoms of the outbreak and who are line listed should be excluded from work for 8 days from onset of symptoms and must have resolution of symptoms for 48 hours before returning to work.
- **Working at other facilities:** During suspect or confirmed rotavirus outbreaks staff members should not work at any other facility; however, if a staff member waits one incubation period (three days) from the last day worked at the outbreak facility/unit then they are free to work at another facility after three days.

***Asymptomatic staff may be allowed to return sooner if staffing shortages demand this. The decision to return to work prior to the recommended 8 days is in consultation with the health unit and Medical Officer of Health.**

Declaring the outbreak over

- To declare a suspect or confirmed rotavirus outbreak over, the facility/unit must wait a period of 11 days from the last onset of symptoms in the last line listed case. The 11 days is a combination of the period of communicability (maximum of 8 days) plus the incubation period (maximum of 3 days) to equal 11.

References

1. Centers for Disease Control and Prevention. 2014. Rotavirus Facts. Available from URL: <http://www.cdc.gov/rotavirus/about/index.html>
2. Heymann, D.L. 2004. Control of Communicable Diseases Manual. 18th Edition. American Public Health Association.
3. Personal E-mail Communication with Dr. Colin Lee. May 12, 2006.
4. Public Health Agency of Canada. 2001. Human Rotavirus MSDS. Available from URL: <http://www.phac-aspc.gc.ca/msds-ftss/msds86e-eng.php>

Human Metapneumovirus (hMPV) – Facts

What is Human Metapneumovirus (hMPV)?

HMPV is a member of a family of viruses first recognized in 2001 in the Netherlands but most likely has been causing respiratory illness, worldwide, for at least 50 years. HMPV can cause acute upper and lower respiratory tract infections in people of all ages but most often occurs in young children or older adults.

How is hMPV spread?

Transmission is usually by direct or indirect contact with the nasal or oral secretions of infected persons or by contact with contaminated objects and surfaces. The virus can persist on nonporous surfaces for many hours.

What are the symptoms of hMPV infections?

HMPV can cause a broad spectrum of respiratory illness from mild illness (fever, cough, runny nose or nasal congestion and sore throat) to more severe illness (high fever, severe cough, wheezing, difficulty breathing, pneumonia, vomiting, diarrhea and exacerbation of underlying asthma or chronic obstructive pulmonary disease).

How soon do symptoms of Human Metapneumovirus appear?

It is believed most persons who develop illness will do so three to five days after being exposed to the virus.

How is it diagnosed?

HMPV can be diagnosed by collecting a nasopharyngeal or throat swab. Public Health Laboratories use Multiplex NAAT (nucleic acid amplification technique) testing to detect hMPV. Turnaround time for results is up to two weeks.

How is hMPV infection treated?

There is no specific treatment for hMPV infection. Treatment is aimed at relieving symptoms.

Who is likely to get hMPV infection?

Though the virus can occur at any age, the populations most at risk of severe disease and hospitalization are small children, immuno-compromised individuals and the elderly.

How can you prevent the spread?

You can help stop the spread of hMPV by:

- Covering your cough and sneeze using single use disposable tissues (then wash your hands) or cough into your upper sleeve
- Wash hands frequently and correctly for at least 15 seconds
- Avoid sharing cups and eating utensils with others
- Refrain from kissing others

References

- Human Metapneumovirus in Adults: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3564111/> published in Jan. 2013
- American Lung Association: <http://www.lung.org/lung-disease/human-metapneumovirus/>

Section VII - Employee Health

Employee Health should provide a systematic, coordinated and continuous process to reduce the risk of nosocomial infections in healthcare workers and to optimize use of resources through a strong preventative program.

Handling and Disposal of Needles and Sharps

All LTCHs and RHs should have a policy and procedure on the safe disposal of sharps as well as ongoing evaluation of newly engineered products that will reduce staff exposure to sharps. Parenteral or percutaneous exposure to needles or other sharp instruments contaminated with blood or body fluids can lead to serious or fatal infections such as Hepatitis B, Hepatitis C or Human Immunodeficiency Virus (HIV).

Protecting staff and others:

1. Use devices with safety features.
2. Staff must immediately discard all used needles/sharps directly into a puncture resistant container.
3. **Do not recap needles.**
4. Place entire sharp in puncture resistant container immediately after use. Do not move from room to room, leave on tray, shelf, linen, or in resident garbage.
5. Do not bend or break needles from syringes.
6. Keep disposal containers close to the source of contaminated sharps.
7. Seal, lock and replace containers when indicated by full line. **Do not overfill containers.**
8. Place locked and used containers in a designated area for proper disposal.
9. Staff must have the ability to report any needle stick injuries.
10. The employer must have a protocol in place describing the step by step process that an injured staff member must follow to ensure that proper treatment, testing, education and follow up is provided.



Preventing the Transmission of Bloodborne Pathogens in Health Care

The potential for transmission of human immunodeficiency virus (HIV), hepatitis B virus (HBV), hepatitis C virus (HCV), and other bloodborne pathogens in health care facilities is of concern to residents and health care workers.

Prevention of bloodborne pathogen transmission in health care requires a comprehensive infection prevention and control program as well as an occupational health and education program to limit exposures and reduce transmission if exposures occur.

The elements of the program include:

1. Education of workers

Education programs should be based on practical situations that workers encounter in their day to day assignment of specific duties. Content should include general information about infection prevention and control (stressing the importance of hand washing); information about bloodborne pathogen transmission; assessing risk of exposure; preventing exposures; immunization (hepatitis B vaccine); specific policies and procedures for individual work areas, including protocols following an exposure; and resources for further assistance.

2. Vaccination of people at risk for hepatitis B

Immunization with hepatitis B vaccine is recommended for those people who are at increased risk of occupational infection, namely those exposed frequently to blood, blood products and bodily fluids that may contain the virus. This group includes all health care workers and others who will be or may be exposed to blood or are at risk of injury by instruments contaminated with blood.

3. Identification and restriction of risky practices

Workers and employers need to analyze the components of their job in order to determine what procedures and activities put them at greatest risk of exposure. Review of reports and workers' compensation claims may assist in this assessment. Exposures and injuries need to be broken down into levels of risk such as low, moderate and high. When risk levels have been identified, then introduction of products and implementation of policies and procedures can be prioritized. For example, an accidental needle stick injury from a hollow bore, blood-filled needle would constitute a high risk exposure as compared with an accidental stick injury from needles used on an intravenous (IV) line for an injection.

Recommendations

- A surveillance system should be established to identify the causes of exposure.
- A risk reduction program should critically evaluate all procedures that may involve risk of exposures to blood or other fluids capable of causing bloodborne pathogen transmission, in order to identify ways to reduce or eliminate the risk of exposure.

4. Design and use of safer medical devices

If it is impossible to eliminate the risk, engineering controls (safer medical devices) should be used to modify work practices and procedures in order to reduce the risk. Whenever possible, alternative processes should be instituted that will eliminate the risk of a significant exposure.

5. Targeted interventions based on occupation-specific hazards.

Personal protective equipment must be used to reduce the risk of exposure.

6. Comprehensive infection prevention and control and occupational health program

These programs include ongoing surveillance and analysis of exposures, with a focus on preventing parenteral exposures, and applying risk assessment methods to identify and modify risky procedures.

The management of potential percutaneous or mucosal exposure to HBV should be based on the immunization and antibody status of the injured person and the infectious status, if known, of the source. Any effective approach to the prevention of the transmission of bloodborne pathogens is based on the assumption that all blood

and certain body fluids are potentially infectious. Precautions, applied to all residents at all times, may reduce the incidence and the quantity of blood exposure for health care workers in occupational settings.

Recommendation for HBV antibody status

- It is critical to ascertain whether the exposed individual has received a full and properly administered course of hepatitis B vaccine and to assess the post-vaccination anti-HBs antibody level. Therefore all health care workers and health care students should have their antibody status assessed and documented after immunization.

Epidemiology of the Transmission of Bloodborne Pathogens

The risk of acquiring a bloodborne infection, i.e., HIV, HBV, or HCV in a health care or public service setting depends on three factors:

1. Significant exposure to bloodborne pathogens

The evaluation of a significant exposure to a bloodborne pathogen requires investigation of two criteria, type of body fluid and type of exposure.

Types of body fluids capable of transmitting HIV, HBV, and HCV from an infected individual include:

- Blood, serum, plasma and all biologic fluids visibly contaminated with blood
- Laboratory specimens, samples or cultures that contain concentrated HIV, HBV, HCV
- Organ and tissue transplants
- Pleural, amniotic, pericardial, peritoneal, synovial and cerebrospinal fluids
- Uterine/vaginal secretions or semen (unlikely to be able to transmit HCV)
- Saliva (for HCV, HBV, and HIV if a bite is contaminated with blood and for HBV if a bite is not contaminated with blood)

Faeces, nasal secretions, sputa, tears, urine and vomitus are not implicated in the transmission of HIV, HBV and HCV unless visibly contaminated with blood. The risk of transmission from screened donated blood and manufactured blood products is negligible in Canada.

To be considered significant, the type of exposure is one in which one of the infected fluids listed above comes into contact with the HCWs tissues as follows:

- Tissue under the skin (e.g., percutaneous or broken skin following a bite)
- Non-intact skin (e.g., cut, chapped or abraded skin)
- Mucous membrane (e.g., eyes, nose or mouth)

In summary, if the type of body fluid and the type of exposure is indicative of a significant exposure, further investigation is warranted.

2. Prevalence of infection in the population

Prevalence of infection refers to the number of infected persons in a population at a particular point in time. The prevalence of bloodborne infections varies by disease from one region of Canada to another, from rural to urban areas, and from one city to another.

3. Risk of infection due to exposure to bloodborne pathogens

The risk of infection after exposure to infected blood varies by bloodborne pathogen. The risk of transmission after parenteral exposure to HIV-infected blood is about 0.3%, whereas it is estimated to be up to 100 times greater for HBV (30%) and may be between 3 and 10% for HCV.

Bloodborne Infection Prevention and Control Program

- All health care workers in LTCHs and RHs must receive infection prevention and control education regarding bloodborne pathogens and safe practice in the workplace before beginning work and on an ongoing basis thereafter (i.e. annually).
- Health care workers need to know how to apply preventive techniques in routine practice and in unusual situations. Time must be given for workers to question, absorb and apply the information. It is critical that educational programs enable workers to express and work through their concerns about caring for individuals with a bloodborne infection.
- Records of participation should be maintained as needed to satisfy legal requirements.
- Facilities should assess procedures to determine risk of exposure to blood and fluids capable of transmitting bloodborne pathogens.
- Facilities should participate in and regularly review accidental blood exposure information from their own pertinent injury reporting programs, and from others (i.e. Workers' Compensation Board).
- Comprehensive objective approaches to data collection and analysis should be used. Statistical and epidemiologic techniques that examine exposure incidences with respect to variables of time, place and person should be applied in a continuous surveillance program to contribute data that should form the basis of occupational safety programs.
- Formal mechanisms should be established to ensure that action is taken as required as a result of the analysis of injury reporting programs. Involve employees at each stage of the development of safety programs.

Management of Incidents of Possible Blood and Body Fluid Exposure

The concern involved with exposure to blood or body fluids is possible exposure to Hepatitis B, Hepatitis C or HIV. The risk associated with an exposure to bloodborne diseases is determined by the nature of the exposure, the immunization status of the exposed person and the risk factors associated with the source.

The health unit serves as a source of information to members of the community related to possible exposures to bloodborne diseases through contact with the blood or body fluids of another person.

Health Unit staff will assess the circumstances of the exposure, provide recommendations for actions to the person or their health care provider, and facilitate voluntary testing of the source where appropriate.

First Aid Management

The following actions are recommended:

1. Remove the contaminated clothes as appropriate.
2. Immediately allow the wound to bleed freely.
3. Wash the wound and injured area well with soap and water. Apply an antiseptic if available; however there is no evidence that antiseptic use reduces risk of pathogen transmission. Application of caustic agents such as bleach, injection of antiseptics, or disinfectants into the wound is not recommended.
4. If the eyes, nose or mouth are involved, flush well with large amounts of water or saline (at least 1000cc's).
5. Occupational exposures should be reported to your supervisor who should immediately implement facility/agency policy.
6. Seek immediate medical assistance, preferably at a hospital emergency department.

Cleaning up Blood Spills, Vomit or Fecal Accidents

Individuals, who clean up blood, vomitus or faeces, should minimize the risk of infection to themselves and others by considering the following procedure:

Procedure for Blood Spills/Vomit/Faeces

Steps:

1. Appropriate personal protective equipment should be worn when cleaning up a spill such as disposable gloves. If the possibility of splashing exists, the worker should wear protective eyewear and a fluid resistant gown.
2. If any broken glass or sharps are involved, they should be disposed with care into a sharps container.
3. The spill area must be cleaned of obvious organic material before applying a disinfectant, as disinfectants are substantially inactivated by blood and other materials.
4. Excess blood, vomit, faeces and fluid should be absorbed and removed with disposable towels. Discard the towels in a plastic-lined waste receptacle and per facility policy.
5. After cleaning, the affected area should be disinfected with a chemical disinfectant such as sodium hypochlorite (household bleach) or 3% hydrogen peroxide. A concentration of household bleach at 5000 ppm (1:10 dilution) is effective. For carpet or upholstered surfaces, 3% peroxide may be used.
6. Leave the disinfectant (diluted bleach or peroxide) on the surface for 10 minutes. When using bleach solutions, be sure the area is well ventilated and that it is not mixed with other cleaning compounds.
7. The treated area should then be wiped with paper towels soaked in tap water. Allow the area to dry.
8. Disposable towels, gloves and other disposable equipment should be discarded in a plastic lined waste receptacle and per facility policy. Immediately tie and place with regular waste where daily trash removal occurs. Take care not to contaminate other surfaces during this process. Change gloves if needed.
9. Care must be taken to avoid splashing or generating aerosols during the clean up.
10. Hands must be thoroughly washed for 10 seconds with soap and warm running water after gloves are removed.

Procedure for Assessing the Source for Risk of Blood or Body fluid Exposures

Exposures

It is important for anyone who has experienced an exposure to another person's blood or body fluids to be assessed by a health care provider to determine risk of infection and to get appropriate and timely treatment to prevent transmission of disease.

When a significant exposure to the blood or body fluids occurs, it is always important to consider an assessment of the source in considering degree of risk. When the source person is known, he or she may be approached to provide information about health status and /or to provide a blood sample for hepatitis B, C and HIV. Any person who is exposed to the blood or body fluid of another person and who is eligible to apply; may seek mandatory blood testing for hepatitis B, C and HIV. The Haldimand Norfolk Health Unit may assist in assessment of the source and assistance with mandatory blood testing. A member of the infectious disease (ID) team may be contacted during business hours at (519) 426-6170 or after hours at 1-877-298-5888.

All persons should be advised to follow medical recommendations with regard to post-exposure prophylaxis (PEP). Waiting for the diagnosis or serostatus of a potential source may take days, which will impact the efficacy of the PEP medication or vaccine. HIV anti-retrovirals for example, should be taken within 1-2 hours after exposure to ensure optimum efficacy.

What is the Mandatory Blood Testing Act?

In August of 2007, section 22.1 of the Health Protection and Promotion Act was repealed. The new Mandatory Blood Testing Act and its regulation then came into effect. The intent of this new legislation is to shorten the time needed to obtain a mandatory blood test and to broaden eligibility for applications.

The law enables police officers, firefighters, correctional services staff, paramedics, members of the College of Nurses of Ontario, members of the College of Physicians and Surgeons of Ontario, medical students engaged in training and others who in the course of their work may be exposed to the blood or body fluid of others, to apply to request information about the source person's blood with respect to hepatitis B, C and HIV.

Under this legislation, good Samaritans are also eligible to apply, when an exposure to blood or body fluids has occurred while providing emergency first aid or health care.

The legislation is implemented by the Ministry of Community Safety and Correctional Services.

Legislation Documents

- 1) [The Mandatory Blood Testing Act](#) – directs the process for blood testing
- 2) [Ontario Regulation 449/07](#) – sets the requirements and procedures which must be followed with respect to an order for compulsory blood testing
- 3) [Ontario Regulation 244/08](#) – an amendment to Regulation 449/07 which describes the inclusion of members of the College of Physicians and Surgeons and medical students in training as those eligible to apply under the Act.

Definition of the Applicant

The person wishing to apply to have another person's blood tested is called the **applicant**.

To be eligible to apply, the applicant must have come into contact with the other person's body fluids:

- While providing emergency health care
- Giving emergency first aid
- As a victim of a crime
- In the course of his or her duty when the applicant belongs to a specified class or group of people

These groups are:

- Persons who are employed in a correctional institution, place of open custody or place of secure custody
- Police officers, civilian employees of a police service, First Nations constables and auxiliary members of a police service
- Firefighters (including volunteer firefighters)
- Paramedics and emergency medical attendants and paramedic students on field placement
- Members of the College of Nurses of Ontario
- Members of the College of Physicians and Surgeons of Ontario
- Medical students engaged in training

To be eligible as a victim of a crime, a police report must have been filed and the applicant must consent to disclose this information if asked.

There are requirements that must be met in completing and submitting an application which are more fully described in the next section.

Note: Your completed application must be received by the health unit within 7 days of the exposure.

Definition of the Respondent

The **respondent** is the person who has been identified by the applicant as the person whose body substances the applicant may have come into contact with. The respondent is the person who may be ordered to submit to a blood test.

There are many requirements and legal criteria which must be met to result in an order for mandatory testing of the respondent's blood. An application does not always mean that mandatory testing will be ordered. There is also an opportunity within the process for the respondent to voluntarily provide this information.

Submitting an Application

How do I apply?

An application includes two forms:

- the Applicant Record
- the Physician Report

You can apply using the Physicians and Applicant Report/Record. [Download these forms](#) from the Ministry of Community Safety and Corrections. Do not print off copies to keep on file for future use. These forms can change at any time without notification.

Instructions are provided on the form. It is important to follow all of the steps on the form and to answer all the questions and complete all fields. If the application is not complete, it may not be accepted by the medical officer of health.

How long do I have to submit an application?

Your application, which includes both the applicant report and the physician report, must be received at the health unit within 7 days from the time you have been exposed. If the application is not received within seven days, it will not be processed.

How do I count the days to make sure I meet the deadline?

The day the exposure occurred is day zero. Begin counting at 1 on the next day and include Saturdays, Sundays and holidays. The legislation states that if the deadline, or your 7th day, falls on a Saturday, Sunday or holiday, you may extend the deadline by one day.

Where do I send the application?

An application is processed by the health unit responsible for the area where the respondent lives. For help in identifying which health unit is the correct one, you may call the Haldimand Norfolk Health Unit or The Ministry of Health's INFOline at 1-866-532-3161.

However, you may drop off your application to any Ontario health unit and it will be forwarded to the correct one. To meet the deadline, please drop off both completed forms to any health unit no later than 4 pm on the 7th day.

What kind of information is asked for on the forms?

As the applicant you must:

- Provide a description of the circumstances of the occurrence and the details of the exposure and your injury
- Provide your immunization history
- Include the name and address of the person whose blood you are applying to have tested
- Agree to counseling about the exposure and treatment options
- Agree to have your blood tested for the three diseases, HIV, hepatitis B and hepatitis C
- Provide consent for the release of information about your blood test results, if asked, to the Consent and Capacity Board
- Give consent for the release of information on the police report if you were the victim of a crime

Will my personal information on the application be shared?

Your application will be read by the medical officer of health and by members of the Consent and Capacity Board if your application is forwarded for an order.

Your blood test results will be shared with the doctor who completed the physician report, your family physician if named, and with the Consent and Capacity Board members if requested.

None of your personal information will be shared with the respondent.

Processing an Application

How long does the whole process take?

The regulations to the act require specific time lines be followed. Despite the shortened time frames intended by the legislation, the process itself has many steps and time will vary depending on many factors.

What are the steps in the process?

a) Voluntary Process

- When an application is received by the correct health unit and all requirements are met, it proceeds to the voluntary stage. This means that the medical officer of health assigns a member of the ID team to contact the respondent and ask that he or she voluntarily provide either a blood sample to test for the three diseases, or evidence of testing that was done within the past four weeks for hepatitis B and C, and HIV
- Two days is allowed for this stage of the process.
- If after two days the respondent cannot be reached, the application is forwarded to the Consent and Capacity Board who will hold a hearing within seven days.
- The assigned ID team member continues to try to reach the respondent and if successful, will notify the Consent and Capacity Board and ask to have the application withdrawn (as long as the hearing hasn't yet started).
- When the respondent is contacted, the ID team member will explain the request and keep information about the applicant confidential.

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- The ID team member will help the respondent to arrange for blood testing for hepatitis B and C, and HIV. The respondent will be asked to sign a consent form giving permission for the test results to be shared with the medical officer of health, the respondent's physician and the applicant's physician.
 - The respondent must show identification when he or she has the testing done. The person taking the blood is required to carefully handle the specimens, send them to the Central Public Health Lab in Toronto and ask for immediate analysis.
 - When the test results are received by the medical officer of health, the results will be immediately forwarded to the applicant's physician. The applicant is notified and asked to make an appointment with his or her doctor so that testing results can be interpreted to the applicant.

b) Order Process

- When the respondent cannot be reached within two days or when the respondent refuses to voluntarily provide the information requested, the application is forwarded to the Consent and Capacity Board.
- The Consent and Capacity Board now has seven days to start and conclude a hearing and one more day to make a decision about whether to issue an order compelling the respondent to provide a sample.
- The hearing is public and any person involved with the application may be called as a witness.
- The applicant, respondent and medical officer of health will be notified of the decision made by the board.
- When a respondent is ordered to provide a blood sample he or she must do so within seven days of the order.
- If the respondent does not comply with an order made by the board, the applicant may apply to a judge of the Superior Court of Justice for an order requiring the respondent to comply with the order of the board.
- A person who does not comply with the order could be fined up to \$5,000 per day.
- When an order is written and the respondent complies, the respondent is provided with a laboratory requisition and must go to a designated person to have the blood drawn. The respondent must bring identification.
- The results of the blood tests will be sent to the applicant's physician and the applicant is notified to make an appointment with his or her physician to have the results interpreted.

Where can I get more information?

Here are some resources about this new legislation that may be helpful:

[Ministry of Community Safety and Correctional Services](#) – provides additional information.

Health Unit staff are available to answer questions and provide support. Please call 519-426-6170 or 905-318-5367 and *ask for a member of the ID team*

Immunization in Health Care Workers

Immunization is the most effective means of preventing hepatitis A and B; influenza; MMR; polio; pertussis; tetanus-diphtheria (Td); varicella; and other vaccine-preventable diseases. HCWs who acquire vaccine-preventable disease not only suffer morbidity and mortality as result of infection but also serve as vectors for transmitting disease to other staff and residents.

Recommendations for Health Care Workers Immunization are contained in the Public Health Agency of Canada (PHAC) document:

Web link:

<http://www.phac-aspc.gc.ca/im/is-cv/>

Example of LTCH policy regarding health care worker influenza immunization:

Sample Form

Employee Health Annual Influenza Vaccine Policy

Vaccination is recognized as the single most effective way of preventing or attenuating influenza for those at high risk of serious illness or death from influenza infection and related complications. The Canadian National Advisory Committee on Immunization (NACI) states that influenza vaccine programs should aim to vaccinate at least 90% of eligible recipients.

People who are potentially capable of transmitting influenza to those at high risk should receive annual vaccination, regardless of whether the high-risk persons have been immunized. Health care and other care providers in LTCHs, through their activities, are potentially capable of transmitting influenza to those at high risk of influenza complications. This group also includes students, regular external care providers (i.e. physiotherapists, agency nurses) and volunteers.

Immunization of care providers decreases death, morbidity and health service use among residents, staff illness and absenteeism. Immunization of care providers and residents is associated with decreased risk of Influenza-like Illness (ILI) outbreaks.

Healthcare workers (HCWs), who have direct patient contact, are an essential component of the standard of care for the protection of their clients. HCWs who have direct patient contact should consider it their responsibility to provide the highest standard of care, which includes undergoing annual influenza vaccination. In the absence of contraindications, refusal of HCWs who have direct patient contact to be immunized against influenza implies failure in their duty of care to patients.

_____ will strive to achieve 100% employee compliance with the annual influenza program although it is noted that the influenza vaccine may be medically contraindicated in some staff members.

Employees will be given every reasonable opportunity to be informed of the risks, benefits, and side effects of the influenza vaccine. This includes, but is not limited to:

- An education program at the beginning of the “flu season” promoting awareness of influenza and the importance of vaccination as well as a resource list which highlights the risk and side effects,
- Posting of a notice in accessible locations of the facility (e.g. conference room, staff lounge) at least a month in advance of the vaccination clinic dates. The notice will include the clinic dates, hours and location,
- Obtaining employees’ individual written consent,
- Sending reminders to those employees who have not yet received the immunization prior to the last day of the immunization clinic

Section VIII – Links

[Haldimand Norfolk Health Unit](#)

[Provincial Infectious Disease Advisory Committee \(PIDAC\)- Best Practice Documents](#)

[A Guide to the Control of Respiratory Infection Outbreaks in Long Term Care Homes](#)

[Control of Gastroenteritis Outbreaks in Long Term Care Homes](#)

[Public Health Ontario](#)

[Public Health Agency of Canada.](#)

[Ministry of Health and Long Term Care](#)

[Canadian Tuberculosis Standards](#)