Keys to Successful Management of Outbreaks in Long-Term Care and Retirement Home Settings

Haliburton, Kawartha, Pine Ridge District Health Unit

Revised September 2015

Communicable Disease Control Department
HKPR District Health Unit
Toll Free 1-866-888-4577
www.hkpr.on.ca

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Disclaimer: This document is a guideline and does not constitute legal advice. This document does not address all aspects of applicable legislation, including regulations and Orders under applicable legislation. It should be read in conjunction with all applicable legislation, including, but not limited to, the Long-Term Care Homes Act, 2007, the Retirement Homes Act, 2010, the Health Protection and Promotion Act and regulations and Orders made under those Acts. In the case of any conflict, the provisions of the legislation, regulations and/or Orders are authoritative.

The Keys to Successful Management of Outbreaks in Long-Term Care and Retirement Home Settings (the "Manual") is largely based on the two documents listed below (the "Guides"), with some portions of the Manual copied directly from them.

Ontario Ministry of Health and Long-Term Care/Public Health Division. (2013) *Control of gastroenteritis outbreaks in long-term care homes: A guide for long-term care homes and public health unit staff*. Toronto, ON: Queens Printer for Ontario.

Ontario Ministry of Health and Long-Term Care/Public Health Division. (2014) *A guide to the control of respiratory infection outbreaks in long-term care homes*. Toronto, ON: Queens Printer for Ontario.

The Haliburton Kawartha Pine Ridge District Health Unit has developed the Manual, in part, as a companion to the aforementioned Guides. Should there be any conflict between the Manual's content and the Guides, the content of the Guides should be considered authoritative.

Table of Contents

Table of Contents (continued)

Table of Contents (continued)

Contact Information

During normal working hours
8:30 am to 4:30 pm, Monday through Friday,
ask for a Communicable Disease Control Nurse at your local
Haliburton, Kawartha, Pine Ridge District Health Unit office:

Northumberland County
200 Rose Glen Road
Port Hope, ON L1A 3V6
Phone: (905) 885-9100
Confidential Fax: (905) 885-9554

City of Kawartha Lakes and Haliburton County
108 Angeline Street South
Lindsay, ON K9V 3L5
Phone: (705) 324-3569
Confidential Fax: (705) 324-6911

For After Hours Emergencies

HALIBURTON, KAWARTHA, PINE RIDGE DISTRICT HEALTH UNIT

AFTER HOURS EMERGENCY NUMBERS

Chemical Spill 1-800-268-6060

Animal Bite • Rabies Vaccine • Natural Disaster
1-888-255-7839 *(Ask for Environmental Health pager)*

Reportable Communicable Diseases requiring immediate Public Health Response *(e.g. suspect or confirmed Meningitis)*
Suspected Food Poisoning • Cold Chain Breaks • Outbreaks
1-888-255-7839 *(Ask for Communicable Disease Control pager)*

Reportable Diseases

There are many diseases that must be reported to the Health Unit.

The Duty to Report

Under the authority of the Health Protection and Promotion Act, all health care providers have a duty to report to the local medical officer of health or designate* any person having or suspected of having a reportable disease.

If you are aware of, or suspect a person (resident, patient, client, staff) of having a reportable disease, call the HKPR District Health Unit office in your county.

During normal working hours, ask to speak to a nurse in the Communicable Disease Control Department.

Outside of normal working hours, call the HKPR after hours emergency number: **1-888-255-7839** and ask for the person carrying the Communicable Disease Control Pager.

*Designate can be any public health nurse in the Communicable Disease Control Department

When in Doubt Call and Find Out!

REPORTABLE DISEASES

The following suspect and confirmed Reportable Diseases (Ontario Regulations 559/91 and amendments under the Health Protection and Promotion Act) are reportable to the local Medical Officer of Health:

Acute flaccid paralysis (AFP)
Acquired Immunodeficiency Syndrome (AIDS)
Amebiasis
➤ **Anthrax**
➤ **Botulism**
➤ **Brucellosis**
Campylobacter enteritis
Chancroid
Chickenpox (Varicella)
Chlamydia trachomatis infections
➤ **Cholera**
➤ ***Clostridium difficile* associated disease (CDAD) outbreaks in public hospitals**
➤ **Cryptosporidiosis**
➤ **Cyclosporiasis**
➤ **Diphtheria**
➤ **Encephalitis, including:**
➤ *1.* ***Primary, viral***
2. Post-infectious
3. Vaccine-related
4. Subacute sclerosing panencephalitis
5. Unspecified
➤ **Food poisoning, all causes**
➤ **Gastroenteritis, institutional outbreaks**
➤ **Giardiasis, except asymptomatic cases**
Gonorrhea
➤ **Haemophilus influenzae b disease, invasive**
➤ **Hantavirus Pulmonary Syndrome**
➤ **Hemorrhagic fevers, including:**
➤ ***1. Ebola virus disease***
➤ ***2. Marburg virus disease***
➤ ***3. Other viral causes***
➤ **Hepatitis, viral**
➤ ***1. Hepatitis A***
2. Hepatitis B
3. Hepatitis C
Influenza
➤ **Lassa Fever**
➤ **Legionellosis**
Leprosy
➤ **Listeriosis**
Lyme Disease
Malaria
➤ **Measles**
➤ **Meningitis, acute**
➤ ***1. bacterial***
2. viral
3. other
➤ **Meningococcal disease, invasive**
Mumps
Ophthalmia neonatorum
Paralytic shellfish poisoning (PSP)
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**
➤ **Streptococcal infections, Group A invasive**
Streptococcal infections, Group B neonatal
Syphilis
Tetanus
Transmissible Spongiform Encephalopathy, including:
1. Creutzfeldt-Jakob Disease, all types
Trichinosis
Tuberculosis
➤ **Tularemia**
Typhoid Fever
➤ **Verotoxin-producing E. coli infection indicator conditions including Hemolytic Uremic Syndrome (HUS)**
➤ **West Nile Virus Illness, including**
➤ ***1. West Nile fever***
➤ ***2. West Nile neurological manifestations***
➤ **Yellow Fever**
Yersiniosis

Note: Diseases marked "➤" should be reported <u>immediately</u> to the Medical Officer of Health by telephone.
Other diseases are to be reported by the next working day.

For more information:

Northumberland County
(905) 885-9100
CKL/Haliburton County
(705) 324-3569
Toll-free 1-866-888-4577

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Haliburton, Kawartha, Pine Ridge District Health Unit

Chain of Transmission

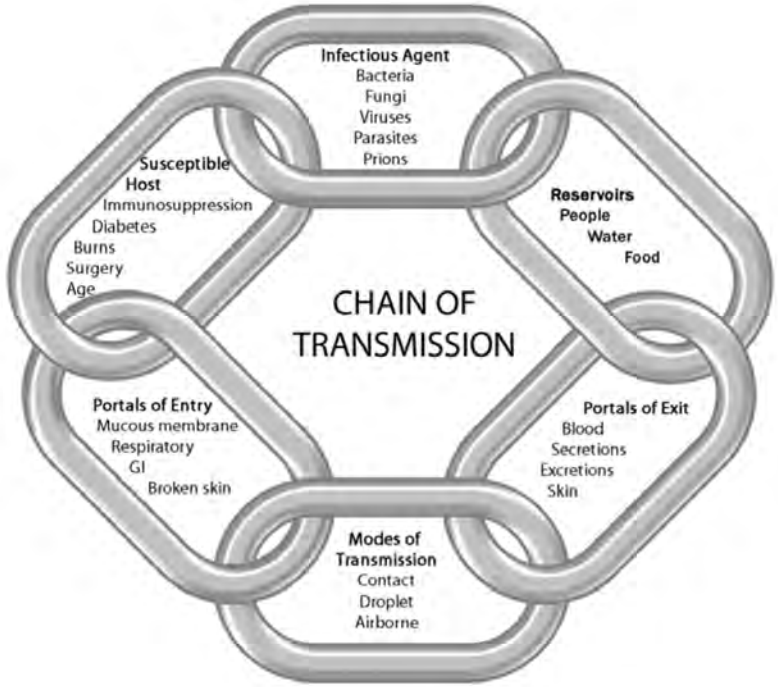


Figure 1: The Chain of Transmission

Transmission occurs when the agent, in the reservoir, exits the reservoir through a portal of exit, travels via a mode of transmission and gains entry through a portal of entry to a susceptible host.

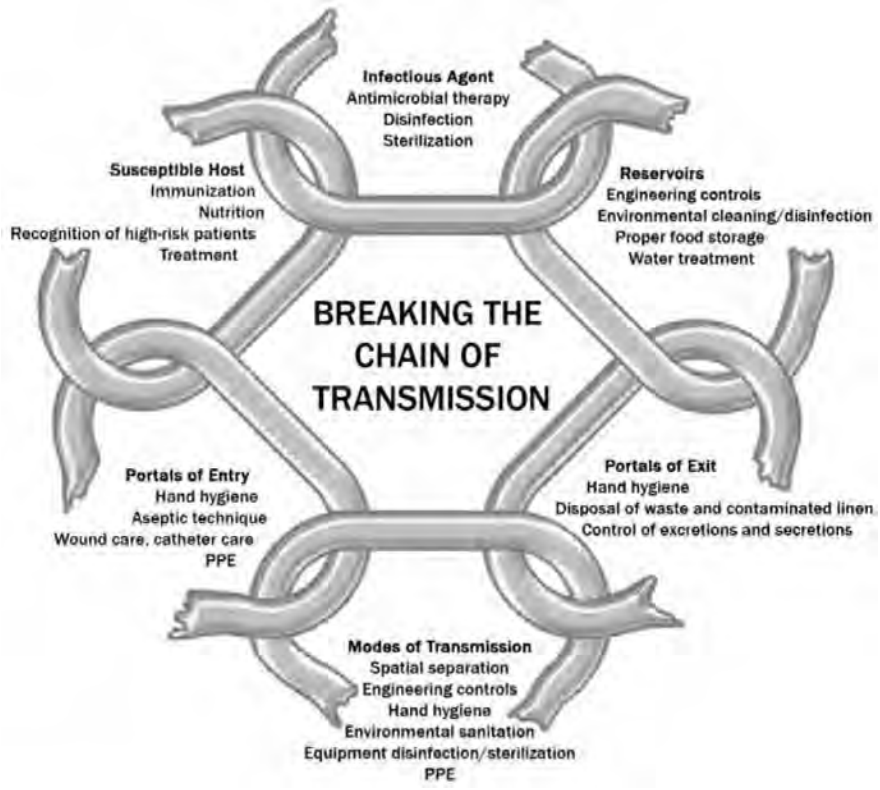


Figure 2: Breaking the Chain of Transmission

Transmission may be interrupted when:

- **the agent is eliminated or inactivated or cannot exit the reservoir;**
- **portals of exit are eliminated through safe practices;**
- **transmission between objects or people does not occur due to barriers and/or safe practices;**
- **portals of entry are protected; and/or**
- **hosts are not susceptible**

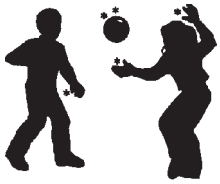
PIDAC - BP: Routine Practices pages 18 and 19.

Modes of Transmission

Direct Contact

Involves contact between infectious agent and a susceptible host.

E.g. Scabies, Chickenpox, Influenza, C. difficile, MRSA, VRE, colds



Indirect Contact

Involves contact between a susceptible host and a contaminated intermediate object.

E.g. Scabies, Influenza, C. difficile, MRSA, VRE, colds

Airborne

Small droplets (five microns or less) remain suspended in the air for long periods of time and can be carried by air currents.

E.g. Tuberculosis, Measles, Legionnaires' Disease and Chickenpox

< 2 metres

Droplet

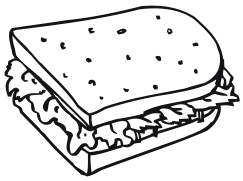
Contact of mucous membranes or conjunctivae with large infectious droplets (>five microns) through face to face contact < two metres from an infectious person. Droplets do not remain suspended in the air.

E.g. Influenza, Streptococcus pneumoniae, Pertussis, Mumps, Mycoplasma pneumoniae

Vectorborne

Transmission through the bite of an insect harbouring an infectious agent.

E.g. West Nile virus, Malaria, Lyme Disease



Vehicle

Contaminated substances (e.g.: food, water) can transmit infection when consumed.

E.g. Salmonella (food), Hepatitis A (water)

Adapted from Canada Communicable Disease Report, Health Canada. Routine Practices and Transmission of Infection in Health Care.

Preventing Transmission of Infection

Hand Hygiene

- Hand hygiene is the **single most effective infection prevention and control measure**.
- Alcohol-based hand rubs (ABHR) containing 70 to 90 per cent alcohol are recommended and must be provided in the health care setting.
- There are two methods of killing/removing microorganisms on hands:
  1. Hand sanitizing with a 70 to 90 per cent ABHR is the preferred method (when hands are not visibly soiled) for cleaning hands.
  2. Hand washing with soap and running water must be performed when hands are visibly soiled.
     * If hands are visibly soiled and running water is not available, use a moistened towelette to remove the visible soil, followed by alcohol-based hand rub.
- It is vital that all staff follow hand hygiene protocols that are appropriate for their residents and home.
- In order to implement a comprehensive hand hygiene program, refer to:
  - Ministry of Health and Long Term Care (MOHTLC) *Just Clean Your Hands* hand hygiene improvement program.
  - Provincial Infectious Diseases Advisory Council Committee (PIDAC) *Best Practices for Hand Hygiene in All Health Care Settings.*

Resident Hand Hygiene

Good resident hand hygiene practices include the following:

- Residents should be instructed in proper hand hygiene and assisted, as necessary.
- Care of hand hygiene in residents is necessary at all times and especially during influenza season.
- Resident hands should be washed after using the washroom and washed or sanitized frequently before and after meals.
- Hand hygiene before and after shared activities.

Personal Protective Equipment (PPE)

- Refer to Table 1. What Personal Protective Equipment is Required and When (at the end of this section)

Gloves

- To be worn when there is a risk of caregiver contact with blood, body fluids, secretions, excretions, non-intact skin, or mucous membranes.
- Gloves are task specific and single use for the task.

Appropriate Glove Use

- Wear the correct size of gloves.
- Gloves should be put on immediately before the activity for which they are indicated.
- Clean hands before putting on gloves for a clean/aseptic procedure.
- Gloves must be carefully removed and discarded immediately after the activity for which they were used.
- Hand hygiene must be performed immediately after glove removal.
- Change or remove gloves if moving from a contaminated body site to a clean body site with the same resident.
- Change or remove gloves after touching a contaminated site and before touching a clean site or the environment.
- Do not wash or re-use gloves.
- The same pair of gloves must not be used for the care of more than one resident.

Additional considerations:

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

Source: *A Guide to the Control of Respiratory Infection Outbreaks in Long-Term Care Homes*, Ministry of Health and Long-Term Care, September 2014

Gown

- To be worn when there is a risk of splattering or spraying of blood, body fluids, secretions or excretions while providing direct resident care.
- Gowns are a one time use item and specific to one resident.

Appropriate Gown Use

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

Additional Considerations:

- Gowns should be removed before leaving the residents' room or dedicated space.

Source: *A Guide to the Control of Respiratory Infection Outbreaks in Long-Term Care Homes*, Ministry of Health and Long-Term Care, September 2014

Mask

- To be worn when providing direct care to residents, or when within two metres of residents ill with a respiratory infection spread through ***droplet transmission***.

Appropriate Mask Use

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

Additional Considerations:

- Masks are recommended when providing care involving direct contact with ill residents or when within two metres of coughing residents.
- For the care of a resident with respiratory illness, put a surgical mask on the resident, if tolerated, whenever the resident is not in his/her room (e.g. transfer to hospital). If masks are not available or not tolerated, residents should be encouraged to use another method to cover their mouth and nose when coughing or sneezing (e.g., tissue).
- Masks should be changed if they become wet, or contaminated by secretions.
- Staff wearing masks must remove their mask with clean hands before caring for another resident, and when leaving the residents dedicated environment.
- Masks should be handled only by the strings/ ties, to prevent self-contamination.
- Masks should be changed according to the manufacturer's recommendations.
- Hand hygiene should be performed before and after mask removal.

Source: *A Guide to the Control of Respiratory Infection Outbreaks in Long-Term Care Homes*, Ministry of Health and Long-Term Care, September 2014

N95 Respirator

- To be worn when in contact with, or providing care to a resident ill with an ***airborne infection*** (e.g. Tuberculosis, Chicken Pox, Measles, SARS).

Eye Protection

- To be worn when there is a risk of splattering or spraying of blood, body fluids, secretions, or excretions while providing direct resident care or when within two metres of a resident who is coughing/sneezing.
- Includes use of safety glasses, safety goggles, face shields, or visors attached to masks.
- **Does not** include personal eyeglasses.

Appropriate Use of Eye Protection

- Eye protection must be removed immediately after the task for which it was used and discarded into waste or placed in an appropriate receptacle for cleaning.
- Prescription eye glasses are not acceptable as eye protection.
- Select a mask appropriate to the activity.

Additional Considerations:

- If using a mask, eye protection is needed. However, if a face shield is being used, a mask is not required.
- Eye protection includes the use of safety glasses, goggles, and face shields. It does not include personal eye glasses.
- Eye protection should be worn where there is a potential for splattering or spraying of blood, body fluids, secretions or excretions, including cough producing aerosol-generating procedures, while providing direct resident care.
- Safety glasses, goggles and face shields should be removed carefully to prevent self-contamination.
- If re-used, eye protection should be cleaned in a manner that will not lead to contamination. The safety glasses, goggles, or face shields should be cleaned between uses according to the manufacturer's recommendations using a minimum of a low level disinfectant.
- To prevent self-contamination, HCWs should not touch their eyes during care of a resident with a respiratory illness.
- Hand hygiene should be performed before and after removal of eye protection. Masks are recommended when providing care involving direct contact with ill residents or when within two metres of coughing residents.

Source: *A Guide to the Control of Respiratory Infection Outbreaks in Long-Term Care Homes*, Ministry of Health and Long-Term Care, September 2014

Administrative Controls

- It is recommended that all homes have administrative controls in place to protect their staff, residents, volunteers, and visitors from infection. This involves:
  - Maintaining age appropriate immunization status with appropriate documentation of residents and staff.
  - Developing exclusion policies and procedures for ill staff and visitors.
  - Providing staff education and training on infection prevention and control practices (i.e. hand hygiene, PPE, respiratory etiquette, etc.).
  - Educating residents and visitors on hand hygiene, respiratory etiquette, not sharing personal items, and not visiting the home when ill.

Environmental Control

- This involves the appropriate:
  - Disposal of waste, storage and transport of contaminated laundry, and sharps.
  - Cleaning, sterilization, and disinfection of equipment, instruments and devices.
  - Accommodation and placement of residents.

For more information, please refer to:

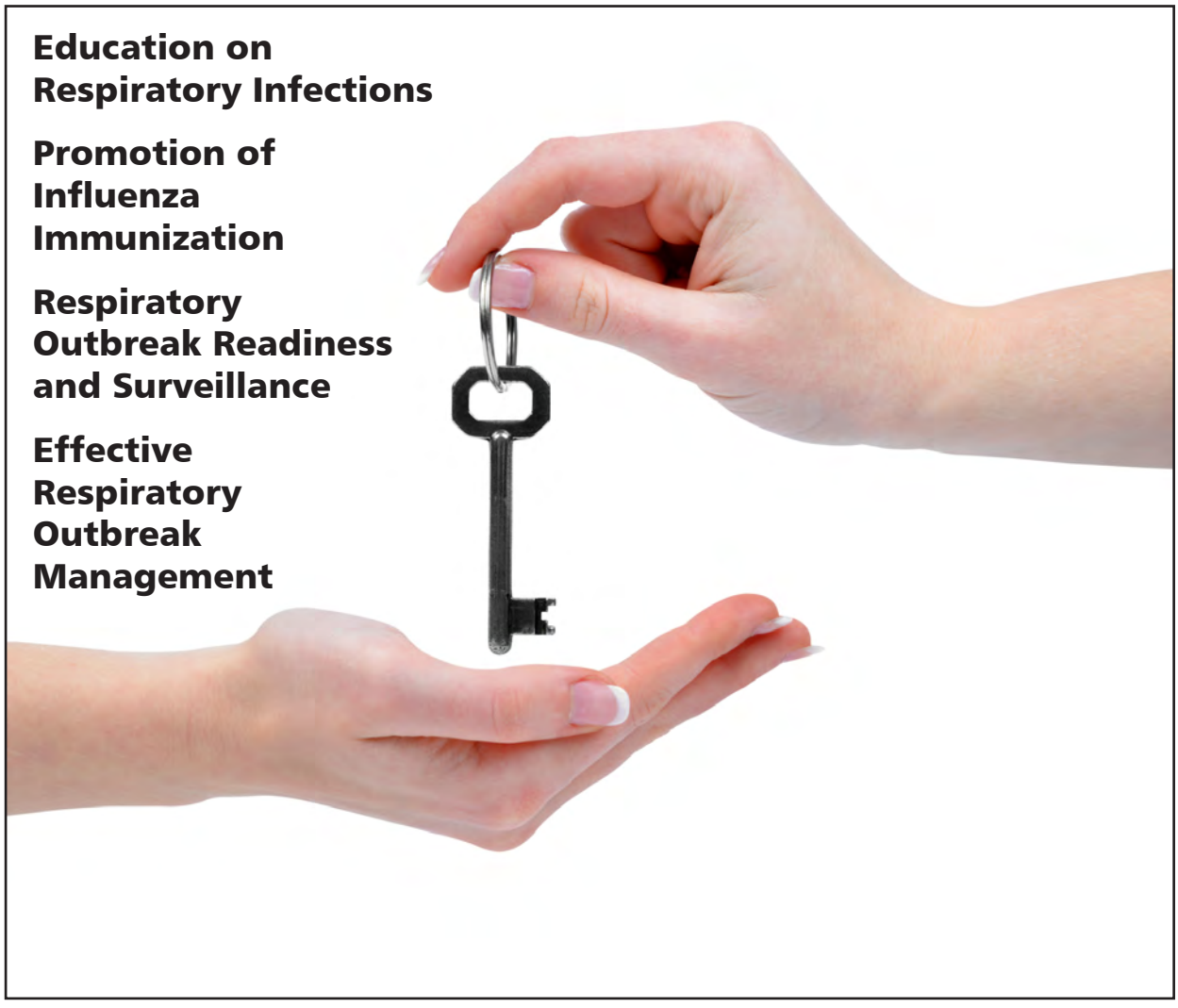
College of Nurses of Ontario. *Practice Standard: Infection Prevention and Control.*
PIDAC. *Routine Practices and Additional Precautions in all Health Care Settings.*
PIDAC. *Hand Hygiene for all Health Care Settings.*
PIDAC. *Environmental Cleaning Best Practices Educational Toolkit.*

	HAND HYGIENE	GLOVES	GOWN	PROTECTIVE EYEWEAR	MASK	N95 RESPIRATOR
CONTACT	✓	✓	✓			
DROPLET	✓			✓	✓	
DROPLET/CONTACT	✓	✓	✓	✓	✓	
AIRBORNE	✓					✓

Table 1. What Personal Protective Equipment is Required and When

Please note: It is advisable to implement droplet/contact precautions for all unknown respiratory illnesses unless otherwise directed by Health Unit.

Four Keys to Successful Management of Respiratory Outbreaks in Long-Term Care and Retirement Home Settings



Haliburton, Kawartha, Pine Ridge District Health Unit

Goal

Our goal is to reduce the morbidity and mortality associated with respiratory outbreaks in Long-Term Care and Retirement Home settings. This can be achieved through effective prevention, preparation and outbreak management techniques.

Our Manual:

"FOUR KEYS TO SUCCESSFUL MANAGEMENT OF RESPIRATORY OUTBREAKS IN LONG-TERM CARE AND RETIREMENT HOME SETTINGS"

This manual has been divided into four chapters ("keys") that will help your staff successfully manage respiratory outbreaks in your home.

The first key is **EDUCATION** and provides valuable background information on respiratory infections that commonly cause outbreaks.

The second key is **PROMOTION** and focuses on the promotion of influenza immunization to staff, residents and visitors.

The third key is **SURVEILLANCE** and provides insight into the value of ongoing surveillance among both residents and staff, especially during the influenza season.

The fourth key is **EFFECTIVE RESPIRATORY OUTBREAK MANAGEMENT** which provides guidance on how to identify an outbreak, how to manage staff and residents during an outbreak, proper specimen collection techniques, use of antiviral medications, and explains how HKPR District Health Unit staff are able to provide assistance during respiratory outbreaks.

Education on Respiratory Infections

Haliburton, Kawartha,
Pine Ridge District
Health Unit

Upper Respiratory Tract Infection

(Includes common cold, pharyngitis)

At least 2 symptoms

Symptoms to watch for:

- Runny nose or sneezing
- Stuffy nose or nasal congestion
- Sore throat
- Hoarseness or difficulty swallowing
- Dry cough (new)
- Swollen or tender glands in the neck
- Fever or abnormal temperature (but is not required)

Influenza in the elderly often causes:

- Tiredness (malaise)
- Muscle aches (myalgia)
- Loss of appetite
- Headache
- Chills

In the elderly, fever could be absent or abnormal, i.e. ≤ 35.5°C or ≥ 37.5°C

Pneumonia

All of the following MUST be met:

- Interpretation of a chest x-ray as pneumonia, probable pneumonia, or presence of infiltrate
- Resident must have at least two of the signs and symptoms described under other lower respiratory tract infections (see below)
- Other non-infectious causes of symptoms must be ruled out (e.g. Congestive Heart Failure)

Lower Respiratory Tract Infection

(Includes bronchitis, tracheobronchitis)

At least 3 symptoms

Symptoms to watch for:

- New or increased cough
- New or increased sputum production
- Fever or abnormal temperature
- Pleuritic chest pain
- New physical findings on examination (e.g. rales, rhonchi, wheezes, bronchial breathing)

One of the following to indicate change in status or breathing difficulty:

- New or increased shortness of breath
- Respiratory rate > 25/minute
- Worsening functional or mental status, i.e.
  - Deterioration in ability to perform activities of daily living

OR

  - Lowering of their level of consciousness

Source: A guide to the control of respiratory disease outbreaks in Long-Term Care Facilities.

Common Viruses that Cause Respiratory Outbreaks

ORGANISM	SYMPTOMS	MODE OF TRANSMISSION	INCUBATION	PERIOD OF COMMUNICABILITY	DIAGNOSIS	PRECAUTIONS AND PPE
Adenovirus	▪ Less common cause of outbreaks ▪ Fever, runny nose, sore throat, conjunctivitis	▪ Direct person-to-person by droplet/ contact through coughing/sneezing or secretions on hands ▪ Indirect contact by exposure to contaminated respiratory secretions on articles/environmental surfaces	▪ 2 to 14 days	▪ As long as symptoms continue ▪ Days to weeks	▪ Nasopharyngeal swab (virus testing)	**Droplet/Contact Precautions** ▪ hand hygiene ▪ gloves ▪ gown ▪ protective eyewear ▪ mask
Coronavirus	▪ Usually mild, similar to common cold: stuffy nose, cough	▪ Direct person-to-person by droplet/ contact through coughing/sneezing or secretions on hands ▪ Indirect contact by exposure to contaminated respiratory secretions on articles/environmental surfaces	▪ 1 to 5 days	▪ As long as symptoms continue ▪ Less than 21 days	▪ Nasopharyngeal swab (virus testing)	**Droplet/Contact Precautions** ▪ hand hygiene ▪ gloves ▪ gown ▪ protective eyewear ▪ mask
Influenza Type A or B	▪ Sudden onset of fever, followed by muscle aches, headache, runny nose, sore throat, dry cough, lethargy, chills ▪ Note: immunized elderly population may not always develop fever	▪ Direct person-to-person by droplet/ contact through coughing/sneezing or secretions on hands ▪ Indirect contact by exposure to contaminated respiratory secretions on articles/environmental surfaces	▪ 1 to 4 days	▪ One day before symptoms and up to 10 days after onset of symptoms	▪ Nasopharyngeal swab (virus testing)	**Droplet/Contact Precautions** ▪ hand hygiene ▪ gloves ▪ gown ▪ protective eyewear ▪ mask
Metapneumovirus	▪ Runny nose, congestion, cough, shortness of breath, fever	▪ Direct person-to-person by droplet/ contact through coughing/sneezing or secretions on hands ▪ Indirect contact by exposure to contaminated respiratory secretions on articles/environmental surfaces	▪ not known (4 to 9 days?)	▪ As long as symptoms continue ▪ 1 to 2 weeks	▪ Nasopharyngeal swab (virus testing)	**Droplet/Contact Precautions** ▪ hand hygiene ▪ gloves ▪ gown ▪ protective eyewear ▪ mask
Parainfluenza	▪ **Not related to the virus which causes influenza ▪ Runny nose, sore throat, mild to moderate fever	▪ Direct person-to-person by droplet/ contact through coughing/sneezing or secretions on hands ▪ Indirect contact by exposure to contaminated respiratory secretions on articles/environmental surfaces	▪ 2 to 6 days	▪ Up to 10 days	▪ Nasopharyngeal swab (virus testing)	**Droplet/Contact Precautions** ▪ hand hygiene ▪ gloves ▪ gown ▪ protective eyewear ▪ mask
Rhinovirus	▪ Most frequent cause of the common cold ▪ Runny nose, sore throat, sneezing, watery eyes, fatigue	▪ Direct person-to-person by droplet/ contact through coughing/sneezing or secretions on hands ▪ Indirect contact by exposure to contaminated respiratory secretions on articles/environmental surfaces	▪ 2 to 4 days	▪ 1 to 3 weeks	▪ Nasopharyngeal swab (virus testing)	**Droplet/Contact Precautions** ▪ hand hygiene ▪ gloves ▪ gown ▪ protective eyewear ▪ mask
RSV	▪ Usually mild, similar to a common cold: stuffy nose, cough	▪ Direct person-to-person by droplet/ contact through coughing/sneezing or secretions on hands ▪ Indirect contact by exposure to contaminated respiratory secretions on articles/environmental surfaces	▪ 3 to 7 days	▪ usually 3 to 8 days ▪ up to 3 to 4 weeks	▪ Nasopharyngeal swab (virus testing)	**Droplet/Contact Precautions** ▪ hand hygiene ▪ gloves ▪ gown ▪ protective eyewear ▪ mask

References: Baker, C., Long, S., & McMillan, J. (Eds.). (2012). *Red Book: Report of the Committee on Infectious Diseases, 29th edition.* Elk Grove Village, IL: American Academy of Pediatrics.
Heymann, D. (Ed.). (2015) *Control of Communicable Diseases Manual, 20th edition.* Washington, DC: American Public Health Association
Ontario Public Health Standards: Disease-Specific Chapters. http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/infdispro.aspx
http://www.publichealthontario.ca/en/ServicesAndTools/LaboratoryServices/pages/index.aspx
Ontario Ministry of Health and Long-Term Care. (2014) *A Guide to the Control of Respiratory Infection Outbreaks in Long-Term Care Homes.* Toronto, ON: Queen's Park Printer for Ontario

Common Bacteria that Cause Respiratory Outbreaks

ORGANISM	SYMPTOMS	MODE OF TRANSMISSION	INCUBATION	PERIOD OF COMMUNICABILITY	DIAGNOSIS	PRECAUTIONS AND PPE
Legionella spp. (Legionnaires' Disease and Pontiac Fever)	▪ Fever, headache, myalgia, malaise, anorexia, non-productive and/or productive cough, abdominal pain, diarrhea ▪ Progresses to pneumonia and other multi-system involvement (Legionnaires' only)	▪ Evidence supports airborne transmission; other modes are possible, including aspiration of water	▪ Legionnaires' Disease: 2 to 10 days, most often 5 to 6 days ▪ Pontiac Fever: 5 to 66 hours most often 24 to 48 hours	▪ No person-to-person transmission	▪ Sputum (not optimal but use TB/CD kit) ▪ Urine (TB/CD, sterile container) ▪ Respiratory tract washings; pleural fluid, lung tissue (TB/CD kit) ▪ Blood, clotted or serum (BL-S, Acute and convalescent IgG,IgM - use vacutainer tubes [SST])	**Airborne Precautions** ▪ hand hygiene ▪ N95 Respirator
Pertussis (Whooping Cough)	▪ Initial catarrhal stage with mild upper respiratory symptoms and mild cough for 1 to 2 weeks ▪ Paroxysmal stage with violent cough and high pitched inspiratory wheeze and vomiting can last 1 to 2 months ▪ Convalescent stage where symptoms lessen and disappear may take weeks to months	▪ Direct person-to-person by droplet/ contact through coughing/sneezing or secretions on hands ▪ Indirect contact by exposure to contaminated respiratory secretions on articles/environmental surfaces	▪ Average 9 to 10 days (range 6 to 20 days)	▪ High in the early catarrhal stage and at beginning of paroxysmal cough stage(first 2 weeks) ▪ Communicability decreases and becomes negligible in about 3 weeks, despite cough ▪ Persons are no longer contagious after 5 days of effective treatment	▪ Bordetella Pertussis Kit (nasopharyngeal swab)	**Droplet/Contact Precautions** ▪ hand hygiene ▪ gloves ▪ gown ▪ protective eyewear ▪ mask

References:

Baker, C., Long, S., & McMillan, J. (Eds.). (2012). *Red Book: Report of the Committee on Infectious Diseases, 29th edition.* Elk Grove Village, IL: American Academy of Pediatrics.

Heymann, D. (Ed.). (2015) *Control of Communicable Diseases Manual, 20th edition.* Washington, DC: American Public Health Association

Ontario Public Health Standards: Disease-Specific Chapters. http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/infdispro.aspx

http://www.publichealthontario.ca/en/ServicesAndTools/LaboratoryServices/Pages/Index.aspx

Ontario Ministry of Health and Long-Term Care. (2014) *A Guide to the Control of Respiratory Infection Outbreaks in Long-Term Care Homes.* Toronto, ON: Queen's Park Printer for Ontario

IS IT A COLD OR INFLUENZA?

COLD	SYMPTOM	INFLUENZA
rare	**fever**	usual high fever (102°F/39°C to 104°F/40°C) – sudden onset, lasts 3-4 days
rare	**headache**	usual – can be severe
sometimes, mild	**general aches and pains**	usual – often severe
sometimes, mild	**fatigue and weakness**	usual, severe, may last 2-3 weeks or more
unusual	**extreme fatigue**	usual early onset – can be severe
common	**runny, stuffy nose**	common
common	**sneezing**	sometimes
common	**sore throat**	common
sometimes, mild to moderate	**chest discomfort, coughing**	usual – can be severe
can lead to sinus congestion or earache	**complications**	can lead to pneumonia and respiratory failure; can worsen a current chronic condition; can be life-threatening

PREVENTION

- wash hands frequently
- cough/sneeze into your sleeve

- **annual vaccination**
- wash hands frequently
- cough/sneeze into your sleeve

Canadian Coalition for Immunization Awareness & Promotion (CCIAP)

FOR MORE INFORMATION, VISIT **IMMUNIZE.CA**

What is Influenza?

Influenza, also known as the "flu," is a respiratory infection that affects the nose, throat, bronchi and lungs. Influenza is transmitted from person to person through droplets when a person coughs, sneezes or talks. It can also be transmitted through contaminated objects handled by individuals who then touch their mouths or eyes before washing their hands. A person who is infected with influenza may have an abrupt onset of body aches, headache, fatigue, malaise, sore throat, dry cough and fever.

People of all ages are susceptible to influenza. The populations at greatest risk for hospitalization are children under age five, adults older than age 65, and immunocompromised individuals.

Residents, employees, and/or visitors can introduce the influenza virus into long-term care or retirement home settings. Once introduced, the virus can spread quickly throughout the home.

Why is the influenza virus different from other viruses?

The influenza virus changes almost every year. It can mutate (or change) in two different ways. The first is referred to as antigenic drift in which minor changes occur in the hemagglutinin (HA) or neuraminidase (NA) surface proteins. This results in the varying strains of influenza seen in yearly outbreaks. Partial immunity may result from previously acquired antibodies. The second is referred to as antigenic shift in which complete changes occur in the HA and/or NA surface proteins resulting in an entirely "new" virus. Antigenic shift results in new pandemic strains and occurs only with the influenza A virus.

Promotion of Influenza Immunization

Haliburton, Kawartha,
Pine Ridge District
Health Unit

The Duty of Care

"Influenza vaccination provides benefits to health care workers (HCWs) and to the patients they care for. NACI considers the provision of influenza vaccination to be an essential component of the standard of care for all HCWs for the protection of their patients. This includes any person, paid or unpaid, who provides services, works, volunteers or trains in a health care setting.

Transmission of influenza between infected HCWs and their vulnerable patients results in significant morbidity and mortality. Randomized controlled trials conducted in geriatric long-term care settings have demonstrated that vaccination of HCWs is associated with substantial decreases in morbidity and mortality in the residents. Therefore, HCWs should consider it their responsibility to provide the highest standard of care, which includes annual influenza vaccination. In the absence of contraindications, refusal of HCWs to be immunized against influenza implies failure in their duty of care to patients."

Source: Public Health Agency of Canada. National Advisory Committee on Seasonal Influenza Vaccine. (2014). Statement on seasonal influenza vaccine for 2014-2015, pg. 51 Retrieved from:http://www.phac-aspc.gc.ca/naci-ccni/assets/pdf/flu-grippe-eng.pdf

Promoting Staff Influenza Immunization

July - August

CDC Nurse:

- Meet with the home's infection control designate to discuss plans and decide which actions his/her home will adopt.
- Encourage home to develop a mandatory influenza immunization policy for staff.

Infection Control Designate or person responsible for home's influenza immunization program:

- Make sure the home has a medical directive for giving influenza immunization to staff.
- Make sure home has an influenza immunization policy pertaining to staff.
- Hold a meeting with management to secure support. Each department head should take an active role in the encouragement of employee influenza immunization. If support is agreed upon, inform the management group that, on a weekly basis after the first flu clinic, the infection control designate will review the list of employees who have not been immunized and refer those names to their supervisors for follow-up reminders.

September

- Recommend influenza education session (done by home's infection control designate or HKPR CDC nurse). At this session, remind staff of the home's influenza immunization policy and show them the manual *Keys to Successful Management of Outbreaks in Long-Term Care and Retirement Home Settings.*
- If home has a newsletter, print an article promoting influenza immunization and dispelling myths.
- Second pay period - place "Duty of Care" pay cheque insert in every employee's pay envelope (See Valuable Resource Section).
- Contact an HKPR CDC Nurse about the availability of free influenza promotional items.
- Post promotional posters in staff area.

October

- Have an updated list of all staff that can be crossed off as influenza immunization is given or when proof of immunization given elsewhere is provided.
- If staff refuse to be immunized have them sign a statement indicating that they have declined to be immunized with influenza vaccine.
- First pay period - place 'Attention All Staff!' pay cheque insert in every employee's pay envelope (See Valuable Resource Section).
- Post poster containing date and location of home's influenza immunization clinics on staff bulletin boards.
- Second pay period - place 'Flu Clinics are Here!' pay cheque insert in every employee's pay envelope (See Valuable Resource section).
- Offer and internally advertise incentives or prizes for those who are immunized (e.g. cafeteria coupons, gift certificates, free parking space for a month/year).
- Create departmental competition. Reward winners with a newsletter article and prizes.

- Consider special incentives for employees who typically resist immunization or for those who are getting influenza immunization for the first time.
- Hold first staff influenza immunization clinic as soon as vaccine is available. (Health care workers have said that clinic hours are not convenient.) Homes can consider the following:
  - Consider using rolling influenza immunization carts that can be taken to each floor, department, cafeteria, etc.
  - Make immunization available during all shifts to all departments.
  - Consider making one nurse on every floor responsible for giving staff influenza immunization or one nurse could work a variety of shifts and visit every floor and department. A record of those immunized should be submitted to infection control designate.
- Consider making first staff clinic a 'kick-off' event. Draw for prizes. Free coffee and muffins.
- On a weekly basis after the first influenza clinic, the infection control designate will review the list of employees who have not been immunized and refer those names to their supervisors for follow-up reminders.

November

- Continue to post dates of staff influenza immunization clinics and/or visit staff with rolling influenza immunization carts.
- Monitor immunization rates. Troubleshoot any problems and brainstorm with department heads for ways to reach staff that are not yet immunized.
- For staff not immunized, place 'Duty of Care' pay cheque insert in their next pay envelope.
- Report staff influenza immunization rates to the Ontario Ministry of Health via the HKPR District Health Unit by the designated date.
- Continue to promote and offer influenza immunization even after this date.
- Continue to track staff influenza immunization, as in the event of an outbreak this information is required.
- In the event of an outbreak, consider placing 'Stay Home!' pay cheque insert in every employee's pay envelope (See Valuable Resource section).

During a confirmed influenza outbreak, only immunized staff can work in the outbreak home. Non-immunized staff may return to work at the affected home if they are receiving appropriate anti-viral prophylaxis as soon as they have started to take the medication.

InFLUencing Others

What you can do to promote the influenza immunization to families and friends of residents:

- Encourage them to be immunized by their health care provider.
- Encourage them to visit a community influenza clinic.

Getting the message out:

- Put a message on your home's answering machine encouraging visitors and family members to get their influenza immunization.
- Post posters, fact sheets and pamphlets in visitor areas encouraging influenza immunization.
- Have messages on the visitor sign-in sheet encouraging immunization.
- Send a letter to frequent visitors.

Respiratory Outbreak Readiness and Surveillance

Haliburton, Kawartha,
Pine Ridge District
Health Unit

Respiratory Outbreak Readiness Checklist

- ❑ Consider Medical Directive to immunize staff and volunteers/others.
- ❑ Have in place doctor's orders for flu/pneumococcal immunization for residents.
- ❑ Consents signed for flu immunization (and pneumococcal immunization if required).
- ❑ Medical directive for antiviral therapy and a plan in place to quickly obtain antivirals for residents.
- ❑ Ensure there is a medical directive to collect NP swabs.
- ❑ Consents signed by all residents or their substitute decision maker for treatment with antiviral therapy.
- ❑ Blood work done on all residents, with known impaired renal function/creatinine issues, for treatment with antiviral therapy.
- ❑ Signs prepared for Entrances/Exits to facility to notify of outbreak.
- ❑ Signs prepared for doors of residents' rooms that are isolated.
- ❑ Ensure PPE stock (gloves, gown, masks, etc.) on hand.
- ❑ NP swabs on hand (check expiry date); these are provided by the Health Unit.
- ❑ An ice pack and cooler, hard- or soft-sided and clearly marked with biohazard signage, available and dedicated to specimen transport (i.e. a different cooler is required for vaccine pick-up)
- ❑ Outbreak Manual easily accessible.
- ❑ Prepare to collect influenza immunization rates for residents and staff.
- ❑ Prepare to collect pneumococcal immunization rates for residents.
- ❑ Ensure plenty of alcohol based hand rub on hand.
- ❑ Appropriate wipes for enhanced environmental cleaning.
- ❑ Education sessions planned for staff and visitors on flu vaccine and PPE.

Respiratory Surveillance in Long-Term Care and Retirement Home Settings

Continuous, home-wide surveillance is required to establish baseline rates of infection throughout the year. Potential outbreaks are recognized when infection rates increase above the baseline.

Targeted surveillance for respiratory symptoms should be enhanced during influenza season (October to May) and when influenza activity has been reported in the local community.

Surveillance for influenza-like illness (ILI) among staff should be conducted during the influenza season and throughout the year. All staff should be aware of early signs and symptoms of respiratory infection. Staff should report any respiratory infection to their supervisor or Infection Control Designate.

Passive surveillance of residents with respiratory symptoms should be noted on a daily surveillance form.

- This form should include resident identification and location, date of onset, a checklist of relevant signs and symptoms, including fever, diagnostic tests and results when available.
- It is important to note any symptoms that are new, chronic symptoms that have changed, or sudden onset of symptoms.
- For elderly people, typical signs and symptoms may be modified by: age, immune status, medications and underlying medical conditions.

Reporting to the Health Unit

Whenever there are two cases of acute respiratory tract illness in one location within 48 hours an outbreak should be suspected, control measures should be initiated, and tests should be done to determine the causative agent.

Please notify the Haliburton, Kawartha, Pine Ridge District Health Unit.

Effective Respiratory Outbreak Management

Haliburton, Kawartha,
Pine Ridge District
Health Unit

What is a Respiratory Outbreak?

Criteria for Suspect Respiratory Outbreak (non-influenza):

- Two cases of acute respiratory tract illness occurring within 48 hours in a geographic area (e.g. unit, floor);
  OR
- More than one unit having a case of acute respiratory illness within 48 hours.

Homes are required to contact their local Public Health Unit whenever a respiratory outbreak is suspected.

Criteria for Outbreak:

- Any further progression (additional cases or laboratory confirmations) of the "suspect outbreak" will be considered an outbreak.

- An outbreak can be declared at any time by the Medical Officer of Health, or designate, or the Medical Director for the LTC or Retirement Home.

A Guide to the Control of Respiratory Disease Outbreaks in Long-Term Care Homes.

Case definition

- Each outbreak requires its own case definition. A CDC nurse from the HKPR District Health Unit can assist you in developing one.
- A sample case definition is as follows: "Any resident or staff member of [*insert name of home*] with two or more of the following symptoms [*insert list of symptoms*], with onset date of [*insert date*] or later."

Line list

- Begin a line list from routinely collected surveillance data (see sample line list).
- Only cases that meet the case definition should be included on the line list (i.e. a line list is NOT your daily surveillance form).
- A separate line list should be created for staff and residents or if there are two suspected outbreaks occurring concurrently (e.g. an enteric and a respiratory outbreak).

Facility Name: Cartoon Villa

Outbreak #: 2235-2015-01

RESIDENT - Respiratory Outbreak Line Listing Form

Case Identification				Symptoms																Complications		Treatment/Prophylaxis			Dx	
Name (last name, first name)	Room #	Sex (M/F)	Date of Birth (yy-mm-dd)	Symptom Onset Date (yy-mm-dd)	Symptom End Date (yy-mm-dd)	Date Client Removed from Isolation (yy-mm-dd)	Abnormal Temperature (✓)	Headache (✓)	Tiredness (✓)	Lethargy (✓)	Runny Nose or Sneezing (✓)	Stuffy Nose/Nasal Congestion (✓)	Sore Throat (✓)	Muscle or Joint Pain (✓)	Cough – New or Worsening (✓)	Hoarseness /Difficulty Swallowing/ Sore Throat (✓)	Chills (✓)	Loss of Appetite (✓)	Other(✓)	Name of Hospital Admission – Discharge Dates (yy-mm-dd)	Cause of Death Date of Death yy-mm-dd)	Vaccine Given (specify) Date Given (yy-mm-dd)	Antiviral Start Date (yy-mm-dd)	Antiviral Side Effects (✓) Date, if discontinued due to side effects (yy-mm-dd)	X-ray Confirmed Pneumonia (✓)	Lab Confirmed Influenza (✓)
Bear, Yogi	2A	M	34-03-30	15-11-01	15-11-06	15-11-06	✓	✓				✓	✓									Flu 15-10-15	15-11-02	☐		✓
Goose, Lucy	2B	F	44-02-13	15-11-01	15-11-06	15-11-06	✓					✓	✓	✓			✓			ZGH 15-11-02		Refused	15-11-02	☑ 15-11-03	✓	
Le Pew, Pepe	3A	M	50-06-13	15-11-02			✓							✓			✓				Stroke 15-11-05	Flu 15-10-15 Pneu 14-10-07	15-11-02	☐		
Duck, Daffy	2F	M	37-12-25	15-11-02			✓	✓					✓	✓								Flu 15-10-15 Pneu 14-10-07	15-11-02	☑		
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Please fax updated line listing to HKPR Health Unit by 10 a.m. DAILY.

CD-216
O:2007 – August
R: 2015 - May

HALIBURTON, KAWARTHA, PINE RIDGE DISTRICT HEALTH UNIT

Facility Name: ____________________ Outbreak #: ______________

RESIDENT - Respiratory Outbreak Line Listing Form

Case Identification				Symptoms																Complications		Treatment/Prophylaxis			Dx	
Name (last name, first name)	Room #	Sex (M/F)	Date of Birth (yy-mm-dd)	Symptom Onset Date (yy-mm-dd)	Symptom End Date (yy-mm-dd)	Date Client Removed from Isolation (yy-mm-dd)	Abnormal Temperature (✓)	Headache (✓)	Tiredness (✓)	Lethargy (✓)	Runny Nose or Sneezing (✓)	Stuffy Nose/Nasal Congestion (✓)	Sore Throat (✓)	Muscle or Joint Pain (✓)	Cough – New or Worsening (✓)	Hoarseness /Difficulty Swallowing/ Sore Throat (✓)	Chills (✓)	Loss of Appetite (✓)	Other(✓)	Name of Hospital Admission – Discharge Dates (yy-mm-dd)	Cause of Death Date of Death yy-mm-dd)	Vaccine Given (specify) Date Given (yy-mm-dd)	Antiviral Start Date (yy-mm-dd)	Antiviral Side Effects (✓) Date, if discontinued due to side effects (yy-mm-dd)	X-ray Confirmed Pneumonia (✓)	Lab Confirmed Influenza (✓)
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Please fax updated line listing to HKPR Health Unit by 10 a.m. DAILY.

CD-216
O: 2007-August
R: 2011-April
R: 2015-May

HALIBURTON, KAWARTHA, PINE RIDGE DISTRICT HEALTH UNIT

Facility Name: ___________________________ Outbreak #: ____________________

STAFF - Respiratory Outbreak Line Listing Form

Case Identification			**Symptoms**																**Complications**		**Treatment/Prophylaxis**			**Dx**	
Staff Initials	Work Assignment (ward, unit, floor, etc.)	Sex (M/F)	Symptom Onset Date (yy-mm-dd)	Last Day of Work of Ill Staff Member (yy-mm-dd)	Symptom End Date (yy-mm-dd)	Abnormal Temperature (✓)	Headache (✓)	Tiredness (✓)	Lethargy (✓)	Runny Nose or Sneezing (✓)	Stuffy Nose/Nasal Congestion (✓)	Sore Throat (✓)	Muscle or Joint Pain (✓)	Cough – New or Worsening (✓)	Hoarseness /Difficulty Swallowing/ Sore Throat (✓)	Chills (✓)	Loss of Appetite (✓)	Other(✓)	Name of Hospital Admission – Discharge Dates (yy-mm-dd)	Cause of Death Date of Death yy-mm-dd)	Vaccine Given (specify) Date Given (yy-mm-dd)	Antiviral Start Date (yy-mm-dd)	Antiviral Side Effects (✓) Date, if discontinued due to side effects (yy-mm-dd)	X-ray Confirmed Pneumonia (✓)	Lab Confirmed Influenza (✓)
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Please fax updated line listing to HKPR Health Unit by 10 a.m. DAILY.

CD-216(a)
O: 2015-May

HALIBURTON, KAWARTHA, PINE RIDGE DISTRICT HEALTH UNIT

Respiratory Outbreak Checklist

- ❑ Assess for suspect or confirmed outbreak.
- ❑ Notify home's medical advisor.
- ❑ Implement appropriate infection control precautions (Refer to Preventing Transmission of Infection in General Information section of this manual).
- ❑ Notify Communicable Disease Control Nurse at HKPR District Health Unit to:
  - ❍ determine if an outbreak exists;
  - ❍ obtain an outbreak number;
  - ❍ determine case definition;
  - ❍ request specimen collection kits as needed (check expiry dates of specimen collection kits);
  - ❍ plan for specimen collection and transportation to Public Health Lab;
  - ❍ provide total number of:
    - ❍ residents and staff in home
    - ❍ residents and staff who are ill
    - ❍ residents and staff who have had influenza immunization
    - ❍ residents who have had pneumococcal immunization.
- ❑ Start ongoing surveillance (line listing).
- ❑ Ensure nasopharyngeal (NP) swabs are collected on newly ill residents/staff.
- ❑ Ensure that specimen is properly refrigerated after collection and during transport.
- ❑ Facilitate transportation of specimens to Public Health Lab.
- ❑ If possible, assemble outbreak management team.
- ❑ Ensure ALL staff in home are aware of outbreak/suspect outbreak.
- ❑ Post appropriate signage.
- ❑ During confirmed influenza outbreaks, check immunization status of all staff.
- ❑ Send ill and susceptible staff home.
- ❑ Stop new admissions/transfers to other homes.
- ❑ Have dedicated equipment for ill residents.
- ❑ Advise visitors, volunteers and students of outbreak status.
- ❑ Cancel group activities/meetings (as appropriate).
- ❑ Institute enhanced environmental cleaning and more frequent hand hygiene.
- ❑ **Fax updated line listing to Health Unit CDC nurse by 10 am DAILY.**

Respiratory Outbreak Control Measures

Please refer back to the General Information section of this manual to "Preventing Transmission of Infection" for information on hand hygiene, PPE, administrative controls, and environmental controls that help minimize the spread of illness during outbreaks.

Control Measures for Residents

Isolation of Symptomatic Residents

- Cases should be isolated in their rooms until at least five days after onset of symptoms or until symptoms have completely resolved (whichever is shorter).
- Residents who cannot be isolated should receive supervision and/or assistance with frequent hand hygiene and wear a surgical mask.
- Room isolation should be used but if this is not feasible, unit isolation could be applied.
- Movement of residents between affected and non-affected units should be discouraged until the outbreak is declared over.

Admissions, Re-admissions and Transfers

- New admissions to the home are not recommended while the outbreak is ongoing; admissions and return from absence decisions should be made in consultation with the Health Unit.*
- Consultation with the Health Unit should be made prior to allowing admissions to non-affected units.
- Residents admitted from the outbreak home to hospital who met the case definition can be re-admitted to the home at any time, provided that appropriate care can be given (refer to the *Transfers between Long-Term Care Homes (LTCH) and Hospitals during* Outbreaks algorithm).
- Residents admitted to hospital prior to the outbreak or who have not been line listed in the outbreak may not be readmitted to the home while the outbreak is ongoing (refer to the *Transfers between Long-Term Care Homes (LTCH) and Hospitals during* Outbreaks algorithm).*
- Residents can be transferred from the outbreak home to a hospital with prior notification to the hospital's Infection Control Professional or designate.
- Resident transfers from anywhere in the home to another long-term care home is not permitted during an outbreak.*

** Exceptions to these recommendations may be made on an individual basis in consultation with the Health Unit.*

Medical Appointments, Communal Activities, and Meetings

- All non-urgent medical and other appointments should be rescheduled until after the outbreak is over.
- As much as possible, restrict activities to their respective units to control the spread of infection.
- Reschedule visits by outside groups (entertainers, volunteer organizations and community groups).
- Reschedule communal meetings and events on the affected units.

Control Measures for Staff, Students, Private Pay Caregivers and Volunteers

Exclusion of Staff, Students, Private Pay Caregivers and Volunteers

- Staff, students, private pay caregivers and volunteers should be excluded for at least five days after onset of symptoms or until symptoms have resolved (whichever is shorter).
- Staff, students, private pay caregivers and volunteers with respiratory symptoms should not attend work; staff and private pay caregivers are required to self-report their illness to the facility.

Exclusion of Non-immunized Staff, Students, Private Pay Caregivers and Volunteers During A Confirmed Influenza Outbreak

- During a confirmed influenza outbreak only immunized staff, students, private pay caregivers and volunteers can be working in the affected home.
- Non-immunized staff, students, private pay caregivers and volunteers may return to work if they are taking appropriate antiviral medication.
- Staff, students, private pay caregivers and volunteers with respiratory symptoms should be excluded from work for five days from symptom onset.

Working at Other Facilities

- During non-influenza outbreaks, when the infectious agent is unknown, staff, students, and volunteers should not work at any other health care facilities or in home care settings.
- During non-influenza outbreaks, when the infectious agent is known, staff, students and volunteers should not work at any other health care facilities or in home care settings until one incubation period has passed.
- During confirmed influenza outbreaks, staff, students, and volunteers immunized with influenza vaccine have no restrictions on their ability to work at other health care facilities, including home care settings, unless directed otherwise by the Health Unit.
- During confirmed influenza outbreaks, non-immunized staff, students, and volunteers not taking appropriate antiviral prophylaxis, who choose to work at another health care facility, including home care settings, must wait one incubation period (three days) after working the last shift at the outbreak home.
- Staff, students, and volunteers working at other health care facilities must inform the employer at the non-outbreak health care facility that they have been working at a facility where there is an outbreak.

Cohort Staffing

- During non-influenza outbreaks, assign some staff to care only for ill residents and others to care only for well residents.
- During non-influenza outbreaks minimize movement of staff, students, and volunteers between affected and non-affected units.
- Unless directed otherwise by the Health Unit, no cohorting of staff is required during confirmed influenza outbreaks, as staff are either immunized or on appropriate antiviral prophylaxis.

Control Measures for Visitors

- It is not permitted that homes be closed to visitors during outbreaks unless ordered by the MOH.
- Signs should be posted at all entrances of the home indicating that there is an outbreak. Visitors should be warned that there is a potential risk that they may acquire illness while in the home.
- Encourage visitors to reschedule visits whenever possible.
- Visitors with respiratory symptoms should postpone visits until at least five days after onset of symptoms or when symptoms have resolved.
- During an outbreak, residents should be visited in their own room, avoiding communal areas.
- Visitors should visit only one resident while at the home.
- Staff should assist visitors with PPE, as required, while visiting an ill resident.
- Visitors should be encouraged to wash their hands when entering the home and prior to leaving the resident's room.

Environmental Cleaning

- Ensure there is enhanced cleaning and disinfection of environmental surfaces frequently touched by residents/staff (i.e. hand rails, door knobs, bathroom units, and furniture).

Sample Transfer and Return Algorithm for use during Outbreaks

Communication for Transfer and Return between Long-Term Care Homes and Hospitals

Ontario

LTCH - Long -Term Care Home
PHU - Public Health Unit

After consultation with PHU, outbreak declared within entire LTCH or within a LTCH unit

Resident transfer to hospital is required

LTCH prepares transfer form with outbreak and line list status

Resident transferred* to hospital with transfer form

Inpatient Treatment

Hospital determines resident is ready for transfer back to LTCH

Hospital notifies LTCH of discharge readiness

LTCH determines whether resident is on outbreak line list

YES → Consult with PHU → Transfer* Resident back to LTCH

NO → **Members of the Outbreak Management Team from the LTCH & PHU should discuss the situation and consider all relevant factors including the following:**

- status of the outbreak (attack rate, severity of illness, length of time since last case)
- whether the resident will return to an outbreak affected area of the LTCH
- medical concerns from resident's hospital and LTCH physicians
- whether the resident is protected from the outbreak pathogen through appropriate infection prevention and control measures (for influenza this may include vaccine and/or antivirals)
- resident/substitute decision-maker has been given information about the return to LTCH

This list is not exhaustive and is intended to promote dialogue that will result in the most appropriate course of action under difficult circumstances.

Continued Reassessment

YES → Transfer* resident back to LTCH

NO → Resident stays in hospital

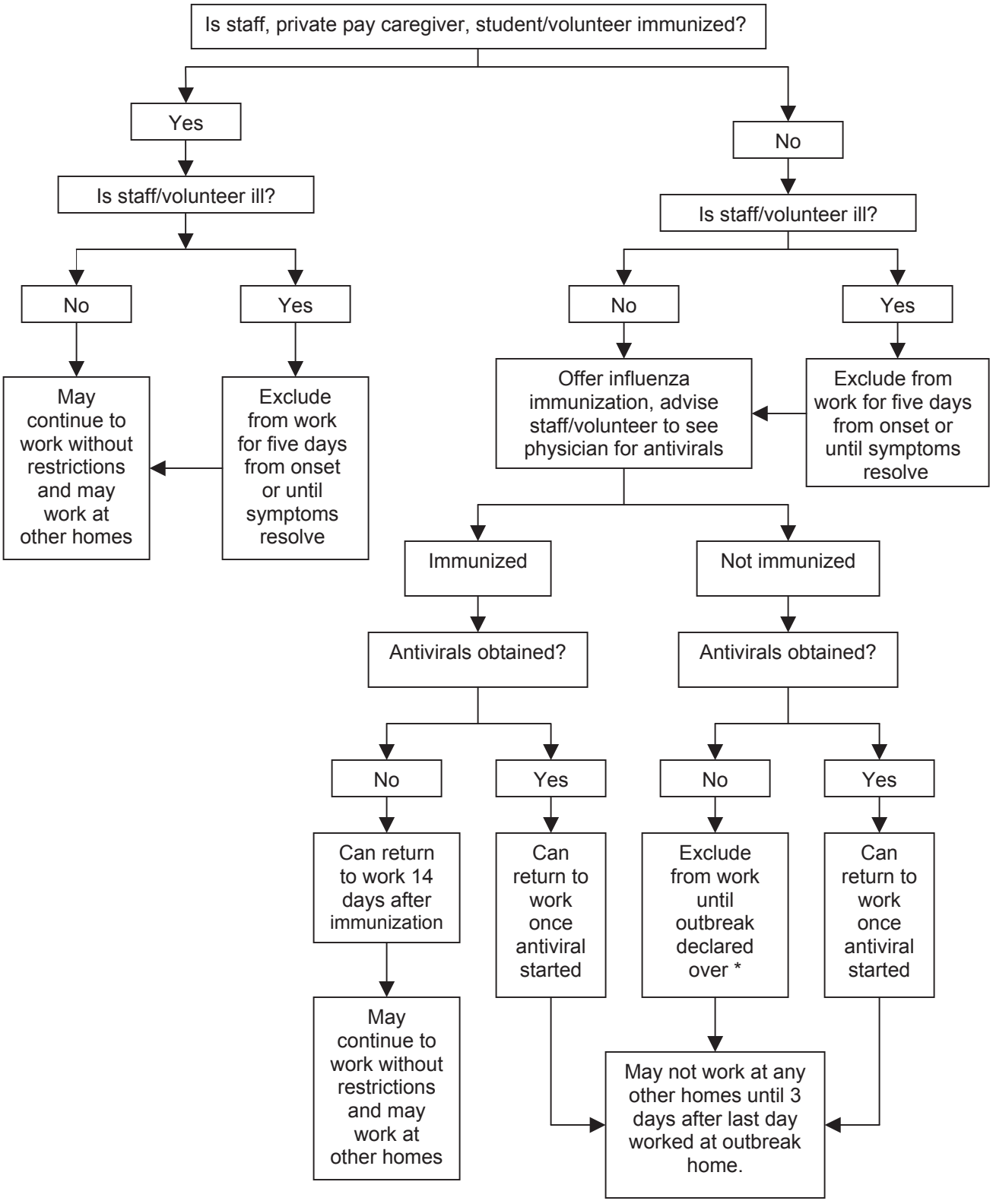
*Patient Transfer Authorization Centre authorization may be required

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

References:

1. Ministry of Health and Long-Term Care. *A Guide to the Control of Respiratory Infection Outbreaks in Long-Term Care Homes,* 2004
2. Ministry of Health and Long-Term Care, *Control of Gastroenteritis Outbreaks in Long-Term Cares,* 2011.

Can I Work During a Confirmed Influenza Outbreak?



**Supported by Facility Policy and Section 22 of the Health Protection and Promotion Act*

Health Unit's Role During an Outbreak

During the course of a respiratory outbreak in a Long-Term Care or Retirement Home Settings, the HKPR District Health Unit's Communicable Disease Control Department will:

- Provide an outbreak number for specimen collection.
- Assist the home in developing a case definition.
- Inform Public Health Lab of outbreak.
- Report outbreak to the Ministry of Health and Long-Term Care.
- Notify other community agencies (LTCHs, retirement homes, hospitals, EMS, etc.) when the outbreak is declared and when the outbreak is declared over.
- Assist the home with case finding.
- Assist with education of home staff (where appropriate).
- Facilitate specimen transportation to the lab.
- Communicate lab results to facility.
- Attend outbreak meetings as requested or as required.
- Declare outbreak over.

Outbreak Management Team

The team should assemble and meet as soon as possible at the onset of the outbreak. The chairperson will decide how often the team will meet during the outbreak (daily is ideal). The team will work toward the common goal of resolving the outbreak.

Depending on the size of the institution, this may include:

1. Chairperson of the outbreak team (who is usually the chairperson of the infection control committee)
2. Infection control designate
3. Medical advisor
4. Chief executive officer, administrator, or designate
5. Director of nursing, director of care, or designate
6. Employee health nurse
7. Director of food services
8. Director of environmental services/housekeeping
9. Recreational services supervisor
10. Pharmacist
11. Health Unit representative.

Role of the Outbreak Management Team

- Ensure outbreak control measures are implemented promptly and enforced for the duration of the outbreak.
- Implement the staff exclusion policy and staffing contingency plan.
- For influenza outbreaks, determine if immunization clinics are required for staff.
- Notify staff and outside individuals (e.g. residents' family members) of outbreak situation.
- Prepare a communications plan, including media releases, if necessary.
- Assign responsibility for ongoing monitoring of the outbreak and submission of daily line lists to the Health Unit.
- Hold a debriefing at the conclusion of the outbreak to acknowledge successes and identify areas requiring improvement.

Nasopharyngeal Specimen Collection

A doctor's order is not required, providing your home has a medical directive regarding NP specimen collection.

All staff responsible for NP specimen collection should:
- ✓ Review the Nasopharygneal Swab Method for Respiratory Virus Collection, produced by the Ontario Agency for Health Protection and Promotion
- ✓ Review the home's policy for NP specimen collection each fall.
- ✓ Know where the kits are located.

In your facility, NP Kits are located: _____

Timing of Specimen Collection

- Optimal time to collect a NP specimen is at the peak of viral shedding, 24 to 48 hours after onset of symptoms.
- Collect specimens on newly ill individuals.
- Continue to collect specimens on the newly ill individuals until a causative organism has been identified or as instructed by the Health Unit.
- A maximum of six NP swabs will be processed per outbreak.

To order more kits, call the Health Unit and ask to speak to a CDC nurse.

The NP Specimen Kit

- Always have 12 kits (two six-packs) on hand year round.
- Kits can be stored at room temperature.
- Be sure to use the correct specimen kit.
- Check the expiry date on the outer package and/or transport medium vial (do not use the date on the swab).
- Check that all the components are in the kit:
  - Biohazard bag
  - Public Health Lab (PHL) requisition
  - NP swab
  - Transport medium vial.

Be Prepared!

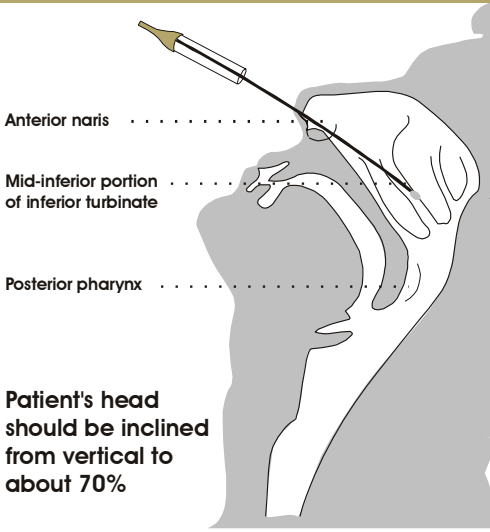
- Before entering the resident's room to collect a NP specimen, ensure that you are wearing the appropriate personal protective equipment and have all of the necessary equipment, including:
  - NP specimen kit
  - Resident /client identification labels, pen
  - Paper towel/small table cover
  - Alcohol based hand rub (ABHR)
  - Small container to hold the transport medium vial (if available)
  - Scissors and alcohol wipes (to clean scissors after use)
  - Paper bag for garbage
  - Insulated cooler bag and ice pack for specimens once collected.

Nasopharyngeal Collection Method

NASOPHARYNGEAL SPECIMEN COLLECTION

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

Nasopharyngeal swab method for Respiratory Virus Collection



Patient's head should be inclined from vertical to about 70%

The laboratory needs high levels of organism to culture successfully for respiratory viruses such as RSV, Influenza A & B or parainfluenza virus.

A properly taken nasopharyngeal swab will yield high levels of organism.

1. Insert flexible nasopharyngeal swab into one nostril.
2. Press the swab tip on the mucosal surface of the mid-inferior turbinate.
3. Rub swab back and forth about 5 times.
4. Leave swab in place for a few seconds to absorb material.
5. Withdraw swab and insert into transport medium.
6. Break swab shaft at score line.

N. B. Rule of thumb to determine when swab is placed properly: insert swab to one-half the distance from the tip of the nose to the tip of the earlobe.

Important Reminders

- Be sure to firmly secure the screw cap on the transport vial.
  - The lab will not process leaking or leaked specimens.
- Complete the label on the transport vial.
- Complete PHL requisition and place it in the outer pouch of the biohazard bag.
- Refer to the Sample PHL requisition on the next page for details on completing the requisition.
  - Ensure the name on the transport medium vial and the requisition match.
- Place the biohazard bag with the specimens in the refrigerator.
- Specimen(s) **MUST** be transported in an insulated bag with an ice pack.
- If outbreak occurs after hours, contact the CDC nurse on pager for assistance with possible transportation of specimens.

Other Considerations

- Although the procedure is not painful, it can be irritating causing the individual to move, sneeze and/or cough.
- A second staff member may be required to assist the resident.

Sample Public Health Lab Requisition

Public Health Ontario / Santé publique Ontario
PARTNERS FOR HEALTH / PARTENAIRES POUR LA SANTÉ

Date received	PHOL No.
yyyy / mm / dd	

General Test Requisition

ALL Sections of this Form MUST be Completed

1 - Submitter

Courier Code

Provide Return Address:

Dr. Lynn Noseworthy, MOH
HKPR District Health Unit
200 Rose Glen Road
Port Hope, ON L1A 3V6
Port Hope Office After hours: 1-888-255-7839

Clinician Initial / Surname and OHIP / CPSO Number

Tel: 905-885-9100 Fax: 905-885-9554

2 - Patient Information

Health No.	Sex	Date of Birth:
123 456 7890	M	yyyy / mm / dd 1919/Apr/20
Medical Record No.		

Patient's Last Name *(per OHIP card)*	First Name *(per OHIP card)*
LE PEW	PEPE

Patient Address
C/O Cartoon Villa LTCH
16 Marshland Road, Port Hope, ON

Postal Code	Patient Phone No.
L1A 3V6	905-878-8887

Submitter Lab No.

Public Health Unit Outbreak No. 2235-2015-01

cc Doctor Information

Name: _____ Tel: _____
Lab/Clinic Name: _____ Fax: _____
CPSO #: _____
Address: _____ Postal Code: _____

Public Health Investigator Information

Name: _____
Health Unit: _____
Tel: _____ Fax: _____

3 - Test(s) Requested *(Please see descriptions on reverse)*

Test: Enter test descriptions below

Respiratory Outbreak Investigation

Hepatitis Serology

Reason for test (Check (✓) only one box):
- ☐ Immune status
- ☐ Acute infection
- ☐ Chronic infection

Indicate specific viruses (Check (✓) all that apply):
- ☐ Hepatitis A
- ☐ Hepatitis B
- ☐ Hepatitis C *(testing only available for acute or chronic infection; no test for determining immunity to HCV is currently available)*

4 - 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

5 - Reason for Test

- ☐ diagnostic ☐ immune status
- ☐ needle stick ☐ follow-up
- ☐ prenatal ☐ chronic condition
- ☐ immunocompromised
- ☐ post-mortem
- ☐ other - *(specify)* _____

Date Collected: 2015/Sept/18

Onset Date: 2015/Sept/17

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 location)* _____

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 F-SD-SCG-1000. Current version of Public Health Laboratory requisitions are available at www.publichealthontario.ca/requisitions

The personal health information is collected under the authority of the Personal Health Information Protection Act, s.36 (1)(c)(iii) for the purpose of clinical laboratory testing. If you have questions about the collection of this personal health information please contact the PHOL Manager of Customer Service at 416-235-6556 or toll free 1-877-604-4567. F-SD-SCG-1000 (08/2013)

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

Use of Antiviral Medications Against Influenza

There are three antiviral medications available in Canada for the treatment and prophylaxis of influenza: Oseltamivir (Tamiflu), Zanamivir (Relenza), and Amantadine. Amantadine is NOT currently recommended for prophylaxis or treatment due to adverse side effects and emergence of amantadine-resistant Influenza A strains.

Clinical decisions regarding the use of medications for influenza treatment and chemoprophylaxis are at the discretion of the attending physician/health care provider. Health care providers are advised to refer to updates on influenza activity and resistance patterns in ongoing surveillance reports disseminated in Public Health Ontario's weekly Ontario Respiratory Virus Bulletin.

Use of antivirals is most effective when started early, so if you are contemplating when to start antivirals during a confirmed influenza outbreak, consider this: *"the sooner, the better."* To expedite the commencement of antiviral treatment, it is recommended that the following measures be in place prior to the start of influenza season:

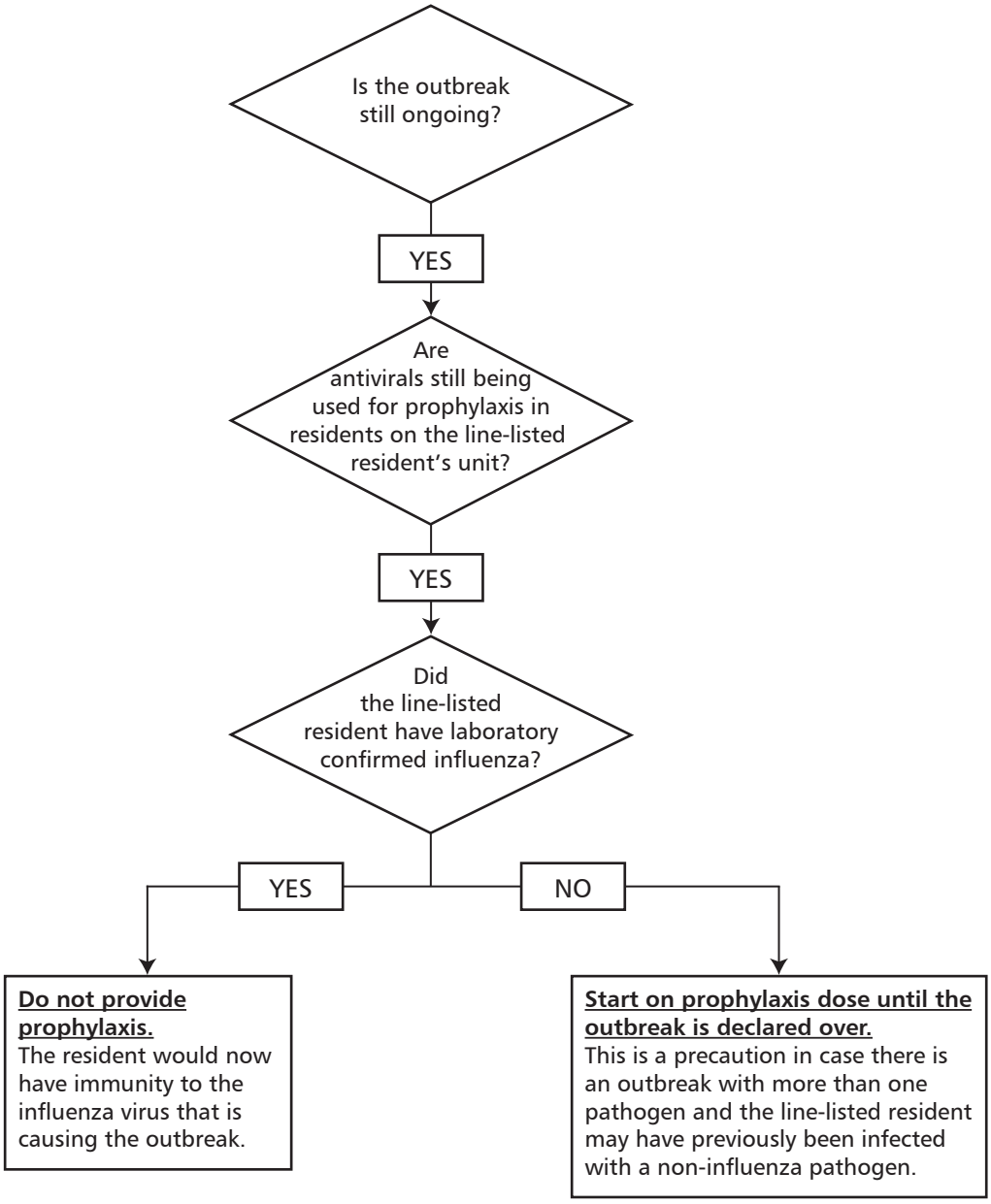
- Consents for antiviral medication use should be obtained.
- Orders for antiviral medication should be obtained from medical staff, or a plan should be in place to obtain orders quickly should an outbreak occur.
- Retirement homes should make arrangements with a single pharmacy to coordinate and obtain antivirals for residents.
- Staff, private pay caregivers, students and volunteers who refuse or cannot receive influenza immunization should speak to their Health Care Providers at the beginning of influenza season, to obtain a prescription for a neuraminidase inhibitor (Tamilflu or Relenza), for use during an outbreak.

Staff, private pay caregivers, students and volunteers should be reminded that during a confirmed influenza outbreak only those who are immunized can work in the home. Non-immunized staff, private pay caregivers, students and volunteers may return to work if they are receiving appropriate antiviral prophylaxis. Refusal to take antiviral prophylaxis will result in exclusion from work until the outbreak is declared over, unless the individual receives influenza vaccine and waits the required 14 days to build immunity to influenza before returning to work.

Treatment

- Antiviral treatment should be started for ill residents who meet the outbreak case definition as soon as possible, preferably within 48 hours of symptom onset.
- Individuals who meet case definition, but are not lab-confirmed cases, should be placed on a treatment regime, followed by a prophylaxis regime for the duration of the outbreak. Individuals who are lab-confirmed cases should receive a full treatment regime only.

Antiviral Prophylaxis Recommendations in Influenza Outbreaks for Line-listed Cases After Completion of Treatment with Antiviral Medication



Prophylaxis

- Antiviral medication for prevention of influenza should be offered to all residents in the outbreak-affected area who are not already ill.
- Antiviral medication for prevention of influenza should be offered to all asymptomatic staff and private pay caregivers who are unimmunized against influenza.
- Prophylaxis should continue until the outbreak is declared over.
- If residents, staff or private pay caregivers develop symptoms and meet case definition, the regime should be switched to treatment dose and duration; once the treatment regime is completed, the individual should return to taking the prophylactic regime for the duration of the outbreak.

Three Keys to Successful Management of Enteric Outbreaks in Long-Term Care and Retirement Home Settings

Haliburton, Kawartha, Pine Ridge District Health Unit

Goal

Our goal is to reduce the morbidity and mortality associated with enteric outbreaks in Long-Term Care and Retirement Home settings. This can be achieved through effective prevention, preparation and management techniques.

Our Manual:

"THREE KEYS TO SUCCESSFUL MANAGEMENT OF ENTERIC OUTBREAKS IN LONG-TERM CARE AND RETIREMENT HOME SETTINGS"

This manual has been divided into three chapters ("keys") that will help your staff successfully manage enteric outbreaks in your Long-Term Care or Retirement Home setting.

The first key is **EDUCATION** and includes food sampling guidelines and valuable background information on enteric diseases that commonly cause outbreaks.

The second key is **ENTERIC OUTBREAK READINESS AND SURVEILLANCE** and provides insight into the value of ongoing surveillance among both residents and staff and being prepared for enteric outbreaks.

The third key is **EFFECTIVE ENTERIC OUTBREAK MANAGEMENT**. This chapter provides guidance on how to identify an outbreak, how to manage staff and residents during an outbreak, and proper specimen collection techniques. It also explains how the HKPR District Health Unit staff are able to provide assistance during enteric outbreaks.

Education on Enteric Infections

Haliburton, Kawartha,
Pine Ridge District
Health Unit

Food Sampling Guidelines

These guidelines are designed to help provide a standardized method of collecting samples of hazardous and high-risk foods from meals prepared and/or served in Long-Term Care and Retirement Homes. These samples are invaluable should a food-borne disease outbreak occur in your home.

Hazardous and High-Risk Foods are defined as "any food that is capable of supporting the growth of pathogenic (harmful) organisms when they are held in the danger zone of 4°C to 60°C for a minimum of two hours." Such foods typically include: dairy products, eggs, meat, poultry and fish/shellfish. Meal-specific examples are outlined below:

- **Breakfast:** scrambled eggs, or eggs that require additional handling and processing, yogurt, and bacon or sausage.
- **Lunch/Supper:** all entrees, sandwich fillings, all sauces/gravies, soup, anything that contains mayonnaise (e.g. potato or macaroni salads), vegetables combined with cream sauces, and salad dressings.
- **Dessert:** any product that contains dairy including milk, cream and/or whipped cream topping.

When to Sample

Samples of all **potentially hazardous and high-risk foods** should be taken at **every meal** and **kept refrigerated** (below 4°C) **or frozen** (below - 18°C) for at least **five days**. Foods that are further processed should also be sampled (e.g. pureed roast beef). Directions for food sampling are as follows:

- **Sample Size**
  - A minimum of 200 grams or millilitres should be collected (if available).

- **Container**
  - Containers for sampling must be sanitized food containers or self-closing plastic bags.

- **Labelling**
  - Containers should be clearly labelled to identify the contents (e.g. pureed roast beef), date of the meal (e.g. April 20, 2011) and time of meal (e.g. 5 pm).

Note: Only the Health Unit can submit food samples to the Public Health Lab for testing. During a suspected food-borne outbreak, a Public Health Inspector (PHI) from HKPR District Health Unit will come to your home and collect the necessary samples for testing.

Enteric Infection Education

Outbreaks caused by viruses are most likely passed from person-to-person, whereas those caused by bacteria and parasites are more likely to arise from ingesting contaminated food and/or water and are easier to control.

Norovirus

Norvirus is the most common cause of viral enteric outbreaks and can cause illness in over 50% of staff and residents. Extremely high viral loads are found in vomit and feces. The virus can survive for days outside of a host and only a low dose of particles are required to cause illness; therefore, illness caused by Norovirus spreads easily from person-to-person.

Viruses that Commonly Cause Enteric Outbreaks

ORGANISM	SYMPTOMS	MODE OF TRANSMISSION	INCUBATION	PERIOD OF COMMUNICABILITY	DIAGNOSIS	PRECAUTIONS & PPE
Adenovirus (Types 40 & 41)	▪ Nausea, vomiting, watery diarrhea, abdominal pain and fever ▪ Symptoms usually last 1 to 7 days	▪ Fecal-oral route through direct and indirect contact.	▪ 3 to 10 days.	▪ Most contagious during first few days of illness	▪ Stool specimen	**Contact Precautions** ▪ hand hygiene ▪ gloves ▪ gown
Norovirus	▪ Sudden onset of watery, non-bloody diarrhea, vomiting, abdominal cramps, and nausea. ▪ Headache, low-grade fever, chills and malaise may also be present. ▪ Symptoms usually last 24 to 72 hours.	▪ Fecal-oral route through direct and indirect contact. ▪ May also be spread through aerosolized vomitus.	▪ 12 to 48 hours.	▪ From onset of symptoms until 48 to 72 hours after symptoms resolve. ▪ Can be as long as 3 weeks after symptoms resolve.	▪ Stool specimen	**Droplet/Contact Precautions** ▪ hand hygiene ▪ gloves ▪ gown ▪ protective eyewear ▪ mask
Rotavirus	▪ Vomiting, fever, and severe watery diarrhea. ▪ Symptoms usually last 3 to 9 days.	▪ Fecal-oral route through direct and indirect contact. ▪ May also be spread through aerosolized vomitus.	▪ 24 to 72 hours.	▪ Before symptoms appear, during acute stage of illness and up to approximately 8 days after symptoms resolve. ▪ May be as long as 30 days in people who are Immunocompromised.	▪ Stool specimen	**Contact Precautions** ▪ hand hygiene ▪ gloves ▪ gown **Droplet Precautions** (if in contact with aerosolized vomitus) ▪ protective eyewear ▪ mask

References:

Baker, C., Long, S., & McMillan, J. (Eds.). (2012). *Red Book: Report of the Committee on Infectious Diseases, 29th edition.* Elk Grove Village, IL: American Academy of Pediatrics.

Heymann, D. (Ed.). (2015) *Control of Communicable Diseases Manual, 20th edition.* Washington, DC: American Public Health Association

Ontario Agency for Health Promotion and Protection. (2008). *Laboratory Guide for Gastroenteritis Outbreaks.* Toronto, ON: Queen's Printer for Ontario.

Ontario Ministry of Health and Long-Term Care (2013). *Control of Gastroenteritis Outbreaks in Long-Term Care Homes.* Toronto, ON: Queen's Printer for Ontario.

Bacteria that Commonly Cause Enteric Outbreaks

ORGANISM	SYMPTOMS	MODE OF TRANSMISSION	INCUBATION	PERIOD OF COMMUNICABILITY	DIAGNOSIS	PRECAUTIONS & PPE
Campylobacter spp.	▪ Diarrhea (may be bloody), abdominal pain (may mimic appendicitis), malaise, fever, nausea and/or vomiting. ▪ Symptom relapses can occur. ▪ Symptoms usually last 1 to 2 weeks.	▪ Fecal-oral route: food-borne, water-borne, person-to-person (is uncommon).	▪ Average of 2 to 5 days with a range of 1 to 10 days.	▪ Throughout the course of infection, as long as bacteria are being shed ▪ 2 to 7 weeks without antibiotic therapy	▪ Stool specimen.	**Contact Precautions** ▪ hand hygiene ▪ gloves ▪ gown
Clostridium difficile	▪ Diarrhea, fever, loss of appetite, nausea and abdominal pain/ tenderness, weight loss, colitis. ▪ Recurrence is common.	▪ Fecal-oral route: often through contact with contaminated surfaces.	▪ Not clearly defined, studies suggest anywhere from 48 hours to 3 months.	▪ May vary depending on amount of toxin in stool. ▪ Spores very difficult to remove from objects and environmental surfaces.	▪ Stool specimen.	**Contact Precautions** ▪ hand hygiene ▪ gloves ▪ gown
Escherichia coli (E. coli) O157:H7 (Verotoxin producing)	▪ Diarrhea may range from mild, non-bloody to stools that are virtually all blood. ▪ Symptoms may also include abdominal pains, nausea and/or vomiting. ▪ Symptoms usually last for less than 5 days. ▪ Serious complications include hemorrhagic colitis and Hemolytic Uremic Syndrome (HUS)	▪ Fecal-oral route: food-borne, person-to-person, animal-to-person, water-borne.	▪ Average of 3 to 4 days with a range of 2 to 10 days. ▪ HUS may develop up to 2 weeks after onset of diarrhea.	▪ 1 week or less in adults. ▪ Up to 3 weeks in children.	▪ Stool specimen.	**Contact Precautions** ▪ hand hygiene ▪ gloves ▪ gown

References:

Baker, C., Long, S., & McMillan, J. (Eds.). (2012). *Red Book: Report of the Committee on Infectious Diseases, 29th edition.* Elk Grove Village, IL: American Academy of Pediatrics.

Heymann, D. (Ed.). (2015) *Control of Communicable Diseases Manual, 20th edition.* Washington, DC: American Public Health Association

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Ontario Ministry of Health and Long-Term Care (2013). *Control of Gastroenteritis Outbreaks in Long-Term Care Homes.* Toronto, ON: Queen's Printer for Ontario.

Bacteria that Commonly Cause Enteric Outbreaks

ORGANISM	SYMPTOMS	MODE OF TRANSMISSION	INCUBATION	PERIOD OF COMMUNICABILITY	DIAGNOSIS	PRECAUTIONS & PPE
Salmonella	▪ Sudden onset of headache, fever, abdominal pain, diarrhea, nausea and sometimes vomiting.	▪ Fecal-oral route: person-to-person, animal-to-person, food-borne	▪ Average of 12 to 36 hours with a range of 6 to 72 hours.	▪ Usually several days to several weeks, but can vary greatly. ▪ A temporary carrier state can continue for months (especially in infants).	▪ Stool specimen. ▪ Blood, urine or any other sterile site.	**Contact Precautions** ▪ hand hygiene ▪ gloves ▪ gown

References:

Baker, C., Long, S., & McMillan, J. (Eds.). (2012). *Red Book: Report of the Committee on Infectious Diseases, 29th edition.* Elk Grove Village, IL: American Academy of Pediatrics.

Heymann, D. (Ed.). (2015) *Control of Communicable Diseases Manual, 20th edition.* Washington, DC: American Public Health Association

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Ontario Ministry of Health and Long-Term Care (2013). *Control of Gastroenteritis Outbreaks in Long-Term Care Homes.* Toronto, ON: Queen's Printer for Ontario.

Parasites that Commonly Cause Enteric Outbreaks

ORGANISM	SYMPTOMS	MODE OF TRANSMISSION	INCUBATION	PERIOD OF COMMUNICABILITY	DIAGNOSIS	PRECAUTIONS & PPE
Cryptosporidium parvum	▪ Non-bloody, watery diarrhea and abdominal pain. ▪ Less commonly nausea, vomiting, anorexia, malaise and fever. ▪ Asymptomatic infections may occur. ▪ Symptoms may last up to 30 days.	▪ Fecal-oral route: person-to-person, animal-to-person, water-borne and/or food-borne.	▪ Average of 7 days, with a range of 1 to 12 days.	▪ From onset of symptoms to several weeks after symptoms resolve. ▪ Can remain infectious outside of body, in moist environments, for up to 6 months.	▪ Stool specimen.	**Contact Precautions** ▪ hand hygiene ▪ gloves ▪ gown
Giardia lamblia	▪ Diarrhea, watery/ foul-smelling, mucousy/ pale greasy stools, stomach cramps, bloating, severe gas, weight loss and fatigue. ▪ Asymptomatic infections may occur. ▪ Symptoms may last 2 to 6 weeks. ▪ Symptoms can be intermittent.	▪ Fecal-oral route: person-to-person, food-borne, and water-borne (both drinking and recreational water).	▪ Average of 7 to 10 days, with a range of 3 to 25 days or longer.	▪ As long as cysts are being excreted, weeks to months.	▪ Stool specimen.	**Contact Precautions** ▪ hand hygiene ▪ gloves ▪ gown
Cyclospora cayetanesis	▪ Watery diarrhea, nausea, anorexia, abdominal cramps, fatigue, myalgia and substantial weight loss. ▪ Symptoms can remit and relapse and may last up to 4 weeks if untreated.	▪ Fecal-oral route: food-borne and/or water-borne	▪ Average 7 days, with a range of 1 to 14 days.	▪ Cyclospora oocysts in freshly excreted stool are not infectious. ▪ Oocysts become infectious days to weeks outside the host after sporilation (up to 4 weeks).	▪ Stool specimen.	**Contact Precautions** ▪ hand hygiene ▪ gloves ▪ gown

References:

Baker, C., Long, S., & McMillan, J. (Eds.). (2012). *Red Book: Report of the Committee on Infectious Diseases, 29th edition.* Elk Grove Village, IL: American Academy of Pediatrics.
Heymann, D. (Ed.). (2015) *Control of Communicable Diseases Manual, 20th edition.* Washington, DC: American Public Health Association
Ontario Agency for Health Promotion and Protection. (2008). *Laboratory Guide for Gastroenteritis Outbreaks.* Toronto, ON: Queen's Printer for Ontario.
Ontario Ministry of Health and Long-Term Care (2013). *Control of Gastroenteritis Outbreaks in Long-Term Care Homes.* Toronto, ON: Queen's Printer for Ontario.

Enteric Outbreak Readiness and Surveillance

Haliburton, Kawartha,
Pine Ridge District
Health Unit

Enteric Outbreak Readiness Checklist

- ❑ Outbreak prevention policies and staff exclusion policies in place.
- ❑ Surveillance system in place.
- ❑ Enteric kits on hand (check expiry dates) and supplies to aid in sample collection (e.g. toilet hats).
- ❑ Signs prepared for entrances/exits to facility to notify of outbreak.
- ❑ Signs prepared for doors of residents' rooms that are isolated.
- ❑ Ensure PPE stock (gloves, gowns, masks, etc.).
- ❑ OB manual readily accessible.
- ❑ Ensure alcohol based hand rub on hand.
- ❑ Education sessions planned for staff, students, volunteers, residents/family (e.g. orientation to exclusion policies, PPE, cleaning, what to expect during outbreak, etc.).

Enteric Surveillance in Long-Term Care and Retirement Home Settings

Continuous, daily, home-wide surveillance is required to establish baseline rates of infection throughout the year. Suspected outbreaks are recognized when infection rates increase over the baseline.

Passive surveillance of residents with enteric symptoms should be noted on a daily surveillance form:

- This form should include: resident identification and location, date of onset, a checklist of relevant signs and symptoms and diagnostic tests and results (when available).
- It is important to note any symptoms that are new, chronic symptoms that have changed, or a sudden onset of symptoms and to consider any non-infectious causes of these symptoms (e.g. antibiotic/laxative use).
- Age, immune status, medications and underlying medical conditions may alter or even disguise typical symptoms in the elderly.
- Staff should report cases of illness and consult with their Infection Control designate and the home's attending physician to determine if the number is above the base line.
- Staff who are ill with vomiting and/or diarrhea should stay home and report illness to their supervisor.

Reporting to the Health Unit

Identifying the cause of an enteric outbreak (e.g. viral, bacterial or parasitic), is vital in helping to pinpoint the potential source. Therefore, whenever an enteric outbreak is suspected, a CDC Nurse from the HKPR District Health Unit should be promptly notified, in order for testing to be done to determine the causative agent.

- During enteric outbreaks, the Health Unit's Environmental Health Department will assist with food and water inspections, should a bacterial source be suspected (Refer to *Control of Gastroenteritis Outbreaks in Long-Term Care Homes: A Guide for Long-Term Care Homes and Public Health Unit Staff*, pgs. 48-53, for more information regarding food-borne illness).

Criteria for a Suspect Enteric Outbreak:

- Two cases with signs and symptoms compatible with infectious gastroenteritis occurring with 48 hours in a specific geographic area (e.g. unit, floor)

Note: It is important to compare the current rate of illness with the home's baseline rates and to rule out any alternative causes of illness (e.g. laxative use) when trying to determine if an outbreak exists.

Please notify the Haliburton, Kawartha, Pine Ridge District Health Unit.

Effective Enteric Outbreak Management

Haliburton, Kawartha,
Pine Ridge District
Health Unit

What is an Enteric Outbreak?

An enteric outbreak can be defined as a greater than expected number of epidemiologically linked cases of infectious gastroenteritis among residents or staff. Symptoms of infectious gastroenteritis may include, but are not limited to: nausea, vomiting, diarrhea/loose stools, lethargy, abdominal cramps/pain, headache and/or fever.

Criteria for Gastroenteritis Case

At least one of the following criteria must be met in a 24 hour period to be considered a case*:

- Two or more episodes of diarrhea
- Two or more episodes of vomiting
- One episode of vomiting and one episode of diarrhea
  - * non-infectious causes of symptoms should be ruled out (e.g. use of laxatives/antibiotics).
  - * an individual with little dietary intake may only have one episode of diarrhea/vomiting; clinical judgment should be used when determining if a client should be placed in isolation.

Criteria for a Suspect Enteric Outbreak:

- Two cases with signs and symptoms compatible with infectious gastroenteritis occurring within 48 hours in a specific geographic area (e.g. unit, floor).

Note: It is important to compare the current rate of illness with the home's baseline rates and to rule out any alternative causes of illness (e.g. laxative use) when trying to determine if an outbreak exists.

Criteria for a Confirmed Enteric Outbreak:

- Three or more cases with signs and symptoms compatible with infectious gastroenteritis occurring within four day period, in a specific geographic area (e.g. unit, floor).

  OR

- Three or more units/floors having a case of infectious gastroenteritis within 48 hours.

Case Definition

- Each outbreak requires its own case definition. A CDC Nurse from the HKPR District Health Unit can assist your home in developing one.
- A sample case definition is as follows: "Any resident or staff member of [*insert name of home*] with two or more of the following symptoms [*insert list of symptoms*], with an onset date of [*insert date*] or later."

Line List

- Begin a line list from routinely collected surveillance data.
- Only cases that meet the case definition should be included on the line list (i.e. a line list is NOT your daily surveillance form).
- A separate line list should be created for staff and for residents, or if there are two suspected outbreaks occurring concurrently (e.g. an enteric outbreak and a respiratory outbreak).

Homes are required to contact their local Public Health Unit whenever an enteric outbreak is <u>suspected</u>.

Facility Name: Cartoon Villa LTCH

Outbreak #: 2235-2015-01

RESIDENT - Enteric Outbreak Line Listing Form

Case Identification				Symptoms													Complications		Diagnostics	
Name (last name, first name)	Room #	Sex (M/F)	Date of Birth (yy-mm-dd)	Symptom Onset Date (yy-mm-dd)	Symptom End Date (yy-mm-dd)	Date Client Removed from Isolation (yy-mm-dd)	**Vomiting (✓)**	**Diarrhea (✓)**	**Bloody Diarrhea (✓)**	Abnormal Temperature (✓)	Nausea (✓)	Abdominal Pain (✓)	Headache (✓)	Lethargy (✓)	Loss of Appetite (✓)	Weight Loss (✓)	Name of Hospital Admission – Discharge Dates (yy-mm-dd)	Cause of Death Date of Death (yy-mm-dd)	Specimen Collection Date (yy-mm-dd)	Specimen Results
Bear, Yogi	2A	M	34-03-30	15-11-01	15-11-03	15-11-05	✓	✓			✓	✓							15-11-02	norovirus
Goose, Lucy	2B	F	44-02-13	15-11-01	15-11-02	15-11-04		✓			✓						ZGH 15-11-02			
Le Pew, Pepe	3A	M	50-06-13	15-11-02			✓	✓				✓						Pancreatic CA 15-11-03		
Duck, Daffy	2F	M	37-12-25	15-11-02			✓	✓											15-02-11	norovirus

Please fax updated line listing to HKPR Health Unit by 10 a.m. DAILY.

CD-217
O:2007 – August
R: 2011-April
R: 2015 - May

Haliburton, Kawartha, Pine Ridge District Health Unit

Facility Name: _____ Outbreak #: _____

RESIDENT - Enteric Outbreak Line Listing Form

Case Identification				Symptoms												Complications		Diagnostics	
Name (last name, first name)	Room #	Sex (M/F)	Date of Birth (yy-mm-dd)	Symptom Onset Date (yy-mm-dd)	Symptom End Date (yy-mm-dd)	Date Client Removed from Isolation (yy-mm-dd)	**Vomiting (✓)**	**Diarrhea (✓)**	**Bloody Diarrhea (✓)**	Abnormal Temperature (✓)	Nausea (✓)	Abdominal Pain (✓)	Headache (✓)	Lethargy (✓)	Loss of Appetite (✓)	Weight Loss (✓)	Name of Hospital Admission – Discharge Dates (yy-mm-dd)	Cause of Death Date of Death (yy-mm-dd)	Specimen Collection Date (yy-mm-dd)	Specimen Results

Please fax updated line listing to HKPR Health Unit by 10 a.m. DAILY.

CD-217
O: 2007–August
R: 2011-April
R: 2015-May

Haliburton, Kawartha, Pine Ridge District Health Unit

Facility Name: _____ Outbreak #: _____

STAFF - Enteric Outbreak Line Listing Form

Case Identification			Symptoms													Complications		Diagnostics	
Staff Initials	Work Assignment (ward, unit, floor, etc.)	Sex (M/F)	Symptom Onset Date (yy-mm-dd)	Last Day of Work of Ill Staff Member (yy-mm-dd)	Symptom End Date (yy-mm-dd)	**Vomiting (✓)**	**Diarrhea (✓)**	**Bloody Diarrhea (✓)**	Abnormal Temperature (✓)	Nausea (✓)	Abdominal Pain (✓)	Headache (✓)	Lethargy (✓)	Loss of Appetite (✓)	Weight Loss (✓)	Name of Hospital Admission – Discharge Dates (yy-mm-dd)	Cause of Death Date of Death (yy-mm-dd)	Specimen Collection Date (yy-mm-dd)	Specimen Result

Please fax updated line listing to HKPR Health Unit by 10 a.m. DAILY.

CD-217(a)
O: 2015-May

Haliburton, Kawartha, Pine Ridge District Health Unit

Enteric Outbreak Checklist

- ❑ Assess for suspected or confirmed outbreak.
- ❑ Notify home's medical advisor.
- ❑ Implement appropriate infection control precautions.
- ❑ Notify Communicable Disease Control Nurse at HKPR District Health Unit to:
  - ❍ determine if an outbreak exists;
  - ❍ obtain an outbreak number;
  - ❍ determine case definition;
  - ❍ request specimen collection kits (if current kits are outdated);
  - ❍ plan for specimen collection and transportation to Public Health Lab;
  - ❍ provide total number of:
    - ❍ residents and staff in home
    - ❍ residents and staff who are ill;
  - ❍ review recommended outbreak control measures.
- ❑ Start ongoing surveillance (line listing).
- ❑ Ensure stool specimens, using Enteric Outbreak Kits, are collected on newly ill residents.
- ❑ Ensure that specimens are properly refrigerated after collection and during transport.
- ❑ Facilitate transportation of specimens to Public Health Lab.
- ❑ If possible, assemble outbreak management team.
- ❑ Ensure ALL staff in home are aware of outbreak.
- ❑ Post appropriate signage.
- ❑ Send ill staff home.
- ❑ Stop new admissions/transfers to other homes.
- ❑ Cancel non urgent outside resident appointments.
- ❑ Have dedicated equipment for ill residents or arrange for equipment cleaning between residents.
- ❑ Advise visitors, volunteers and students of outbreak status.
- ❑ Cancel group activities/meetings (as appropriate).
- ❑ Institute enhanced environmental cleaning and more frequent hand washing.
- ❑ **Fax updated line listing to Health Unit CDC nurse by 10:00 am DAILY.**

Enteric Outbreak Control Measures

Please refer back to the General Information section of this manual to "Preventing Transmission of Infection" for information on hand hygiene, PPE, administrative controls, and environmental controls that help minimize the spread of illness during outbreaks.

Control Measures for Residents

Isolation of symptomatic residents

- Initiate droplet/contact precautions as soon as gastrointestinal symptoms develop and an infectious cause is suspected.
- Use dedicated/disposable equipment for patient care, or clean between uses.
- Cases should be isolated in their rooms for at least 48 hours after symptoms have ended, as long as this does not cause the resident undue stress.
- Residents who cannot be isolated should receive supervision and/or assistance with frequent hand hygiene.
- Room isolation should be used but if this is not feasible, unit isolation could be applied.
- Provide isolated residents with tray service.

Admissions, Re-admissions and Transfers

- New admissions are not permitted to the home while the outbreak is ongoing.*
- Consultation with the Health Unit should be made prior to allowing admissions to non-affected units.
- Residents can be transferred from the outbreak home to a hospital with prior notification to the hospital's Infection Control Professional or designate.
- Residents admitted from the outbreak home to hospital with enteric illness can be re-admitted to the home at any time, provided that appropriate care can be given.
- Residents admitted to hospital prior to the outbreak may not be readmitted to the home while the outbreak is ongoing.*
- Resident transfers from anywhere in the home to another long-term care home is not permitted during an outbreak.*

* Exceptions to these recommendations may be made on an individual basis in consultation with the Health Unit.

Medical Appointments, Communal Activities, and Meetings

- Movement of residents between affected and non-affected units should be discouraged until the outbreak is declared over.
- All non-urgent medical and other appointments should be rescheduled until after the outbreak is over.
- As much as possible, restrict residents' activities to their respective units to control the spread of infection.
- Reschedule visits by outside groups (entertainers, volunteer organizations and community groups).
- Reschedule communal meetings on the affected units.
- Ensure there is no interaction between floors/units in outbreak and on-site day programs.

Control Measures for Staff, Students, and Volunteers

Exclusion of Staff, Students, and Volunteers

- Staff, students, and volunteers with gastrointestinal symptoms should be excluded for at least 48 hours after symptoms have resolved.
  - If the cause of the outbreak is known, the exclusion period may differ.
- Staff, students, and volunteers with gastrointestinal symptoms should not attend work but should report the illness to their supervisor.

Working at Other Facilities

- During an outbreak, staff, students, and volunteers should not work at any other health care facilities.
- If asymptomatic staff, students, and volunteers choose to work at another health care facility, they must wait one incubation period (if causative agent is known), or at least 48 hours (if causative agent is unknown) after working their last shift at the outbreak home.
- Staff, students, and volunteers working at other health care facilities must inform the employer at the non-outbreak health care facility that they have been working at a facility where there is an outbreak.

Cohort Staffing, Students and Volunteers

- Assign some staff members to only care for ill residents and others to care for only well residents.
- If possible, exposed staff should remain caring for symptomatic residents on a daily basis.
- Minimize movement of staff, students, and volunteers between affected and non-affected units.

Control Measures for Visitors

- It is not permitted that homes be closed to visitors during outbreaks.
- Signs should be posted at all entrances of the home indicating that there is an outbreak. Visitors should be warned that there is a potential risk that they may acquire illness while in the home.
- Encourage visitors to reschedule visits whenever possible.
- Signage should be placed on ill residents' doors asking visitors to check-in at nursing station/reception area prior to entering the room.
- Visitors with gastrointestinal symptoms should postpone visits until at least 48 hours after symptoms have resolved.
- During an outbreak, residents should be visited in their own room, avoiding communal areas.
- Visitors should only visit one resident while at the home.
- Staff should assist visitors with PPE, as required, while visiting an ill resident.
- Visitors should be encouraged to wash their hands when entering the home and prior to leaving the resident's room; provide handwashing stations at entrance and throughout the facility.
- Bathrooms in resident rooms that may normally be used by both residents and visitors should be labelled for resident use only, until the outbreak is declared over.

Other

- Should dietary staff develop gastrointestinal symptoms such as diarrhea, vomiting and abdominal cramping, while working, all ready-to-eat foods (i.e. sandwiches, salads, etc.) prepared by this staff member during his/her shift, should be discarded.

Environmental Cleaning

- Promptly clean and disinfect surfaces contaminated by stool or vomit.
- Soiled carpets and soft furnishing should not be vacuumed; instead, steam clean or clean with hot water and detergent.
- Ensure there is enhanced cleaning and disinfection of high-touch surface areas in residents' private and communal-living areas, as well as areas used by visitors and staff (i.e. hand rails, door knobs, bathroom units, furniture, bed railings, light switches, call-bells, elevator buttons, etc.).
- Disposable dishes and cutlery are not required.
- Refer to the Environmental Tool Kit produced by Public Health Ontario for further guidance. (www.publichealthontario.ca/en/ServicesAndTools/Tools/Pages/Environmental_Cleaning_Toolkit.aspx)
- Should facility staff have questions about environmental cleaning, please contact a Public Health Inspector.

Health Unit's Role During an Outbreak

During the course of an enteric disease outbreak in Long-Term Care or Retirement Homes settings, the HKPR District Health Unit's Communicable Disease Control Department will:

- Provide an outbreak number for specimen collection.
- Assist the home in developing a case definition.
- Inform Public Health Lab of outbreak.
- Inform the Environmental Health Department of the HKPR District Health Unit of outbreak.
  - A Public Health Inspector will then do a kitchen inspection and take appropriate food and water samples.
  - He/she will ask for a copy of the menu for about one week prior to the onset of symptoms.
- Report outbreak to the Ministry of Health and Long-Term Care.
- Notify other area agencies (LTCHs, Retirement Homes,Hospitals, EMS, Access Centres, etc.) when the outbreak is declared, infectious agent is identified, and when the outbreak is declared over.
- Assist the home with case finding.
- Assist with education of staff (where appropriate).
- Facilitate specimen transportation to the lab.
- Communicate lab results to outbreak facility.
- Regularly communicate with the outbreak facility and provide consultation as required.
- Attend outbreak meetings.
- Declare outbreak over.

Outbreak Management Team

The team should assemble and meet as soon as possible at the onset of the outbreak. The chairperson will decide how often the team will meet during the outbreak (daily is ideal). The team will work toward the common goal of resolving the outbreak.

Depending on the size of the institution, this may include:

1. Chairperson of the outbreak team (who usually is the chairperson of the infection control committee)
2. Infection control designate
3. Medical advisor
4. Chief executive officer, administrator, or designate
5. Director of nursing, director of care, or designate
6. Director of facility's laboratory, microbiologist, or charge technologist of the microbiology department
7. Employee health nurse
8. Director of food services
9. Director of environmental services/housekeeping
10. Recreational services supervisor
11. Pharmacist
12. Health Unit representative

Role of the Outbreak Management Team

- Ensure outbreak control measures are implemented promptly and enforced for the duration of the outbreak.
- Implement the staff exclusion policy and staffing contingency plan.
- Notify staff and outside individuals (e.g. residents' family members) of outbreak situation.
- Prepare a communications plan, including media releases, if necessary.
- Assign responsibility for ongoing monitoring of the outbreak and submission of daily line lists to the Health Unit.
- Hold a debriefing at the conclusion of the outbreak to acknowledge successes and identify areas requiring improvement.

Enteric Outbreak Kit Specimen Collection

Specimen collection is critical in determining the causative agent in an enteric outbreak. Specimens should be collected initially from symptomatic residents and staff (as soon as possible after onset of symptoms). The Health Unit, for laboratory purposes, will assign an outbreak number.

A doctor's order is not required providing your home has a medical directive regarding specimen collection when an outbreak occurs.

All staff responsible for specimen collection should:

- know the home's policy for specimen collection when an outbreak has been declared
- know where the Enteric Outbreak Kits are located

In your facility, Enteric Outbreak Kits are located: _____

The Enteric Outbreak Kit

To order more kits, call the Health Unit and ask to speak to a CDC nurse.

- Always have six kits, with currently valid dates, on hand.
- Kits can be stored at room temperature prior to use.
- Be sure to use the correct specimen kit.
- Check the expiry date on the green and yellow capped vials which contain transport medium (If either date has passed do not use. Return the entire kit to the Health Unit).
- Check that all components are in the kit:
  - Biohazard bag;
  - Public Health Lab requisition plus a two-part label on the outside of the bag;
  - Instructions for using "Enteric Outbreak Kit"in bag pouch;
  - one **GREEN**-capped (bacterial);
  - one **WHITE**-capped (viral and toxin);
  - one **YELLOW**-capped (parasitology).

Collecting The Specimen

Before entering the resident's room to collect stool specimens, complete requisition and stool container labels in pen and place outside of biohazard bags. Ensure that you are wearing appropriate PPE and have the necessary equipment, including:

- All three vials from enteric kit;
- A collection tool like a disposable aluminum plate, plastic "hat" or plastic wrap, which can be used to aid in specimen collection.

Refrigerate the kit immediately after collection.

Instructions for Using the Enteric Outbreak Kit

Enteric Outbreak Kit

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

Instructions for the collection and transportation of clinical specimens for faeces cultures.

Obtain supplies, complete requisitions and label specimen vials

1. Remove the appropriate specimen collection vial(s) from the biohazard bag. Do not use expired kits.
2. Complete an "Enteric Disease Investigation Multiple Specimen Submission Form **OR** public health laboratory General Test Requisition". Include the outbreak number which is assigned by the local health unit.
3. On the main kit label located on the biohazard bag, fill in the required information with a ballpoint pen (press firmly). Peel this label off of the bag and place this label on the completed submission form in the area marked;
   - "Label" of the "Enteric Disease Investigation Multiple Specimen Submission Form".

   OR
   - If a public health laboratory General Test Requisition is used, fill in the required information with a ballpoint pen (press firmly).
4. Record the patient name on each of the vials used. Peel off one of the four corresponding kit numbered labels located on the biohazard bag. Place one label on each vial used.
5. Note: The specimen container is required to have the patient's full name and date of collection or two unique identifiers. The information on the specimen must be the same as the name and other identifier on the test requisition. Unmatched or mismatched specimens will not be processed.

Specimen collection

6. Faeces specimens that have been in contact with water in toilet are unacceptable.
   a) Infants/Toddlers (not toilet trained) – Collect faeces sample (bowel movement) from soiled diaper or directly from "potty".
   b) Older Children/Adults – Instruct the patient to defecate into a clean container.

Place specimen in appropriate container

7. Using the spoon from each vial, select different sites of the faeces specimen, preferably blood, mucus or pus, and transfer to the vials as follows:
   a) Bacteriology - GREEN-capped vial with red-coloured transport medium. A collecting device *(plastic spoon)* is fitted inside the cap. Add 2-3 spoonfuls of faeces. Mix into transport medium. Replace and tighten cap.
   b) Parasitology – YELLOW-capped vial with clear liquid preservative and plastic spoon. Add faeces up to the line indicated. Mix well. Replace and tighten cap.
   c) Virology/Toxin - WHITE-capped vial which is empty with a plastic spoon. Add faeces up to the line indicated. Replace and tighten cap.

Transportation

8. Place all vials in the biohazard bag. Place the completed test requisition in the outside pocket. Do not place the test requisition inside the biohazard bag containing the specimens.
9. Refrigerate specimens immediately. Do not freeze specimens.
10. Send specimens to the local Health Unit or laboratory as soon as possible.

STORAGE - Kits can be stored at room temperature until use. **DO NOT USE EXPIRED KITS.**

TO ORDER KITS or INFORMATION: Contact OAHPP order desk, Public Health Laboratory Toronto @ 416 235-5937 or order by fax @ 416 235-5753 or your local Public Health Laboratory.

STORAGE - Kits can be stored at room temperature until use. **DO NOT USE EXPIRED KITS.**

Revised May 2010

TO ORDER KITS or INFORMATION: Contact OAHPP order desk, Public Health Laboratory Toronto @ 416 235-5937 or order by fax @ 416 235-5753 or your local Public Health Laboratory.

The instructions above can be found in the pouch on the outside of the biohazard bag in each Enteric Outbreak Kit.

Important Reminders:

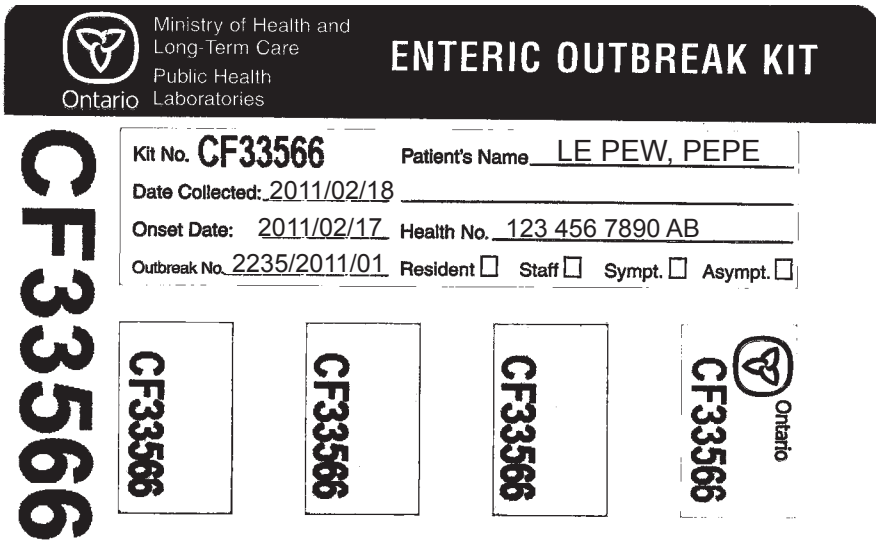
- A separate kit must be used for each person providing a specimen for testing.
- Ensure that the specimen fills each vial only to the line specified; do not overfill.
- Select samples from different sites of the stool specimen; preferably, include any blood, mucous and/or pus present in the specimen.
- Urine and water may contaminate a specimen and affect the results. A disposable aluminum pie plate or plastic "hat" placed on the water in the toilet bowl, or plastic wrap loosely stretched across the toilet bowl, may reduce the risk of such contamination.
- Ensure that each vial is clearly and correctly labelled with two unique resident identifiers that exactly match those on the requisition.
- Ensure each vial is tightly capped (the lab will not test leaking specimens).
- Do not remove or apply any stickers included in the kit.
- All three vials should be placed in a sealed specimen bag and refrigerated immediately.
- The **yellow**-capped vial contains **formaldehyde** as a preservative, and should not be left unattended in the resident's room.

Sample Public Health Lab Requisition

Medical Officer of Health
Haliburton Kawartha Pine Ridge District Health Unit

OUTBREAK LOCATION

CARTOON VILLA LTC - LINDSAY



Fill in each vial label with all requested information and add the outbreak number

Public Health Ontario | Santé publique Ontario
PARTNERS FOR HEALTH | PARTENAIRES POUR LA SANTÉ

Date received	PHOL No.
yyyy / mm / dd	

General Test Requisition

ALL Sections of this Form MUST be Completed

1 - Submitter

Courier Code

Provide Return Address:

Dr. Lynn Noseworthy, MOH
HKPR District Health Unit
200 Rose Glen Road
Port Hope, ON L1A 3V6
Port Hope Office After hours: 1-888-255-7839

Clinician Initial / Surname and OHIP / CPSO Number

Tel: 905-885-9100 Fax: 905-885-9554

2 - Patient Information

Health No.	Sex	Date of Birth:
123 456 7890 Medical Record No.	M	yyyy / mm / dd 1919/Apr/20

Patient's Last Name *(per OHIP card)*	First Name *(per OHIP card)*
LE PEW	PEPE

Patient Address
C/O Cartoon Villa LTCH
16 Marshland Road, Port Hope, ON

Postal Code	Patient Phone No.
L1A 3V6	905-878-8887

Submitter Lab No.

Public Health Unit Outbreak No. 2235-2015-01

cc Doctor Information

Name: _____ Tel: _____
Lab/Clinic Name: _____ Fax: _____
CPSO #: _____
Address: _____ Postal Code: _____

Public Health Investigator Information

Name: _____
Health Unit: _____
Tel: _____ Fax: _____

3 - Test(s) Requested *(Please see descriptions on reverse)*

Test: Enter test descriptions below

Respiratory Outbreak Investigation

Hepatitis Serology

Reason for test (Check (✓) only one box):
- ☐ Immune status
- ☐ Acute infection
- ☐ Chronic infection

Indicate specific viruses (Check (✓) all that apply):
- ☐ Hepatitis A
- ☐ Hepatitis B
- ☐ Hepatitis C *(testing only available for acute or chronic infection; no test for determining immunity to HCV is currently available)*

4 - 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

5 - Reason for Test

- ☐ diagnostic ☐ immune status
- ☐ needle stick ☐ follow-up
- ☐ prenatal ☐ chronic condition
- ☐ immunocompromised
- ☐ post-mortem
- ☐ other - *(specify)* _____

Date Collected: 2015/Sept/18

Onset Date: 2015/Sept/17

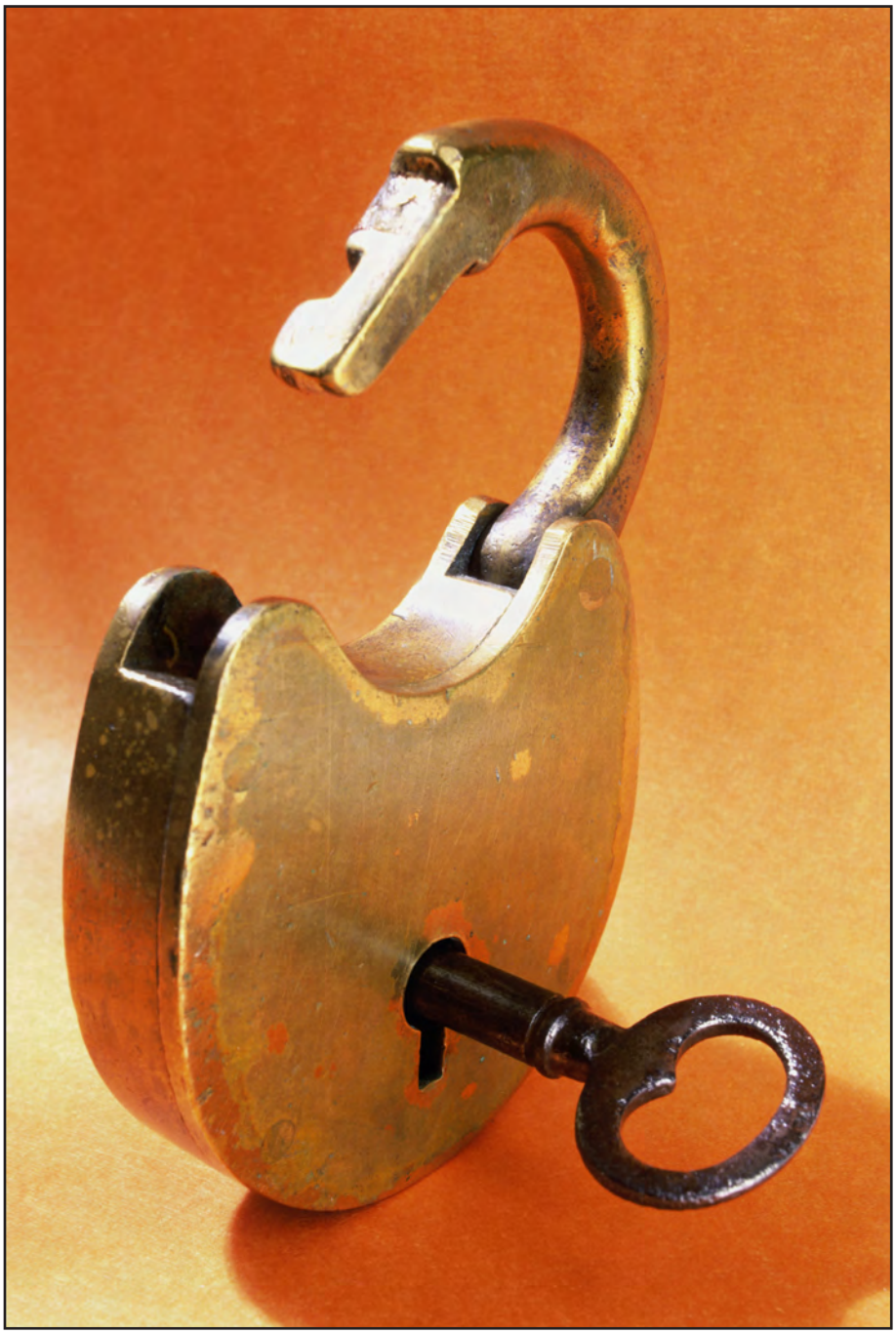
Clinical Information
- ☐ fever ☐ gastroenteritis ☐ respiratory symptoms
- ☐ STI ☐ headache / stiff neck ☐ vesicular rash
- ☐ pregnant ☐ encephalitis / meningitis ☐ maculopapular rash
- ☐ jaundice
- ☐ other - *(specify)* _____
- ☐ influenza high risk - *(specify)* _____
- ☐ recent travel - *(specify location)* _____

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 F-SD-SCG-1000. Current version of Public Health Laboratory requisitions are available at www.publichealthontario.ca/requisitions

The personal health information is collected under the authority of the Personal Health Information Protection Act, s.36 (1)(c)(iii) for the purpose of clinical laboratory testing. If you have questions about the collection of this personal health information please contact the PHOL Manager of Customer Service at 416-235-6556 or toll free 1-877-604-4567. F-SD-SCG-1000 (08/2013)

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

Valuable Resources



Haliburton, Kawartha,
Pine Ridge District
Health Unit

Valuable Resources

This section contains resources that you may find helpful. We have included some fact sheets and websites that will be of benefit to you. Feel free to add to this section other resources that you find useful.

Websites

- Public Health Ontario (PHO) www.publichealthontario.ca
- Provincial Infectious Diseases Advisory Committee (PIDAC): www.publichealthontario.ca/en/BrowseByTopic/InfectiousDiseases/PIDAC/Pages/PIDAC.aspx
- PHO Environmental Cleaning Toolkit: www.publichealthontario.ca/en/ServicesAndTools/Tools/Pages/Environmental_Cleaning_Toolkit.aspx
- PHO Infection Prevention and Control - Additional Precautions, Signage and Lanyard Cards: http://www.publichealthontario.ca/en/BrowseByTopic/InfectiousDiseases/Pages/IPAC_Additional_Precautions_Signage_and_Lanyard_Cards.aspx
- Regional Infection Control Network (RICN): www.ricn.on.ca
- Haliburton, Kawartha, Pine Ridge District Health Unit: www.hkpr.on.ca

Fact Sheets

Infections

- Adenovirus
- Campylobacter enteritis
- *Clostridium difficile* Infection (CDI)
- Coronavirus
- Cryptosporidiosis
- Cyclosporiasis
- Giardiasis
- Human Metapneumovirus (hMPV)
- Influenza
- Legionellosis
- Listeriosis
- Norovirus
- Parainfluenza
- Pertussis (Whooping Cough)
- Pneumococcal pneumonia
- Rhinovirus
- Rotavirus
- Respiratory Syncytial Virus (RSV)
- Salmonellosis
- Verotoxin-producing Escherichia coli (E.coli)

Antiviral Medications

- Oseltamivir (Tamiflu™)
- Zanamivir (Relenza™)

Signage and Tools

Tools

- Hand Hygiene Fact Sheet
- How to Handrub
- How to Handwash
- Recommended Steps for Putting on and Taking Off Personal Protective Equipment (PPE)
- Sample Pay Stub Inserts
  - Stay Home
  - Attention All Staff!
  - Duty of Care
  - Flu Clinics Are Here!
- Recommendations for Outbreak Control Measures
- Respiratory Line Listing Forms
- Enteric Line Listing Forms

Signage

- Routine Practices
- Airborne Precautions
- Contact Precautions
- Droplet Precautions
- Droplet and Contact Precautions
- Stop Sign
- Yield Sign

Sources

Unless stated otherwise, all information used for the development of the subsequent fact sheets was compiled from the following sources:

- Baker, C., Ling, S., & McMillan, J. (Eds.). (2006). *Red Book: Report of the Committee on Infectious Diseases, 27th edition.* Elk Grove Village, IL: American Academy of Pediatrics.
- Heymann, D. (Ed.) (2008). *Control of Communicable Diseases Manual, 19th edition.* Washington, DC: American Public Health Association.
- Ministry of Health and Long-Term Care. (2008). *Ontario Public Health Standards: Disease-Specific Chapters.* Toronto, ON: Queen's Printer for Ontario.

Sources for HPMV Fact Sheet:

- Domachowske, J. (2009). *Human Metapneumovirus.* Retrieved from http://emedicine.medscape.com
- Halton Region. (2010). *Metapneumovirus Fact Sheet.* Retrieved from www.halton.ca
- Hamilton Health Sciences. (2010). *Metapneumovirus Fact Sheet.* Retrieved from www.hamiltonhealthsciences.ca

Sources for Parainfluenza Fact Sheet:

- Iowa Department of Public Health. (2010). *Parainfluenza Fact Sheet.* Retrieved from: www.idph.state.ia.us

FACT SHEET

Adenoviruses

What is it?

Adenoviruses are a group of viruses that infect the membranes (tissue linings) of the respiratory tract, the eyes, the intestines, and the urinary tract. They account for approximately three to five per cent of acute respiratory infections in children and up to two per cent in adults. Illnesses due to adenoviruses can occur throughout the year, but are more common in late winter, spring and early summer. There are more than 50 subtypes of adenoviruses.

What are the symptoms?

Depending on which part of the body is affected, the signs and symptoms of adenovirus infection vary.
Respiratory: fever, conjunctivitis (swelling/infection of the eyelids), sore throat, runny nose, congestion, and cough.
Gastrointestinal: watery diarrhea, vomiting, headache, fever and abdominal cramps.

Who is at risk?

Adenoviruses can affect anyone. People with weakened immune systems are especially susceptible to severe complications of an adenovirus infection.

When do symptoms start?

Onset of symptoms ranges from two to 14 days for respiratory infections and three to 10 days for gastrointestinal infections, after being in contact with the virus.

When is it contagious?

Adenovirus is contagious as long as symptoms are present.

How does it spread?

Adenovirus can spread from person to person through contact with droplets from the nose and throat of infected people when they cough and sneeze, contact with objects soiled with discharge from the nose/throat of infected people, or ingesting food or water contaminated with the virus.

How is it treated?

There is no treatment for adenoviral infections. Your health care provider may suggest treating the symptoms with over-the-counter medications.

How can the spread of Adenovirus be reduced?

- Frequent hand hygiene.
- Keep shared surfaces such as countertops and toys clean.
- Cover your mouth and nose when you cough and sneeze, using your sleeve or disposable tissue.

What should I do if I get sick with Adenovirus?

- Stay home if you are ill, and follow the above measures to prevent the spread of infection.
- Get plenty of rest.
- Drink plenty of fluids.

Haliburton, Kawartha, Pine Ridge District Health Unit

1-866-888-4577 www.hkpr.on.ca

CD-206
O: 2007-06 R: 2011-06

FACT SHEET

Campylobacter enteritis

What is it?
Campylobacter enteritis is a bacterial infection caused by *Campylobacter*. Most human illness is caused mainly by *Campylobacter jejuni* (most common) and *Campylobacter coli*.

What are the symptoms?
Symptoms can vary from mild to severe and include diarrhea (sometimes bloody), abdominal pain, feeling unwell, fever, nausea and vomiting. Abdominal pain can sometimes mimic appendicitis. Relapses can occur.

Less common forms include typhoid-like syndrome, febrile convulsions, and meningitis. Rarely, post-infectious complications include reactive arthritis, febrile convulsions or Guillian-Barré syndrome (an illness which causes progressive weakness and paralysis).

Who is at risk?
Campylobacter causes five to 14 per cent of reported cases of diarrhea in the world. In industrialized countries, children under five years of age and young adults have the highest incidence of illness. It is one of the most common causes of diarrhea disease in North America.

When do symptoms start?
Symptoms usually start within two to five days, with a range of one to 10 days, depending on how much bacteria was ingested.

When is it contagious?
The bacteria is found in the stool of infected people. An infected person is contagious while they continue to have diarrhea, which usually lasts from several days to several weeks.

How does it spread?
Campylobacter can be spread from person-to-person, animal-to-person, or by eating food or water contaminated with the bacteria. *Campylobacter* is found most frequently in poultry and cattle but it can also be found in puppies, kittens, other pets, pigs, sheep, rodents and birds. Contact with infected animals can spread infection to humans. Most cases are associated with handling raw poultry or eating raw or undercooked meat and poultry. One way to become infected is to cut poultry on a cutting board, and then use the unwashed cutting board or utensil to prepare vegetables or other raw or lightly cooked foods. Drinking unpasteurized milk or contaminated water can also cause infection.

How is it treated?
Most people will recover without any specific treatment. However, your health care provider may prescribe antibiotics. Persons infected should drink plenty of fluids as long as the diarrhea lasts to avoid dehydration.

How can the spread of *Campylobacter* enteritis be reduced?
- Thorough hand hygiene is the best prevention. Make sure hands are properly washed after using the bathroom, handling pets, before preparing food, and after contact with raw meats or poultry.
- Prevent cross-contamination in the kitchen by cleaning, with soap and warm water, all counter tops and utensils after contact with raw meats and poultry.
- If possible use separate cutting boards for preparing raw foods and cooked foods.
- Cook meat, poultry and egg products thoroughly. Make sure all meat is cooked throughout (no longer pink) and juices run clear. Cook stuffing separately from the bird.
- If you are served undercooked poultry in a restaurant, send it back for further cooking.
- Drink only pasteurized milk.
- Keep cold foods cold at 4°C or lower; keep hot foods hot at 60°C or higher.
- Drink water from a safe water supply. Have your well tested to ensure the water is safe to drink.

What do I do if I get sick with *Campylobacter* enteritis?

- Avoid preparing or handling food for others.
- Symptomatic individuals must be excluded from work if they are food handlers, provide direct care to clients in health care facilities or in daycare centres, until symptom free for 24 hours.
- Symptomatic daycare attendees must be excluded from daycare centres until symptom free for 24 hours.
- Drink plenty of fluids.
- Always wash hands after using the bathroom or handling diapers.
- Avoid medication such as loperamide (Imodium) as it is likely to make the infection worse.

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CD-195
O: 2007-06 R: 2011-06

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FACT SHEET

Clostridium difficile Infection (CDI)

What is it?

Clostridium difficile (C. diff) is a type of bacteria that can be found in the stool. Antibiotic use can kill off healthy bacteria in the stool and allow C. diff to grow and produce spores and toxins. The toxins can damage the bowel and cause symptoms. The spores are difficult to remove with regular cleaning and disinfection.

What are the symptoms?

Some people have no symptoms, while others may develop watery diarrhea, fever, loss of appetite, nausea and abdominal pain/tenderness.

Who is at risk?

Most healthy people, who are not taking antibiotics, are not at risk for CDI. People with a history of antibiotic use, bowel disease and/or bowel surgery, people undergoing immunosuppressive therapy, people undergoing chemo-therapy and/or people who have been hospitalized for more than a few days are at greatest risk of developing CDI. Older people and those with underlying illnesses are also at an increased risk of developing CDI.

When do symptoms start?

Symptoms may start as early as 48 hours after exposure to the bacteria, or may take up to three months to develop.

When is it contagious?

There is no definite timeframe, but it is important to remember that C. diff spores can survive outside of the body for long periods of time and are very difficult to remove from the environment. It is also possible for people to shed the C. diff toxins in their stool for several weeks.

How is it spread?

CDI is spread through the fecal-oral route; meaning that people can become infected if they touch people, objects and/or surfaces contaminated with C. diff spores, then touch their mouths.

How is it treated?

Sometimes, no treatment is needed, but for severe CDI, treatment may include antibiotics and/or surgery.

How can the spread of CDI be reduced?

- Frequent and thorough hand hygiene (washing with soap and warm, running water or using alcohol based hand rub).
- Thorough environmental cleaning with products known to kill C. diff spores.
- Monitoring appropriateness and compliance of antibiotic use.
- Dedicating toilets, commodes and other equipment for people with CDI staying in Long-Term Care Homes and hospitals.

What should I do if I get sick with CDI?

- If given antibiotics to treat CDI, take them exactly as prescribed by your health care provider (HCP) and do not stop taking them until the treatment is complete.
- Do not use any over-the-counter medications to stop the diarrhea.
- Wash your hands frequently and thoroughly.
- Drink plenty of fluids.
- Contact your HCP if your symptoms worsen.

FACT SHEET

Coronavirus

What is it?

Coronaviruses are a group of viruses considered to be a frequent cause of the "common cold" and upper respiratory tract infections. Most coronavirus strains cause mild respiratory symptoms.

In 2002-2003 a new coronavirus, the SARS coronavirus, was found to cause acute, severe and frequently fatal respiratory disease. The SARS coronavirus is only distantly related to the coronavirus.

What are the symptoms?

Symptoms include sore throat, cough, headache, runny nose and occasionally a low-grade fever. The elderly are subject to more severe respiratory illness during coronavirus infections such as pneumonia and lower respiratory tract infections.

Who is at risk?

The virus is found worldwide. All ages are at risk, however, it most commonly affects children. Respiratory coronavirus infections occur more often in the winter and spring.

When do symptoms start?

Symptoms usually occur two to five days after coming in contact with the virus.

When is it contagious?

It is contagious for as long as the symptoms are present.

How is it spread?

Coronavirus is spread from person-to-person through contact with droplets from the nose and throat of infected people when they cough or sneeze. It can also be spread through contact with objects soiled with discharge from the nose/throat of infected people (tissue, toys, countertops, etc.).

How is it treated?

There is no specific treatment.

How can it be prevented?

- Frequent and thorough hand hygiene is the best prevention.
- Cover your mouth and nose when you cough or sneeze using your sleeve or disposable tissue, and encourage others to do the same.
- Wash articles soiled with nose and throat discharge, including toys, in soapy water.

What should I do if I get sick with coronavirus?

- Stay at home and away from others until your symptoms are gone.
- Get plenty of rest.
- Drink plenty of fluids.
- Contact your health care provider if symptoms are severe.

Haliburton, Kawartha, Pine Ridge District Health Unit

CD-325
O: 2011-06

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FACT SHEET

Cryptosporidiosis

What is it?
Cryptosporidiosis is a disease caused by the parasite *Cryptosporidium*. It can live in the intestine of humans and animals.

What are the symptoms?
The symptoms are diarrhea, which may be watery and profuse, often accompanied by feeling unwell, abdominal cramps, fatigue, nausea, vomiting, lack of appetite and low-grade fever. Healthy people may get better and then get symptoms again. Symptoms usually resolve after 30 days.

Who is at risk?
People of all ages are at risk. It is found worldwide. In people with weakened immune systems, cryptosporidiosis can be chronic and life threatening.

When do symptoms start?
People usually develop symptoms one to 12 days after ingesting the parasite, with an average onset of symptoms after about seven days.

When is it contagious?
Oocysts appear in the stool at the onset of symptoms and are infectious immediately upon excretion. Shedding in the stool continues for an average of seven days after symptoms resolve but may continue for several weeks. Outside the body, oocysts may remain infective for two to six months in a moist environment.

How does it spread?
Cryptosporidium can be found in soil, food, water, or surfaces that have been contaminated with stool from infected humans or animals. *Cryptosporidium* can be spread by ingesting something that has come in contact with the stool of a person or animal infected with *Cryptosporidium,* such as food or water. *Cryptosporidium* is chlorine resistant and can live for days in pools.

How is it treated?
There is no treatment other than fluid replacement to prevent dehydration.

How can the spread of *Cryptosporidium* be reduced?
- Maintain personal hygiene.
- Wash hands frequently, especially before and after using the bathroom, before preparing or eating food, after handling diapers, after sexual activity, and after being in contact with animals.
- Dispose of stool, human and animal, in a sanitary manner.
- Boil drinking water if not from an approved source.
- Wash all fruit and vegetables carefully in water from an approved source before eating.
- Do not drink water in pools or lakes.

What should I do if I get sick with Cryptosporidiosis?
- Stay home and away from others until symptoms have gone.
- Get plenty of rest.
- Drink plenty of fluids.
- Refrain from swimming in public recreational water (pools, hot tubs, splash pads) for two weeks after the symptoms stop.
- Symptomatic individuals must be excluded from food handling, direct care of people in health care facilities, and daycare centres until symptom free for 24 hours.
- Symptomatic daycare attendees must be excluded from daycare until symptom free for 24 hours.
- Always wash hands after using the bathroom.

CD-197
O: 2007-06 R:2011-06

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FACT SHEET

Cyclosporiasis

What is it?

Cyclosporiasis is a disease caused by the parasite *Cyclospora cayetanensis*, infecting the upper small bowel. *Cyclospora* is common in developing countries.

What are the symptoms?

The most common symptom is large amounts of watery diarrhea. Other symptoms may include loss of appetite, substantial weight loss, abdominal cramps, nausea, muscle aches, and fatigue. Diarrhea can alternate with constipation. Some people who are infected have no symptoms.

Who is at risk?

People of all ages are at risk. Cyclosporiasis is usually associated with living or travelling in developing countries. The infection has also been linked to eating imported foods.

When do symptoms start?

It usually takes about one week after coming in contact with the parasite, but can range from one to 14 days. If not treated, the illness may last from a few days to a month or longer. Symptoms may seem to go away and then return one or more times.

When is it contagious?

Cyclosporiasis is contagious from the onset of symptoms until symptoms resolve.

How does it spread?

Cyclospora can be found in soil, food, water, or on surfaces that have been contaminated with stool from infected people. Ingesting food or water that has come in contact with the stool of a person infected with Cyclosporiasis can spread *Cyclospora*.

How is it treated?

It is treated with antibiotics.

How can the spread of Cyclosporiasis be reduced?

- Maintain personal hygiene.
- Dispose of stool in a sanitary manner.
- Boil drinking water if not from an approved source.
- Wash all fruit and vegetables carefully in water from an approved source before eating.
- Wash hands frequently, especially before and after using the bathroom, before preparing or eating food, after handling diapers, and being in contact with animals.
- Travelers should avoid food from questionable sources such as roadside vendors.

What should I do if I get sick with Cyclosporiasis?

- Get plenty of rest.
- Drink lots of fluids.
- See your doctor for antibiotic treatment.
- Symptomatic individuals must be excluded from food handling until symptom free for 24 hours.

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FACT SHEET

Giardiasis

What is it?
Giardiasis is a disease caused by the parasite *Giardia lamblia*.

What are the symptoms?
Symptoms include diarrhea, abdominal cramps, bloating, weight loss, dehydration, and fatigue. Bowel movements may be loose, pale and greasy. Diarrhea usually lasts several weeks but occasionally becomes chronic. Some infected people have no symptoms.

Who is at risk?
Giardiasis can affect anyone. Children are infected more frequently than adults. More cases of Giardiasis are seen in areas of poor sanitation and in institutions with children not yet toilet trained, including daycare centres.

When do symptoms start?
Symptoms usually appear seven to 10 days after ingesting the parasite but range from three to 25 days or longer.

When is it contagious?
Giardia is contagious for the entire period of infection, often months.

How does it spread?
Giardiasis is found in the intestines of infected humans and animals (beavers, muskrats, pets, and livestock). Ingestion of food or water contaminated with *Giardia* cysts can spread infection. Anal intercourse can also spread *Giardia*.

How is it treated?
It is treated with antiparasitic medication, but infection may resolve without treatment.

How can the spread of Giardiasis be reduced?
- Maintain personal hygiene.
- Wash hands frequently, especially before and after using the bathroom, before preparing or eating food, after handling diapers, after sexual activity, and after being in contact with animals.
- Dispose of stool, human and animal, in a sanitary manner.
- Boil drinking water if not from an approved source.
- Wash all fruit and vegetables carefully in water from an approved source before eating.
- Do not drink water from pools or lakes.
- Avoid sexual practices that may lead to the spread of the parasite.

What should I do if I get sick with Giardiasis?
- Stay home and away from others until symptom-free.
- Get plenty of rest and drink lots of fluids.
- See your health care provider for anti-parasitic treatment if symptoms are prolonged.
- Symptomatic individuals must be excluded from food handling, direct patient care or work in a daycare centre until symptom free for 24 hours.
- Symptomatic daycare attendees must be excluded from daycare centres until symptom free for 24 hours.
- Refrain from swimming in recreation water venues such as swimming pools, lakes and rivers for two weeks after diarrhea has resolved.

FACT SHEET

Human Metapneumovirus (hMPV)

What is it?
The human metapneumovirus (hMPV) is a virus that usually circulates in the community in late winter and early spring and causes upper and lower respiratory tract infections in people.

What are the symptoms?
Symptoms may include fever, cough, runny nose/nasal congestion, wheezing, sore throat/hoarseness and/or muscle aches. Complications of hMPV can include aggravation of asthma, difficulty breathing, pneumonia and bronchiolitis.

Who is at risk?
Children less than one year of age, elderly people and those with weakened immune systems and/or underlying medical conditions (asthma, chronic lung disease, organ transplants) are at greatest risk for complications, including hospitalization from hMPV infection.

When do symptoms start?
It is assumed that symptoms start between three to five days after being exposed to the virus.

When is it contagious?
It is believed that people can shed the virus for one to two weeks, or longer (months) if the person is immunocompromised.

How is it spread?
hMPV is spread through direct or close contact with droplets (secretions) from the mouth/nose of an infected person and through contact with objects and surfaces contaminated by these secretions.

How is it treated?
Treatment for hMPV is generally supportive and depends on the severity of symptoms. Medications to reduce fever and to improve breathing may be prescribed.

How can the spread of hMPV be reduced?
- Frequent and thorough hand hygiene.
- Cover your mouth and nose when you cough or sneeze, using your sleeve or disposable tissue.
- Avoiding visitations to daycares/long-term care facilities when sick.

What should I do if I get sick with hMPV?
- Stay home and away from others (especially young children and the elderly) until symptoms are gone.
- Cough/sneeze into your sleeve.
- Wash your hands frequently and thoroughly.
- Clean hard surfaces in your house that are handled regularly (e.g.: doorknobs, toys, telephones).
- See your health care provider if your symptoms worsen or become severe.

CD-326
O: 2011-06

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FACT SHEET

Influenza

What is it?

Influenza is a virus that causes respiratory illness in people of all ages. Influenza types A and B are the two main types that cause yearly outbreaks. In Canada, the influenza season usually runs from November through April.

What are the symptoms?

Influenza is associated with a sudden onset and may cause:

- fever - elderly people may not always develop a fever
- headache
- fatigue
- runny nose
- dry cough
- loss of appetite
- sore throat
- sneezing
- muscle aches

Note: Children may also have nausea, vomiting and diarrhea.

Who is at risk?

Certain groups are at risk for developing serious illness and/or complications, including:

- people with underlying medical conditions including; chronic respiratory disease (e.g. asthma), heart or kidney disease, diabetes, or a weakened immune system
- very young children
- pregnant women
- people aged 65 and older

When do symptoms start?

Usually one to three days after coming in contact with the virus.

When is it contagious?

People with influenza are considered contagious up to 24 hours before symptoms start until five days after the start of symptoms. Children may be contagious for up to seven days after the start of symptoms.

How does it spread?

Influenza spreads easily from person-to-person through contact with droplets from the nose and throat of infected people when they cough and/or sneeze. Influenza can also be spread through contact with objects soiled with discharge from the nose/throat of infected people (e.g. tissues, hands, toys, countertops, etc.).

How is it treated?

For most healthy people, influenza is allowed to run its course. High-risk people may be placed on antiviral medications to help reduce symptoms and shorten the length of illness.

How can the spread of Influenza be reduced?

There are several ways to reduce the spread of influenza, including:

- Getting the influenza immunization every year.
- Frequent and thorough hand hygiene.
- Staying home when sick.
- Covering your nose and mouth when you cough and sneeze, using your sleeve or disposable tissue.

What should I do if I get sick with Influenza?

- Stay at home and away from others until your symptoms are gone.
- Get plenty of rest and drink lots of fluids.
- See your health care provider if symptoms worsen or become severe.

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FACT SHEET

Legionellosis

What is Legionellosis?
A bacterial infection caused by *Legionellae* can cause two different illnesses: Legionnaires' disease and Pontiac fever. Legionnaires' disease is a type of pneumonia. Pontiac fever is a milder flu-like illness without pneumonia. *Legionella* bacteria are found naturally in the environment, usually in water. The bacteria grow best in warm water (hot water systems, air conditioning towers, humidifiers, spas, etc.).

What are the symptoms?
Legionnaires' disease can have symptoms like many other forms of pneumonia, so it can be hard to diagnose at first. Symptoms can include fever, headache, muscle aches, feeling unwell, and loss of appetite. Sometimes there is also a non-productive cough, nausea, diarrhea, and abdominal pain. The infection leads to pneumonia and can involve other systems of the body.

Pontiac fever causes flu-like illness. The symptoms may include fever, lack of appetite, headache, feeling unwell, and muscle aches. Cough may or may not be present. Pontiac fever is not associated with pneumonia. In most cases, no treatment is required, and people recover within two to five days.

Who is at risk?
People 50 years of age or greater, who smoke, have chronic lung or kidney disease, or weak immune systems (diabetes, cancer, transplant patients) are at highest risk.

When do symptoms start?
After coming in contact with the bacteria, symptoms for Legionnaires' disease can start in two to 10 days (most often five to six days), and symptoms for Pontiac fever can start in five to 66 hours (most often 24 to 48 hours).

When is it contagious?
Legionella bacteria are NOT spread from person to person. People become infected by breathing in mist or steam containing the bacteria. Single cases of Legionnaires' disease are more common, but outbreaks do occur and have been reported in hospitals, hotels, large buildings, and on cruise ships where several people have been exposed to the same source of infection.

How is it treated?
Most cases can be treated successfully with antibiotics.

How can the spread of Legionnaires' disease be reduced?
Proper maintenance and disinfection of all mist-producing devices such as showerheads, hot tubs, whirlpools and humidifiers.

What should I do if I get sick with Legionellosis?
Most people exposed to the bacteria do not become ill. If you have reason to believe that you were exposed to the bacteria, talk to your health care provider or local health unit.

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CD-224
O: 2007-08 R: 2011-06

FACT SHEET

Listeriosis

What is it?
Listeriosis is a serious bacterial infection caused by *Listeria monocytogenes*.

What are the symptoms?
Symptoms usually include fever, muscle aches, diarrhea, and sometimes, nausea and vomiting. In certain cases, the bacteria can infect the brain causing meningoencephalitis, the symptoms of which may be sudden and can include fever, intense headache, nausea, and vomiting. In pregnant women symptoms may be mild flu-like illness. Infection during pregnancy may lead to spontaneous abortion, stillbirth, premature delivery, or infection of the newborn that may lead to meningitis.

Who is at risk?
This infection mainly affects pregnant women, newborns and fetuses, the elderly, and those with weakened immune systems.

When do symptoms start?
Symptoms generally start three weeks after exposure to the bacteria, but can vary from three to 70 days.

When is it contagious?
Infected individuals can shed the bacteria in their stools for several months. Mothers of infected newborn infants can shed the bacteria in vaginal discharges or urine for seven to 10 days.

How does it spread?
People become infected with *Listeriosis* mainly by ingestion of food contaminated with the bacteria. Listeriosis can also be spread from an infected mother to the fetus during pregnancy or to the newborn during delivery.

Listeria monocytogenes is found in soil and water. Vegetables can become contaminated from the soil or from manure used as fertilizer. Animals can carry *Listeria* without appearing ill and can contaminate foods of animal origin such as meats and dairy products. *Listeria* has been found in a variety of raw foods, such as uncooked meats and vegetables, as well as in processed foods that become contaminated after processing, such as soft cheeses and cold cuts. Unpasteurized (raw) milk or foods made from unpasteurized milk may contain *Listeria*.

Unlike most other harmful bacteria, *Listeria* will grow on foods stored in a refrigerator. Foods that are contaminated with *Listeria* look, smell and taste normal. *Listeria* is killed by pasteurization and cooking. However, in certain ready-to-eat foods such as hot dogs and deli meats, contamination may occur after cooking but before packaging.

How is it treated?
Listeriosis is treated with specific antibiotics.

How can the spread of Listeriosis be reduced?
- Thoroughly cook raw food from animal sources, such as beef, pork, and poultry.
- Wash raw vegetables thoroughly before eating.
- Keep uncooked meats separate from vegetables and from cooked foods and ready-to-eat foods.
- Avoid unpasteurized (raw) milk or foods made from unpasteurized milk.
- Wash hands, knives, and cutting boards after handling uncooked foods.
- Consume perishable and ready-to-eat foods as soon as possible.
- Take appropriate precautions when handling aborted fetuses and sick or dead animals, especially sheep that have died of encephalitis.

Recommendations for persons at high risk, such as pregnant women and persons with weakened immune systems, in addition to the recommendations listed above:

- Do not eat hot dogs, luncheon meats, or deli meats, unless they are heated until steaming hot.
- Avoid getting fluid from hot dog packages on other foods, utensils, and food preparation surfaces, and wash hands after handling hot dogs, luncheon meats, and deli meats.
- Do not eat soft cheeses such as feta, Brie, and Camembert, blue-veined cheeses, or Mexican-style cheese such as queso blanco, queso fresco, and Panela, unless they have labels that clearly state they are made from pasteurized milk.
- Do not eat refrigerated pâtés or meat spreads. Canned or shelf-stable pâtés and meat spreads may be eaten.
- Do not eat refrigerated smoked seafood, such as salmon, trout, whitefish, cod, tuna or mackerel, often labelled as "nova-style," "lox," "kippered," "smoked," or "jerky," unless it is contained in a cooked dish (e.g. casserole). This fish is found in the refrigerator section or sold at deli counters of grocery stores and delicatessens. Canned or shelf-stable smoked seafood may be eaten.
- Avoid contact with potentially infective materials, such as aborted fetuses on farms.

What should I do if I get sick with Listeriosis?

- Finish the antibiotic prescription, even if starting to feel better.
- Get plenty of rest.

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CD-225
O: 2007-08 R: 2011-06

FACT SHEET

Norovirus

What is it?
Noroviruses are a group of viruses that cause gastroenteritis in people. It is often called stomach flu, although it is not related to the flu (or influenza) which is a respiratory illness caused the influenza virus.

What are the symptoms?
The symptoms are sudden onset of nausea, vomiting, diarrhea, and abdominal cramps. Other symptoms may include a low-grade fever, chills, headache, and feeling unwell. Symptoms usually last 24 to 48 hours but may last longer in some people.

Who is at risk?
Noroviruses occur throughout the year but are more common in winter and affect all age groups.

When do symptoms start?
The symptoms usually start 24 to 48 hours after exposure to the virus but may occur as early as 12 hours after exposure.

When is it contagious?
People infected with Norovirus are contagious from the moment they begin feeling ill to at least 48 hours after they no longer have symptoms.

How is it spread?
The virus is found in the stool or vomit of infected people. It is spread by direct contact with a person who is ill or through indirect contact by touching surfaces contaminated with the virus, like door handles or by eating food or drinking water that has been contaminated. Good evidence exists that droplets from aerosolization of vomitus can also spread the virus. The virus can survive on hard surfaces in the environment for up to 12 hours. It can survive on contaminated carpet for up to 12 days.

How is it treated?
There is no specific treatment for this viral infection.

How can the spread of Norovirus be reduced?
- Frequent and thorough handwashing is the best prevention, especially after using the bathroom or handling diapers and before eating or preparing food.
- Eat food that is well cooked and still hot when served.
- Thoroughly wash fruits and vegetables, in a safe water source, before eating.
- Thoroughly clean contaminated surfaces immediately after an episode of illness with warm, soapy water and then disinfect the area using a household disinfectant. Immediately remove and wash clothing or linen that may be contaminated with stool or vomit.
- Flush or discard any vomit and/or stool in the toilet and make sure that the surrounding area is kept clean.
- Avoid shaking out soiled linen and wear household gloves when handling soiled materials.

What should I do if I get sick with *Norovirus*?
- Stay home and away from others until symptoms have gone.
- Get plenty of rest and drink lots of fluids.
- Symptomatic individuals must be excluded from food handling, direct patient care in health care facilities and daycare centres until symptom free for 48 hours.
- Symptomatic daycare attendees must be excluded from daycare centre until symptom free for 48 hours.
- See your health care provider if your symptoms are severe.

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FACT SHEET

Parainfluenza

What is it?

There is more than one type of Parainfluenza virus, all of which can cause upper or lower respiratory infections (pneumonia) in adults and children.

What are the symptoms?

Symptoms vary depending on the type of infection. Cold-like symptoms consisting of a runny nose and mild cough are common. Life-threatening respiratory symptoms can be seen in young infants with bronchiolitis. Other symptoms include: fever, congestion, sore throat, croup, wheezing, bronchitis, shortness of breath, and chest pain.

Who is at risk?

Young children, the elderly, and people with weakened immune systems are at greatest risk. By school age, most children have been exposed to parainfluenza virus. Most adults have antibodies against parainfluenza although they can have repeat infections.

When do symptoms start?

Symptoms usually start two to six days after coming in contact with the virus.

When is it contagious?

A person can spread the virus shortly before symptoms start and throughout the course of the infection.

How does it spread?

Parainfluenza is spread through contact with droplets from the nose and throat of infected people when they cough or sneeze. It can also be spread by contact with soiled surfaces or objects. The virus can remain in the air for more than an hour.

How is it treated?

There is no specific treatment for this viral infection. Your health care provider may suggest treating the symptoms with over-the-counter medications.

How can the spread of Parainfluenza be reduced?

- Good hand hygiene is very important.
- Cover your mouth and nose when coughing or sneezing using your sleeve or disposable tissue.
- Put soiled tissues in the garbage right away.

What should I do if I get sick with Parainfluenza?

- Stay home and away from others until symptoms are gone.
- Get plenty of rest.
- Drink lots of fluids.
- See your health care provider if your symptoms are severe.

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CD-227
O: 2007-08 R: 2011-06

FACT SHEET

Pertussis (Whooping Cough)

What is it?
Whooping cough is a vaccine preventable disease of the respiratory tract caused by the bacteria *Bordetella pertussis.*

What are the symptoms?
Pertussis starts like a cold with a runny nose, sneezing and an irritating cough that gradually (over one to two weeks) becomes more frequent and severe. The cough may end in gagging, vomiting or difficulty breathing. In children, the coughing is often followed by a loud "whoop" when breathing in. Infants under six months of age and people who have been immunized may not have the "whoop" or the coughing fits. The cough can last one to two months and may be worse at night. Immunized people who become ill with pertussis usually have milder illness than those who have not been immunized.

Who is at risk?
Children, especially babies, are at high risk for serious infections and complications, but pertussis can affect individuals of any age.

When do symptoms start?
After coming in contact with the bacteria, symptoms can start in nine to 10 days (range six to 20 days).

When is it contagious?
Pertussis is contagious for up to three weeks after symptoms begin. It is most contagious in the early stage of infection. A person is no longer contagious after completing five days of appropriate antibiotic treatment.

How does it spread?
It is spread easily from person to person by direct contact with droplets produced when an infected person coughs or sneezes.

How is it treated?
Pertussis is treated with antibiotics. Unless started very early in the illness, antibiotics will not have any effect on how long the cough and other symptoms last, but will help lessen the chance of spreading the disease and reduce the possibility of complications.

How can the spread of Pertussis be reduced?
- All children can be immunized against pertussis as part of routine childhood immunization. Immunization can provide 60 to 80 per cent effectiveness against the disease and reduce the severity in others.
- Frequent and thorough hand hygiene can help reduce the spread of Pertussis.
- Cover your mouth and nose when coughing or sneezing using your sleeve or disposable tissue.
- Do not share water bottles, straws, eating utensils, cigarettes, toothbrushes, toys, or anything that has been in contact with saliva, or droplets from the nose or throat of an infected person.
- Wash hands after touching articles soiled with droplets from the mouth or nose.

What should I do if I get sick with Pertussis?
- See your health care provider for treatment.
- If antibiotics are prescribed, avoid contact with others until five days of treatment have been completed.
- If no antibiotics are prescribed, avoid contact with others until 21 days after coughing started.
- Stay home if you are ill, and away from others particularly young children, infants, and women in their third trimester of pregnancy.

CD-203
O: 2007-06
R: 2011-06 R: 2012-07

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HALIBURTON, KAWARTHA, PINE RIDGE DISTRICT HEALTH UNIT

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FACT SHEET

Pneumococcal pneumonia

What is it?

Pneumonia is a lung disease that can be caused by a variety of viruses, bacteria, and sometimes fungi. Pneumococcal pneumonia is an infection in the lungs caused by bacteria called *Streptococcus pneumoniae*. *S. pneumoniae*, also called pneumococcus, can infect the upper respiratory tracts of adults and children and can spread to the blood, lungs, middle ear, or nervous system.

What are the symptoms?

Pneumococcal pneumonia may begin with sudden onset of severe chills, high fever, cough, shortness of breath, rapid breathing and chest pains. Other symptoms include: nausea, vomiting, headache, tiredness and muscle aches.

Who is at risk?

Pneumococcal pneumonia mainly causes illness in children younger than two years old and adults 65 years of age or older. Elderly people are at risk of becoming seriously ill and dying from this disease. People with certain medical conditions such as chronic heart, lung, or liver diseases or sickle cell anemia are also at increased risk of serious illness from pneumococcal infection. People with HIV infection, AIDS, or people who have had organ transplants and are taking medicines that lower their resistance to infection are also at high risk.

When do symptoms start?

It may take as little as one to three days after coming in contact with the bacteria for symptoms to appear.

When is it contagious?

It is presumed that the disease can be spread until the droplets from the nose and throat no longer contain infective pneumococci in high numbers. A person is no longer contagious after 24 to 48 hours of appropriate antibiotic treatment.

How is it spread?

Pneumococci are spread through contact with droplets from the nose and throat of infected people when they cough or sneeze, or from direct oral contact with an infected person. It can also be spread through contact with surfaces or objects contaminated with the bacteria.

How is it treated?

Pneumococcal pneumonia can be treated with antibiotics, usually penicillin, but some strains are resistant to antibiotics. If the strain of bacteria causing the infection is not resistant, the person will no longer be contagious after 24 to 48 hours of appropriate antibiotic treatment.

How can the spread of Pneumococcal pneumonia be reduced?

- Immunization with pneumococcal vaccine is the best way to prevent pneumococcal pneumonia. Vaccines are available for children and adults.
- Frequent and thorough hand hygiene.
- Cover your mouth and nose when coughing or sneezing, using your sleeve or disposable tissue.

What should I do if I get sick with Pneumococcal pneumonia?

- Stay home and away from others until symptoms are gone.
- Get plenty of rest and drink lots of fluids.
- Contact your health care provider for appropriate treatment.

FACT SHEET

Rhinovirus

What is it?

Rhinoviruses are the usual cause of the "common cold."

What are the symptoms?

Symptoms include runny nose, sore throat, sneezing, watery eyes and tiredness.

Who is at risk?

Everyone.

When do symptoms start?

Symptoms usually start two to three days but occasionally up to seven days after coming in contact with the virus .

When is it contagious?

It varies, but ranges from seven to 10 days after symptoms start.

How does it spread?

Rhinovirus is spread from person-to-person through contact with droplets from the nose and throat of infected people when they cough or sneeze. It can also be spread through contact with objects soiled with discharge from the nose/throat of infected people (e.g. tissues, hands, toys, countertops, etc.).

How is it treated?

There is no treatment for this infection. Your health care provider may suggest treating symptoms with over-the-counter medications.

How can the spread of Rhinovirus be reduced?

- Frequent and thorough hand hygiene.
- Covering your nose and mouth when you cough and sneeze, using your sleeve or disposable tissue.

What should I do if I get sick with Rhinovirus?

- Stay at home and away from others until your symptoms are gone.
- Get plenty of rest.
- Drink lots of fluids.
- Contact your health care provider if symptoms worsen or are severe.

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CD-207
O: 2007-06 R: 2011-06

FACT SHEET

Rotavirus

What is it?
Rotavirus is a viral infection that causes gastroenteritis in people.

What are the symptoms?
The symptoms are vomiting, fever, and watery diarrhea. They last on average three to eight days. The symptoms can become severe and result in dehydration.

Who is at risk?
Rotavirus is common in children, although adults can also become infected. The virus can cause illness in day care environments, in the elderly living in long-term care homes and in community residences for older adults.

When do symptoms start?
The symptoms usually start 24 to 72 hours after exposure to the virus.

When is it contagious?
Rotavirus may be present in the stool before the onset of symptoms until approximately eight days after. However, in rare cases, in people who are immunocompromised, it has been reported to be present in the stool for as long as 30 days after the onset of symptoms.

How is it spread?
The virus is found in the stool or vomit of infected people. It is spread by direct contact with a person who is ill or through indirect contact by touching surfaces contaminated with the virus, like door handles or by eating food or drinking water contaminated with the virus. The virus may also be spread through respiratory secretions when a person coughs, sneezes or vomits.

How is it treated?
There is no specific treatment for this infection.

How can the spread of Rotavirus be reduced?
- Frequent and thorough hand hygiene is the best prevention, especially after using the bathroom or handling diapers and before eating or preparing food.
- Thoroughly clean contaminated surfaces immediately after an episode of illness with warm, soapy water and then disinfect the area using a household disinfectant. Immediately remove and wash clothing or linen that may be contaminated with stool or vomit.
- Flush or discard any vomit and/or stool in the toilet and make sure that the surrounding area is kept clean.
- Avoid shaking out soiled linen and wear gloves when handling soiled materials.
- Symptomatic individuals must be excluded from food handling, direct patient care or work in a daycare until symptom free for 24 hours.
- Symptomatic daycare attendees must be excluded from daycare centres until symptom free for 24 hours.
- Rotavirus vaccine is available for infants under six months of age. Ask your health care provider.

What should I do if I get sick with Rotavirus?
- Stay home and away from others until symptoms are gone.
- Get plenty of rest.
- Drink lots of fluids.
- See your health care provider if your symptoms are severe.

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R: 2012-06

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Haliburton, Kawartha, Pine Ridge District Health Unit

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FACT SHEET

Respiratory Syncytial Virus (RSV)

What is it?
RSV is a virus that can cause acute respiratory tract illness. Most people have been infected with this virus within the first few years of life. Immunity, however, is not complete and re-infection is common. This infection usually occurs in late winter and early spring.

What are the symptoms?
Although RSV infections may look like the common cold, they tend to be more severe and last longer. Bronchiolitis, croup, pneumonia and influenza-like illness are often the signs of RSV in infants and the elderly. Other symptoms include fever, conjunctivitis (swelling or infection of the eyelids), earache, nasal congestion, cough, sore throat, headache and fatigue.

Who is at risk?
People of all ages are at risk. RSV is the major cause of lower respiratory tract illness in young children. For elderly people and those with other medical conditions, RSV infections can involve both the upper and lower respiratory tracts and may be severe. Pneumonia can develop in five to 50 per cent of elderly cases and can lead to death in up to 20 per cent of these cases.

When do symptoms start?
Symptoms usually start within four to six days but can range from two to eight days after coming in contact with the virus.

When is it contagious?
The infection can be spread for seven to 14 days after symptoms appear, but may last longer in young infants where viral shedding may continue for three to four weeks.

How does it spread?
RSV is spread through contact with droplets from the nose and throat of infected people when they cough and sneeze. It can also be spread through dried droplets on objects as the virus can live on surfaces for many hours and for a half-hour or more on unwashed hands. RSV is not spread through the air.

How is it treated?
Most cases of RSV do not need any treatment and you will get better on your own. For severe cases, oxygen therapy and or an antiviral medication may be prescribed.

How can the spread of RSV be reduced?
- Frequent and thorough hand hygiene.
- Cover your mouth and nose when coughing or sneezing, using your sleeve or disposable tissue.

What should I do if I get sick with RSV?
- Stay home and away from others until symptoms are gone.
- Get plenty of rest.
- Drink lots of fluids.
- See your health care provider if your symptoms are severe.

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CD-229
O: 2007-06 R: 2011-06

FACT SHEET

Salmonellosis

What is it?
Salmonellosis is a food-borne infection caused by *Salmonella* bacteria. There are many different types of *Salmonella*. These bacteria grow in the small intestine and invade the gut lining.

What are the symptoms?
Symptoms range from mild to severe. Typical symptoms include abdominal pain, headache, diarrhea, fever, nausea, and sometimes vomiting. Dehydration can be severe, especially among infants and the elderly.

Who is at risk?
Everyone is at risk, but infection occurs more frequently in infants and young children. People with a history of gastrointestinal surgery, cancer, immunosuppressive treatments and HIV infection are at greater risk of having symptoms and a more serious illness.

When do symptoms start?
Salmonella is fast acting and generally causes symptoms within 12 to 36 hours, but onset can range from six to 72 hours after coming in contact with the bacteria.

When is it contagious?
Salmonella is contagious throughout the course of the infection. This can be extremely variable, usually several days to several weeks. Some people, particularly children under five and one per cent of infected adults, become carriers and can continue to excrete the bacteria in their stool for more than a year.

How does it spread?
Salmonella bacteria are commonly found in the intestines of livestock, poultry, turtles, exotic pets (i.e. iguanas), dogs, cats, and rodents. They can be found in certain foods such as unpasteurized milk, raw eggs and egg products, uncooked poultry or meats, and unwashed fruits and vegetables. Illness usually occurs after individuals eat or drink foods contaminated with *Salmonella* bacteria. In addition, the bacteria can spread from one food product to another. This happens if utensils or counter tops used to prepare contaminated foods are re-used without proper cleaning.

Infected people can also be a source of the infection. Person-to-person transmission can occur when the bacteria are passed in the stool and make their way to another person on unwashed hands, contaminating food or objects. *Salmonella* bacteria are then ingested by another person, which can make them ill.

How is it treated?
For uncomplicated Salmonellosis, treatment is rarely necessary. Health care providers (HCPs) may prescribe antibiotics, particularly for infants, the elderly, and those with other illnesses. Antibiotics may not eliminate the carrier state.

How can the spread of Salmonellosis be reduced?
- Frequent and thorough hand hygiene.
- Clean counter tops and utensils immediately after the preparation of foods, particularly meats and poultry.
- If possible, have separate cutting boards for raw and cooked meats.
- Drink only pasteurized milk.
- Store and serve foods at appropriate temperatures.
- If you are served undercooked meat, poultry or eggs in a restaurant, don't hesitate to send it back for further cooking.

- Cook poultry and meat thoroughly.
- Avoid using raw eggs, in eggnogs or homemade ice cream, and never use dirty or cracked eggs.
- Keep in mind that turtles, chicks and ducks may be *Salmonella* carriers, and are not suitable pets for small children.

What should I do if I get sick with Salmonellosis?

- Wash your hands frequently with soap and warm running water or use alcohol based hand rub, especially after using the bathroom.
- Disinfect areas of household that may have come in contact with contaminated stool.
- If your HCP prescribes you antibiotics, complete the prescription even if you begin to feel better.
- Drink plenty of fluids to avoid dehydration.
- Symptomatic individuals must be excluded from food handling, direct patient care or work in a daycare until symptoms free for 24 hours.
- Symptomatic daycare attendees must be excluded from daycare centre until symptom free for 24 hours.
- Avoid preparing food or pouring water for others until you are symptom free for 24 hours.
- Avoid medication such as loperamide (Imodium) as it is likely to make infection worse.

Haliburton, Kawartha,
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CD-204
O: 2007-06 R: 2011-06

FACT SHEET

Verotoxin-producing *Escherichia coli* (E. coli)

What is it?

E. coli belongs to a family of bacteria with many strains. One of these strains, *E. coli O*157:H7 is responsible for severe illness in humans. Because of its association with raw ground beef, this particular strain of *E. coli* is sometimes referred to as "hamburger disease." This bacterium has been implicated in widespread outbreaks related to specific food products. Outbreaks have also been linked to contaminated water.

What are the symptoms?

E. coli often causes diarrhea ranging from mild to severe and sometimes bloody. Other symptoms include abdominal cramps, feeling unwell, exhaustion, dehydration, nausea and vomiting. Fever is not usually present. Symptoms generally last fewer than five days.

A very serious complication of *E. coli* is called Hemolytic Uremic Syndrome (HUS), which can cause red blood cell destruction and kidney failure and, in severe cases, death.

Who is at risk?

It takes only a very small amount of bacteria to make a person ill. Children under five years of age and the elderly are most frequently diagnosed with this infection and are also the most likely to experience severe complications.

When do symptoms start?

Generally people become ill three to four days after coming in contact with the bacteria, but can range from two to 10 days. HUS may develop up to two weeks after onset of diarrhea.

When is it contagious?

E. coli is generally passed in a person's stool for one week or less. About one third of children will pass the bacteria for three weeks. It is uncommon to be contagious for longer than three weeks.

How does it spread?

E. coli can be found in both food and water. Undercooked hamburger meat, unpasteurized milks and juices and contaminated fruits and vegetables are common sources of infection. Person-to-person spread has been known to occur within families and daycare centres. Both drinking and recreational waters (i.e. swimming) have been associated with *E. coli*. Poor hand hygiene and improper food handling are factors that can lead to the spread of the bacteria. Animal-to-person transmission can occur at farms and petting zoos.

How is it treated?

Current recommendations suggest not using antibiotics as some may increase the risk of developing HUS. Antidiarrheal agents, such as loperamide drugs (Imodium), should be avoided.

Some individuals do require hospitalization and fluid replacement for dehydration while they are ill. HUS is usually treated in the intensive care unit and may require blood transfusions and kidney dialysis.

How can the spread of *E. coli* be reduced?

Thorough hand hygiene is the best prevention. Make sure hands are properly washed after using the bathroom, after contact with animals, and before preparing food.

- Consume only pasteurized milk and dairy products, fruit juices and cider.
- Wash fruits and vegetables with water from an approved source.
- Hamburger must be cooked until the juices run clear and the meat is grey/brown inside.
- Keep cold foods at 4°C or lower. Keep hot foods at 60°C or higher.
- Clean and sanitize countertops and utensils after they have been in contact with raw meats.
- Use separate platters, utensils and cutting boards for raw meats.

- Keep raw food away from ready-to-eat food while shopping, storing and preparing it.
- Follow beach advisories as well as "boil water" advisories in your area when applicable.
- If your household is supplied by well water, ensure your well water is tested regularly.

What should I do if I get sick with *E. coli*?

- Wash your hands frequently with soap and water or use alcohol based hand rub (ABHR). Disinfect areas of your household that may have come in contact with contaminated stool.
- Anyone who shows symptoms of *E. coli* should see their health care provider (HCP) immediately.
- When experiencing diarrhea, it is very important to get rest and drink plenty of fluids.
- If your illness is severe, consult your HCP or local emergency department.
- Avoid preparing or handling food for others.
- Symptomatic food handlers and health care workers must not return to work until symptom free for 24 hours.
- Symptomatic daycare staff and attendees must not return to daycare centres until two negative stool samples have been submitted.

Haliburton, Kawartha, Pine Ridge District Health Unit

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CD-199
O: 2007-06 R: 2011-06

FACT SHEET

Oseltamivir (TAMIFLU™)

What is it?
Tamiflu™ is an antiviral medication.

What is the purpose of taking Tamiflu™?
Tamiflu™, may help stop influenza from spreading inside the body and shorten the length of illness. It can also be used to reduce the risk of getting influenza in adults and children over one year of age.

How does Tamiflu™ work?
Tamiflu™ prevents the spread of infectious virus in the body by stopping an enzyme called neuraminidase, which is necessary for the virus to spread.

When should Tamiflu™ be taken?
For treatment, Tamiflu™ is taken twice a day for five days. It should be started within two days of the start of symptoms, ideally within 40 hours. For prevention in institutions with confirmed influenza outbreaks, Tamiflu™ is taken once a day until the outbreak is over.

How is Tamiflu™ prescribed?
Tamiflu™ comes in capsule form and requires a prescription. Tamiflu™ is excreted by the kidneys. People with kidney disease may need a blood test to know their correct dosage.

What are the possible side effects of Tamiflu™?
Tamiflu™ has few side effects. The most common side effects are mild to moderate nausea and vomiting.

Who should not take Tamiflu™?
You should not take Tamiflu™ if you are allergic to any item in the product. If you are pregnant, planning on becoming pregnant, breastfeeding or have kidney disease, you and your health care provider should decide if Tamiflu™ is right for you.

HALIBURTON, KAWARTHA, PINE RIDGE DISTRICT HEALTH UNIT

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CD-233
O: 2007-08 R: 2011-06

FACT SHEET

Zanamivir (RELENZA™)

What is Relenza™?

Relenza™ is an antiviral medication.

What is the purpose of taking Relenza™ ?

Relenza™ may help stop influenza from spreading inside the body and shorten the length of illness by one to two days. Relenza™ can also be used to reduce the risk of getting influenza in adults and children over seven years of age.

How does Relenza™ work?

When inhaled, Relenza™ stops the spread of the influenza virus to healthy cells in the respiratory tract. With less influenza in the respiratory tract, there is a reduction in symptoms and a less severe infection because the body's defence does not have to work as hard to fight the virus.

When should Relenza™ be taken?

For treatment, Relenza™ is taken twice a day for a total of five days, and works best when started within two days of the start of symptoms. For prevention in institutions with confirmed influenza outbreaks, Relenza™ is taken once a day for a minimum of two weeks.

How is Relenza™ prescribed?

Relenza™ requires a prescription. It is in powder form and is taken using an inhaler. Relenza™ is inhaled directly into the respiratory tract to fight the influenza virus.

What are the possible side effects of Relenza™?

Relenza™ is generally well tolerated although bronchospasms and allergies can occur.

Who should not take Relenza™?

If you suffering from asthma or chronic respiratory disease, you and your health care provider should decide if Relenza™ is right for you.

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CD-234
O: 2007-08 R:2011-06

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PARTNERS FOR HEALTH | PARTENAIRES POUR LA SANTÉ

Fact Sheet

Hand Hygiene for Health Care Settings

Based on PIDAC's Best Practices for Hand Hygiene in All Health Care Settings

In health care settings, hand hygiene is the single most important way to prevent infections

Hand hygiene is the responsibility of the organization and all individuals involved in health care. Hand hygiene is a core element of client/patient/resident safety for the prevention of infections and the spread of antimicrobial resistance. There are two methods of performing hand hygiene:

1. ALCOHOL-BASED HAND RUB (ABHR)

ABHR is the preferred method for decontaminating hands. ABHR is faster and more effective than washing hands (even with an antibacterial soap) when hands are not visibly soiled. ABHRs:

- provide for a rapid kill of most transient microorganisms
- contain a variety of acceptable alcohols in concentrations from 60 to 90%; 70 to 90% is preferred for health care settings
- are not to be used with water
- contain emollients to reduce hand irritation
- are less time-consuming than washing with soap and water

If running water is not available, use moistened towelettes to remove the visible soil, followed by ABHR

2. HAND WASHING

Hand washing with soap and running water must be performed when hands are visibly soiled. Antimicrobial soap may be considered for use in critical care areas but is not required and not recommended in other care areas. Bar soaps are not acceptable in health care settings except for individual client/patient/resident personal use.

FACTORS THAT REDUCE THE EFFECTIVENESS OF HAND HYGIENE

The following factors reduce the effectiveness of hand hygiene:

Condition of the skin: See PIDAC's *Best Practices for Hand Hygiene in All Health Care Settings,* Section 4, "*Hand Care*", for information about maintaining skin integrity.

Nails: Long nails are difficult to clean, can pierce gloves and harbour more microorganisms than short nails. Nails must be kept clean and short.

Nail polish: Only nail polish that is fresh and free of cracks or chips is acceptable.

Artificial nails or nail enhancements are not to be worn by those giving care.

Jewellery: Hand and arm jewellery hinder hand hygiene. Rings increase the number of microorganisms present on hands and increase the risk of tears in gloves. Arm jewellery, including watches, should be removed or pushed up above the wrist before performing hand hygiene.

Products: Products must be dispensed in a disposable pump container that is not topped-up, to prevent contamination.

Your 4 Moments for Hand Hygiene

1 Before initial client/patient/ resident or environment contact

When? Clean your hands when entering a room :

- before touching client/patient/resident
- before touching any object or furniture in the client/patient/resident's environment

Why? To protect the client/patient/resident and their environment from harmful germs carried on your hands.

2 Before aseptic procedure

When? Clean your hands immediately before any aseptic procedure.

Why? To protect the client/patient/resident from harmful germs, including his/her own germs, entering his or her body.

3 After body fluid exposure risk

When? Clean your hands immediately after an exposure risk to body fluids (and after glove removal)

Why? To protect yourself and the health care environment from harmful client/patient/resident germs.

4 After client/patient/resident or environment contact

When? Clean your hands when leaving:

- after touching client/patient/resident or
- after touching any object or furniture in the client/patient/resident's environment

Why? To protect yourself and the health care environment from harmful germs.

For more information please contact ipac@oahpp.ca

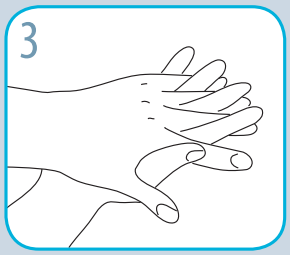
Ontario Agency for Health Protection and Promotion / Agence de protection et de promotion de la santé

How to hand**rub**

Rub hands for 15 seconds

Apply 1 to 2 pumps of product to palms of dry hands.

Rub hands together, palm to palm.



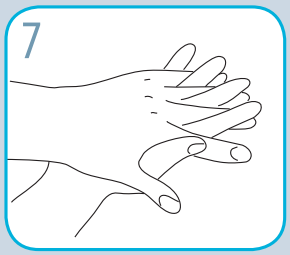
Rub in between and around fingers.

Rub back of each hand with palm of other hand.

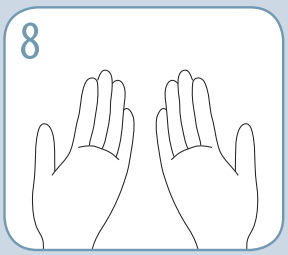
Rub hands for 15 seconds

Rub fingertips of each hand in opposite palm.

Rub each thumb clasped in opposite hand.



Rub hands until product is dry . Do not use paper towels.



Once dry, your hands are safe.

JUST CLEAN YOUR HANDS

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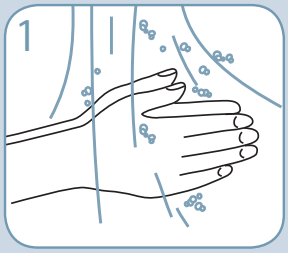
Ontario

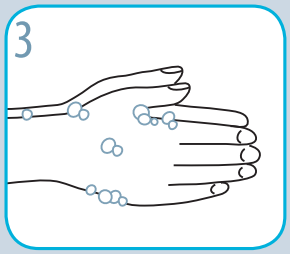
How to handwash

Lather hands for 15 seconds



Wet hands with warm water.

Apply soap.

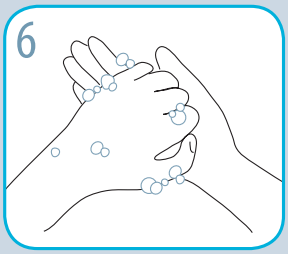


Lather soap and rub hands palm to palm.

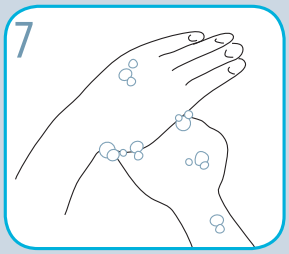
Rub in between and around fingers.

Lather hands for 15 seconds

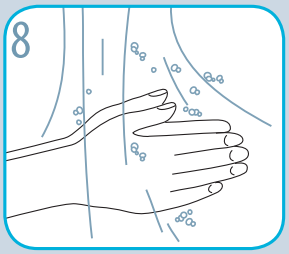
Rub back of each hand with palm of other hand.



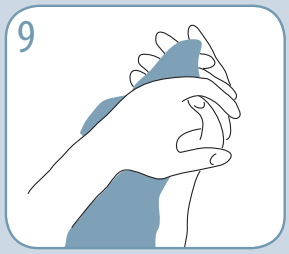
Rub fingertips of each hand in opposite palm.



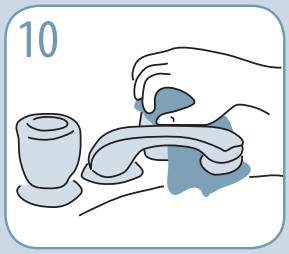
Rub each thumb clasped in opposite hand.



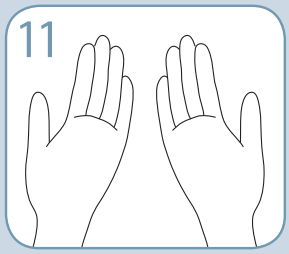
Rinse thoroughly under running water.



Pat hands dry with paper towel.



Turn off water using paper towel.



Your hands are now safe.

JUST CLEAN YOUR HANDS

Catalogue No. 011875 13M March 2009

Ontario

Recommended Steps for Putting On and Taking Off Personal Protective Equipment (PPE)

PUTTING ON PPE

1. Perform Hand Hygiene

2. Put on Gown

- Tie neck and waist ties securely

3. Put on Mask/N95 Respirator

- Place mask over nose and under chin
- Secure ties, loops or straps
- Mould metal piece to your nose bridge
- For respirators, perform a seal-check

4. Put on Protective Eyewear

- Put on eye protection and adjust to fit
- Face shield should fit over brow

5. Put on Gloves

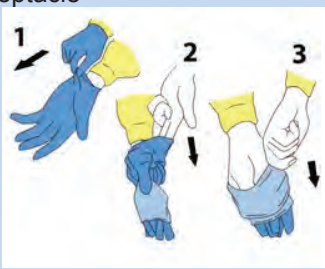
- Put on gloves, taking care not to tear or puncture glove
- If a gown is worn, the glove fits over the gown's cuff

Images developed by Kevin Rostant. Some images adapted from Northwestern Ontario Infection Control Network – NWOICN

TAKING OFF PPE

1. Remove Gloves

- Remove gloves using a glove-to-glove/skin-to-skin technique
- Grasp outside edge near the wrist and peel away, rolling the glove inside-out
- Reach under the second glove and peel away
- Discard immediately into waste receptacle



2. Remove Gown

- Remove gown in a manner that prevents contamination of clothing or skin
- Starting at the neck ties, the outer, 'contaminated', side of the gown is pulled forward and turned inward, rolled off the arms into a bundle, then discarded immediately in a manner that minimizes air disturbance

3. Perform Hand Hygiene

4. Remove Eye Protection

- Arms of goggles and headband of face shields are considered to be 'clean' and may be touched with the hands
- The front of goggles/face shield is considered to be contaminated
- Remove eye protection by handling ear loops, sides or back only
- Discard into waste receptacle or into appropriate container to be sent for reprocessing
- Personally-owned eyewear may be cleaned by the individual after each use

5. Remove Mask/N95 Respirator

- Ties/ear loops/straps are considered to be 'clean' and may be touched with the hands
- The front of the mask/respirator is considered to be contaminated
- Untie bottom tie then top tie, or grasp straps or ear loops
- Pull forward off the head, bending forward to allow mask/respirator to fall away from the face
- Discard immediately into waste receptacle

6. Perform Hand Hygiene

Stay Home!

Protect Your Residents

- If you are sick, call in and inform the appropriate person.
- If you have respiratory symptoms, stay at home for five days, or until your symptoms have resolved, whichever is shorter.
- Do not work at another home if you are ill.

Brought to you by your employer and
Haliburton, Kawartha, Pine Ridge District Health Unit

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Brought to you by your employer and
Haliburton, Kawartha, Pine Ridge District Health Unit

Attention All Staff!

Protect Yourself - Protect Others

Having a flu shot this fall is the #1 way of protecting yourself and others from getting the flu.
Prevent loss of income and valuable family time.

B E W I S E - I M M U N I Z E

Check your staff bulletin board for dates and locations of flu clinics in the home, in the community, or go to your health care provider.

Brought to you by your employer and
Haliburton, Kawartha, Pine Ridge District Health Unit

Attention All Staff!

Protect Yourself - Protect Others

STOP

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Brought to you by your employer and
Haliburton, Kawartha, Pine Ridge District Health Unit

Duty of Care

Protect Your Residents

Health care workers should consider it their responsibility to provide the highest standard of care, which includes annual influenza immunization. In the absence of contraindications, refusal of health care workers to be immunized against influenza implies failure in their duty of care to patients.

Brought to you by your employer and

Haliburton, Kawartha, Pine Ridge District Health Unit

Source: Public Health Agency of Canada: *National Advisory Committee on Seasonal Influenza Vaccine. (2014). Statement* on seasonal influenza vaccine for 2014-2015 (pg. 51).

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Source: Public Health Agency of Canada: *National Advisory Committee on Seasonal Influenza Vaccine. (2014). Statement* on seasonal influenza vaccine for 2014-2015 (pg. 51).

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Brought to you by your employer and

Haliburton, Kawartha, Pine Ridge District Health Unit

Source: Public Health Agency of Canada: *National Advisory Committee on Seasonal Influenza Vaccine. (2014). Statement* on seasonal influenza vaccine for 2014-2015 (pg. 51).

Flu Clinics are Here!

Protect yourself, your family, and those you provide care for

Location:_____

Date: _____

Time: _____

If you can not make it to this clinic, you can get the flu shot from your health care provider, or you can visit **www.hkpr.on.ca** to find Flu Clinics in the community.

Brought to you by your employer and

Haliburton, Kawartha, Pine Ridge District Health Unit

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Location:_____

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Time: _____

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Brought to you by your employer and

Haliburton, Kawartha, Pine Ridge District Health Unit

Haliburton, Kawartha, Pine Ridge District Health Unit

Recommendations for Outbreak Control Measures

Outbreak #:_____

Type of Outbreak: ❑ Respiratory ❑ Enteric ❑ Both Causative Organism:_____

Control Measure	Check
Declaring an outbreak	
Post outbreak notification signs at all entrances to the home indicating that the premise is in an outbreak.	
Establish a case definition with the assistance of the Health Unit.	
Advise facility Health Care Provider(s) (HCP) of outbreak.	
Apply appropriate isolation measures for ill residents, as directed by public health staff.	
Line List	
Record case information on the Health Unit line list(s). Please fill out all columns as appropriate.	
Fax line listing(s) to the Health Unit every morning during the outbreak.	
Ensure that one person and a back-up are assigned to record information on the line list(s) to minimize errors and ensure that the case definition is met.	
Increase surveillance (active) of the reported symptoms for staff and residents.	
Transfers/Movement	
Do not admit new residents into the facility. If required, contact the Health Unit.	
Re-admit only residents who met the case definition to the facility provided the appropriate accommodations and care can be provided. To re-admit residents who were NOT cases, contact the Health Unit.	
Minimize movement of staff, students or volunteers between floors/resident home areas.	
Postpone non-urgent medical appointments and events.	
Visitors	
Advise visitors of the potential risk of acquiring illness.	
Advise family members of the illness of their relative(s).	
Advise ill visitors not to enter the premise.	
Encourage visitors to postpone visits wherever possible.	
Ensure that visitors who choose to visit during the outbreak are asked to: a) wash hands on arrival and just before leaving the resident's room; b) visit only one resident and exit the home immediately after the visit; and c) wear personal protective equipment (PPE) as required.	
Place notices on the door of the rooms of ill residents advising visitors to check at the nursing station before entering room.	
Ensure that ill residents are visited in their room only.	
Avoid visitation by outside groups (i.e. entertainers, meetings, community groups, etc.).	

Control Measure	Check
Environmental Cleaning	
Ensure documentation of the assigned responsibility for cleaning all environmental surfaces including furniture (bed rails, over-bed tables, etc.) and non-critical resident care items (i.e. call bells).	
Ensure disinfection procedures are appropriate and are being implemented.	
Ensure frequent cleaning of environmental surfaces and non-critical patient care items using hospital grade detergents, cleaners, disinfectants.	
Ensure that the components of an effective cleaning process include: a sufficient quantity of hospital grade detergents, cleaners, or disinfectants, in the correct concentration, are applied with a clean cloth; and that the contact time, indicated on the manufacturer's label are adhered to and are according to workplace safety requirements.	
Ensure all horizontal and frequently-touched surfaces are cleaned daily and more often when soiled.	
Ensure that routine practices are applied when handling soiled linen.	
Ensure routine practices are applied to handling of clinical waste.	
Ensure that resident care equipment is disposable whenever possible.	
Ensure that soiled resident care equipment is handled in a manner that prevents exposure of skin and mucous membranes and contamination of clothing or the environment.	
Ensure that equipment is cleaned and disinfected prior to use and between residents.	
Staff	
Exclude ill staff, students or volunteers from work, as directed by the Health Unit.	
Advise staff, students and volunteers not to work at other facilities for a specified period of time as directed by the Health Unit.	
Cohort staff (assigned staff working with ill residents and different staff working with well residents).	
Offer education on hand hygiene and/or PPE to all staff as needed.	
Increase access to hand hygiene stations throughout facility.	
Advise all staff of the outbreak and of the control measures to minimize the spread.	
Influenza Outbreaks Only	
Determine treatment recommendations for influenza outbreaks, based on recommendations by the Health Unit and as ordered by attending HCP(s).	
Offer influenza vaccine to all residents, staff, visitors and volunteers, based on recommendations by the Health Unit.	
Offer antiviral medication to all residents, based on recommendations by the Health Unit and as ordered by the attending HCP(s) during an influenza outbreak.	
Ensure only immunized staff or un-immunized staff who are currently taking antiviral prophylaxis are working in the premise during an influenza outbreak.	

Facility Name: ____________________ Outbreak #: ______________

RESIDENT - Respiratory Outbreak Line Listing Form

Case Identification				Symptoms																Complications		Treatment/Prophylaxis				Dx	
Name (last name, first name)	Room #	Sex (M/F)	Date of Birth (yy-mm-dd)	Symptom Onset Date (yy-mm-dd)	Symptom End Date (yy-mm-dd)	Date Client Removed from Isolation (yy-mm-dd)	Abnormal Temperature (✓)	Headache (✓)	Tiredness (✓)	Lethargy (✓)	Runny Nose or Sneezing (✓)	Stuffy Nose/Nasal Congestion (✓)	Sore Throat (✓)	Muscle or Joint Pain (✓)	Cough – New or Worsening (✓)	Hoarseness /Difficulty Swallowing/ Sore Throat (✓)	Chills (✓)	Loss of Appetite (✓)	Other(✓)	Name of Hospital Admission – Discharge Dates (yy-mm-dd)	Cause of Death Date of Death yy-mm-dd)	Vaccine Given (specify) Date Given (yy-mm-dd)	Antiviral Start Date (yy-mm-dd)	Antiviral Side Effects (✓)	Date, if discontinued due to side effects (yy-mm-dd)	X-ray Confirmed Pneumonia (✓)	Lab Confirmed Influenza (✓)
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Please fax updated line listing to HKPR Health Unit by 10 a.m. DAILY.

CD-216
O: 2007-August
R: 2011-April
R: 2015-May

Haliburton, Kawartha, Pine Ridge District Health Unit

Facility Name: ____________________________ Outbreak #: ______________________

STAFF - Respiratory Outbreak Line Listing Form

Case Identification			Symptoms																Complications		Treatment/Prophylaxis			Dx	
Staff Initials	Work Assignment (ward, unit, floor, etc.)	Sex (M/F)	Symptom Onset Date (yy-mm-dd)	Last Day of Work of Ill Staff Member (yy-mm-dd)	Symptom End Date (yy-mm-dd)	Abnormal Temperature (✓)	Headache (✓)	Tiredness (✓)	Lethargy (✓)	Runny Nose or Sneezing (✓)	Stuffy Nose/Nasal Congestion (✓)	Sore Throat (✓)	Muscle or Joint Pain (✓)	Cough – New or Worsening (✓)	Hoarseness /Difficulty Swallowing/ Sore Throat (✓)	Chills (✓)	Loss of Appetite (✓)	Other(✓)	Name of Hospital Admission – Discharge Dates (yy-mm-dd)	Cause of Death Date of Death yy-mm-dd)	Vaccine Given (specify) Date Given (yy-mm-dd)	Antiviral Start Date (yy-mm-dd)	Antiviral Side Effects (✓) Date, if discontinued due to side effects (yy-mm-dd)	X-ray Confirmed Pneumonia (✓)	Lab Confirmed Influenza (✓)
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Please fax updated line listing to HKPR Health Unit by 10 a.m. DAILY.

Haliburton, Kawartha, Pine Ridge District Health Unit

Facility Name: _____ Outbreak #: _____

RESIDENT - Enteric Outbreak Line Listing Form

Case Identification				Symptoms													Complications		Diagnostics	
Name (last name, first name)	Room #	Sex (M/F)	Date of Birth (yy-mm-dd)	Symptom Onset Date (yy-mm-dd)	Symptom End Date (yy-mm-dd)	Date Client Removed from Isolation (yy-mm-dd)	**Vomiting (✓)**	**Diarrhea (✓)**	**Bloody Diarrhea (✓)**	Abnormal Temperature (✓)	Nausea (✓)	Abdominal Pain (✓)	Headache (✓)	Lethargy (✓)	Loss of Appetite (✓)	Weight Loss (✓)	Name of Hospital Admission – Discharge Dates (yy-mm-dd)	Cause of Death Date of Death (yy-mm-dd)	Specimen Collection Date (yy-mm-dd)	Specimen Results

Please fax updated line listing to HKPR Health Unit by 10 a.m. DAILY.

CD-217
O: 2007–August
R: 2011-April
R: 2015-May

Haliburton, Kawartha, Pine Ridge District Health Unit

Facility Name: _____ Outbreak #: _____

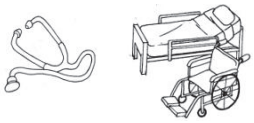
STAFF - Enteric Outbreak Line Listing Form

Case Identification			Symptoms													Complications		Diagnostics	
Staff Initials	Work Assignment (ward, unit, floor, etc.)	Sex (M/F)	Symptom Onset Date (yy-mm-dd)	Last Day of Work of Ill Staff Member (yy-mm-dd)	Symptom End Date (yy-mm-dd)	**Vomiting (✓)**	**Diarrhea (✓)**	**Bloody Diarrhea (✓)**	Abnormal Temperature (✓)	Nausea (✓)	Abdominal Pain (✓)	Headache (✓)	Lethargy (✓)	Loss of Appetite (✓)	Weight Loss (✓)	Name of Hospital Admission – Discharge Dates (yy-mm-dd)	Cause of Death Date of Death (yy-mm-dd)	Specimen Collection Date (yy-mm-dd)	Specimen Result

Please fax updated line listing to HKPR Health Unit by 10 a.m. DAILY.

Haliburton, Kawartha, Pine Ridge District Health Unit

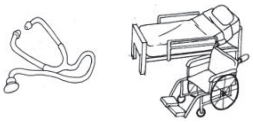
PIDAC'S Routine Practices Fact Sheet for All Health Care Settings

ROUTINE PRACTICES to be used with ALL PATIENTS	
	**Hand Hygiene** Hand hygiene is performed using alcohol-based hand rub or soap and water: ✓ Before and after each client/patient/resident contact ✓ Before performing invasive procedures ✓ Before preparing, handling, serving or eating food ✓ After care involving body fluids and before moving to another activity ✓ Before putting on and after taking off gloves and PPE ✓ After personal body functions (e.g., blowing one's nose) ✓ Whenever hands come into contact with secretions, excretions, blood and body fluids ✓ After contact with items in the client/patient/resident's environment
	**Mask and Eye Protection or Face Shield [based on risk assessment]** ✓ Protect eyes, nose and mouth during procedures and care activities likely to generate splashes or sprays of blood, body fluids, secretions or excretions. ✓ Wear within two metres of a coughing client/patient/resident.
	**Gown [based on risk assessment]** ✓ Wear a long-sleeved gown if contamination of skin or clothing is anticipated.
	**Gloves [based on risk assessment]** ✓ Wear gloves when there is a risk of hand contact with blood, body fluids, secretions, excretions, non-intact skin, mucous membranes or contaminated surfaces or objects. ✓ Wearing gloves is NOT a substitute for hand hygiene. ✓ Remove immediately after use and perform hand hygiene after removing gloves.
	**Environment and Equipment** ✓ All equipment that is being used by more than one client/patient/resident must be cleaned between clients/patients/residents. ✓ All high-touch surfaces in the client/patient/resident's room must be cleaned daily.
	**Linen and Waste** ✓ Handle soiled linen and waste carefully to prevent personal contamination and transfer to other clients/patients/residents.
	**Sharps Injury Prevention** ✓ NEVER RECAP USED NEEDLES. ✓ Place sharps in sharps containers. ✓ Prevent injuries from needles, scalpels and other sharp devices. ✓ Where possible, use safety-engineered medical devices.
	**Patient Placement/Accommodation** ✓ Use a single room for a client/patient/resident who contaminates the environment. ✓ Perform hand hygiene on leaving the room.

Images Developed By: Kevin Rostant

Source: Ontario Agency for Health Protection and Promotion, Provincial Infectious Diseases Advisory Committee. *Routine Practices and Additional Precautions in All Health Care Settings. 3rd edition.* Toronto, ON: Queen's Printer for Ontario; November 2012.

Sample Signage for Entrance to Room of a Patient Requiring Contact Precautions in Non-Acute Care Facilities

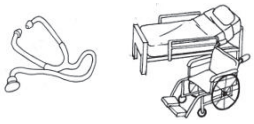
CONTACT PRECAUTIONS – Non-acute Care Facilities	
	**Hand Hygiene as per Routine Practices** Hand hygiene is performed: ✓ Before and after each resident contact ✓ Before performing invasive procedures ✓ Before preparing, handling, serving or eating food ✓ After care involving body fluids and before moving to another activity ✓ Before putting on and after taking off gloves and other PPE ✓ After personal body functions (e.g., blowing one's nose) ✓ Whenever hands come into contact with secretions, excretions, blood and body fluids ✓ After contact with items in the resident's environment ✓ Whenever there is doubt about the necessity for doing so ✓ Clean the resident's hands before he/she leaves his/her room
	**Resident Placement** ✓ Single room with own toileting facilities if resident hygiene is poor ✓ Door may remain open ✓ Perform hand hygiene on leaving the room or bed space
	**Gown [based on risk assessment]** ✓ Wear a long-sleeved gown for <u>direct care</u>* when skin or clothing may become contaminated
	**Gloves [based on risk assessment]** ✓ Wear gloves for <u>direct care</u>* ✓ Wearing gloves is NOT a substitute for hand hygiene ✓ Remove gloves on leaving the room or bed space and perform hand hygiene
	**Environment and Equipment** ✓ Dedicate routine equipment to the resident if possible (e.g., stethoscope, commode) ✓ Disinfect all equipment before it is used for another resident ✓ All high-touch surfaces in the resident's room must be cleaned at least daily
	**Visitors** ✓ Visitors must wear gloves and a long-sleeved gown if they will be in contact with other residents or will be providing <u>direct care</u>*, as required by Routine Practices ✓ Visitors must perform hand hygiene before entry and on leaving the room

Images Developed By: Kevin Rostant

* <u>Direct Care</u>: Providing hands-on care, such as bathing, washing, turning the resident, changing clothing, continence care, dressing changes, care of open wounds/lesions or toileting. Feeding and pushing a wheelchair are not classified as direct care.

Source: Ontario Agency for Health Protection and Promotion, Provincial Infectious Diseases Advisory Committee. *Routine Practices and Additional Precautions in All Health Care Settings. 3rd edition.* Toronto, ON: Queen's Printer for Ontario; November 2012.

Sample Signage for Entrance to Room of a Patient Requiring Airborne Precautions in All Health Care Facilities

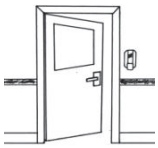
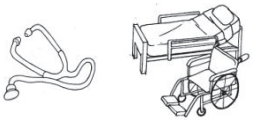
AIRBORNE PRECAUTIONS – All Facilities	
	**Hand Hygiene as per Routine Practices** Hand hygiene is performed: ✓ Before and after each client/patient/resident contact ✓ Before performing invasive procedures ✓ Before preparing, handling, serving or eating food ✓ After care involving body fluids and before moving to another activity ✓ Before putting on and after taking off gloves and other PPE ✓ After personal body functions (e.g., blowing one's nose) ✓ Whenever hands come into contact with secretions, excretions, blood and body fluids ✓ After contact with items in the client/patient/resident's environment ✓ Whenever there is doubt about the necessity for doing so
	**Client/Patient/Resident Placement** ✓ Single room with own toileting facilities ✓ Room must have negative pressure ventilation with room air exhausted outside or through a HEPA filter ✓ Monitor negative pressure daily while in use ✓ Door must remain closed
	**N95 Respirator** ✓ Wear a fit-tested, seal-checked N95 respirator for entry to the room for TB patients ✓ For measles, varicella or disseminated zoster, only immune staff are to enter the room and an N95 respirator is not required
	**Environment and Equipment** ✓ Equipment that is being used by more than one client/patient/resident must be cleaned between patients/residents ✓ All high-touch surfaces in the patient's room must be cleaned at least daily
	**Transport of the Client/Patient/Resident** ✓ Client/patient/resident to wear a mask during transport ✓ Transport staff to wear an N95 respirator during transport
	**Visitors** ✓ Visitors must be kept to a minimum ✓ Visitors must perform hand hygiene before entry and on leaving the room ✓ For TB, household members do not require an N95 respirator ✓ For TB, non-household visitors require an N95 respirator ✓ For measles/varicella, visitors should be counselled before entering the room

Images Developed By: Kevin Rostant

*** Direct Care:** Providing hands-on care, such as bathing, washing, turning the resident, changing clothing, continence care, dressing changes, care of open wounds/lesions or toileting. Feeding and pushing a wheelchair are not classified as direct care.

Source: Ontario Agency for Health Protection and Promotion, Provincial Infectious Diseases Advisory Committee. *Routine Practices and Additional Precautions in All Health Care Settings. 3rd edition.* Toronto, ON: Queen's Printer for Ontario; November 2012.

Sample Signage for Entrance to Room of a Patient Requiring Droplet Precautions in All Health Care Facilities

DROPLET PRECAUTIONS – All Facilities	
	**Hand Hygiene as per Routine Practices** Hand hygiene is performed: ✓ Before and after each client/patient/resident contact ✓ Before performing invasive procedures ✓ Before preparing, handling, serving or eating food ✓ After care involving body fluids and before moving to another activity ✓ Before putting on and after taking off gloves and other PPE ✓ After personal body functions (e.g., blowing one's nose) ✓ Whenever hands come into contact with secretions, excretions, blood and body fluids ✓ After contact with items in the client/patient/resident's environment ✓ Whenever there is doubt about the necessity for doing so
	**Client/Patient/Resident Placement** ✓ Single room with own toileting facilities if available, or maintain a spatial separation of at least 2 metres between the client/patient/resident and others in the room, with privacy curtain drawn ✓ Door may remain open ✓ Perform hand hygiene on leaving the room
	**Mask and Eye Protection or Face Shield** ✓ Wear within 2 metres of the client/patient/resident ✓ Remove and perform hand hygiene on leaving the room
	Environment and Equipment ✓ Dedicate routine equipment to the client/patient/resident (e.g., stethoscope, thermometer) ✓ Disinfect all equipment that comes out of the room ✓ All high-touch surfaces in the client/patient/resident's room must be cleaned at least daily
	**Client/Patient/Resident Transport** ✓ Client/patient/resident to wear a mask during transport
	**Visitors** ✓ Non-household visitors wear a mask and eye protection within 2 metres of the client/patient/resident ✓ Visitors must perform hand hygiene before entry and on leaving the room

Images Developed By: Kevin Rostant

Source: Ontario Agency for Health Protection and Promotion, Provincial Infectious Diseases Advisory Committee. *Routine Practices and Additional Precautions in All Health Care Settings. 3rd edition.* Toronto, ON: Queen's Printer for Ontario; November 2012.

Sample Signage for Entrance to Room of a Resident Requiring Droplet and Contact Precautions in Non-acute Care Facilities

DROPLET + CONTACT PRECAUTIONS – Non-acute Care Facilities

Hand Hygiene as per Routine Practices

Hand hygiene is performed:

- ✓ Before and after each resident contact
- ✓ Before performing invasive procedures
- ✓ Before preparing, handling, serving or eating food
- ✓ After care involving body fluids and before moving to another activity
- ✓ Before putting on and after taking off gloves and other PPE
- ✓ After personal body functions (e.g., blowing one's nose)
- ✓ Whenever hands come into contact with secretions, excretions, blood and body fluids
- ✓ After contact with items in the resident's environment
- ✓ Whenever there is doubt about the necessity for doing so

Resident Placement

- ✓ Single room with own toileting facilities if resident hygiene is poor and if available, or maintain a spatial separation of at least 2 metres between the resident and others in the room, with privacy curtain drawn
- ✓ Door may remain open
- ✓ Perform hand hygiene on leaving the room

Mask and Eye Protection or Face Shield

- ✓ Wear within 2 metres of the resident
- ✓ Remove and perform hand hygiene on leaving the room

Gown and Gloves [based on risk assessment]

- ✓ Wear a long-sleeved gown for direct care* when skin or clothing may become contaminated
- ✓ Wear gloves for direct care*
- ✓ Wearing gloves is NOT a substitute for hand hygiene.
- ✓ Remove gloves on leaving the room or bed space and perform hand hygiene

Envi**ronment and Equipment**

- ✓ Dedicate routine equipment to the resident if possible (e.g., stethoscope, thermometer)
- ✓ Disinfect all equipment before it is used for another resident
- ✓ All high-touch surfaces in the patient's room must be cleaned at least daily

Resident Transport

- ✓ Resident to wear a mask during transport

Visitors

- ✓ Non-household visitors wear a mask and eye protection within 2 metres of the resident
- ✓ Visitors must wear gloves and a long-sleeved gown if they will be in contact with other residents or will be providing direct care*
- ✓ Visitors must perform hand hygiene before entry and on leaving the room

* Direct Care: Providing hands-on care, such as bathing, washing, turning the patient, changing clothing, continence care, dressing changes, care of open wounds/lesions or toileting. Feeding and pushing a wheelchair are not classified as direct care.

Sample STOP Sign

Sample Yield Sign