Shared health
Soins communs
Manitoba

INFECTION PREVENTION AND CONTROL OUTBREAK MANAGEMENT GUIDELINES RESPIRATORY (including Influenza and COVID-19) and GASTROINTESTINAL

October 27, 2020
Revised: December 15, 2021
Last Revised: Nov 1, 2022

The purpose of this document is to provide best practice infection prevention and control guidelines for outbreak management of respiratory and gastrointestinal (GI) illness in Acute and Long Term Care settings. Recommendations are provided for outbreak management in Regional Health Authority (RHA)/Service Delivery Organization (SDO) community health programs.

These guidelines support Infection Control Professionals/designates, SDOs, and health care workers in developing, implementing and evaluating infection prevention and control (IP&C) policies, procedures and programs to improve their outbreak response. They also assist in standardizing IP&C practices throughout the province.

SDOs may develop policies and procedures based on these guidelines. These guidelines have been developed by the Manitoba Provincial IP&C Team.

The information in this guideline was current at the time of development. Scientific knowledge and technology are constantly evolving. Revisions of these guidelines will be necessary as further experience and advances in the field provide new information. Although the guidelines will be updated periodically, professionals are responsible to ensure the most current knowledge and practice is applied for each case.

In the event of an emerging infectious disease threat or a pandemic, direction on best practices for outbreak management will be provided by Manitoba Health and Shared Health and may extend beyond this document.

Table of Contents

SECTION 1: GENERAL PRINCIPLES OF OUTBREAK MANAGEMENT

Respiratory virus season causes a strain on the health care system every year. A planned and unified response is required. Reducing the burden of respiratory viruses including viruses such as influenza, RSV and COVID-19 is particularly important to protect the patients we care for and prevent an increase in health care utilization.

PURPOSE

To provide Infection Prevention and Control (IP&C) guidance for the minimum requirements SDOs should implement prior to and during outbreaks to ensure patients receive the appropriate IP&C management.

GUIDING PRINCPLES

This guidance is supported by the following principles:

- Multiple viruses contribute to the impact of the annual respiratory season
- Influenza and COVID-19 morbidity and mortality can have significant impact on the operations of the health care system.
- Sites, programs and services operate as one system – sharing resources, balancing their needs, and coordinating patient care. This is required to meet the demands of the respiratory season, mitigate the various risks that lack of coordination of these services poses, and to protect public health.
- Health Care Workers (HCW) with direct patient contact should consider it their responsibility to provide the highest standard of care, which includes annual influenza vaccination as well as COVID vaccination
- Routine Practices and Additional Precautions are required within all healthcare settings (see Manitoba Health Routine Practices Additional Precautions: Preventing the Transmission of Infection in Healthcare document), including, but not limited to:
    - Hand hygiene with alcohol-based hand rub (ABHR) or soap and water
    - Cough/respiratory etiquette
    - Appropriate personal protective equipment (PPE) such as gloves, gowns, masks, facial protection, eye protection (including face shields, masks with visor attachments), N95 respirators

- Preventing transmission of respiratory viruses within the health care delivery settings requires a multi-faceted approach that includes:
    - Ensuring IP&C measures are implemented to prevent spread of respiratory viruses
    - Offering immunization (e.g. influenza, COVID-19, pneumococcal) to patients and staff as appropriate, who meet the criteria established by the National Advisory Committee on Immunization (NACI) and Manitoba Health.
    - Ensuring facilities have adequate supplies in the event of an outbreak
    - Providing timely antiviral chemoprophylaxis and/or treatment as appropriate

Outbreak Prevention and Preparedness	 ☑ Being prepared for a potential outbreak is vital. ☑ Ensure your facility has supplies (e.g., hand hygiene, personal protective equipment (PPE), cleaning/disinfecting etc.) and resources (e.g., line lists, signage, prophylactic antiviral dosing info, contact lists etc.) that can be quickly accessed and implemented.
Surveillance	🔍 Conduct ongoing infection surveillance and monitor for unusual clusters of illness and identification of possible outbreaks. 🔍 Surveillance takes place prior to, during, and after outbreaks
Assessment	🔍 Assess individual cases to confirm the illness meets respiratory case definition (including Influenza-like Illness or COVID-19) or gastrointestinal (GI) illness case definitions outlined in this document. See Tables 1, 2, 3 and 4.
Outbreak Identification	Confirm the outbreak definition criteria outlined in this document are met. See Tables 1, 2, 3 and 4.
Initial Infection Prevention and Control Measures	Implement initial IP&C measures including PPE, isolation of symptomatic and exposed patients, as appropriate, and enhanced cleaning/disinfection, active case finding, etc.
Notification and Communication	Follow SDO/sector established outbreak notification protocols to report outbreaks to Manitoba Health (e.g., using CNPHI)
Specimen Collection	Collect specimens with outbreak code identified, as appropriate and outlined in protocols and/or recommended by IP&C/designate

Outbreak Control Strategies	☑ Ensure adequate resources to manage the outbreak ☑ Restrict symptomatic patients to their room (with dedicated bathroom/commode, meal tray service in room, etc.), except for medically essential purposes ☑ Apply site and/or unit level restrictions (e.g., cohort staff, restrict admissions, limit visitation, assess the need to cancel group activities) ☑ Post outbreak signage ☑ Enhance environmental cleaning and disinfection of frequently touched surfaces and equipment. ☑ HCW notification and management as per recommendations by occupational health/designate. ☑ Visitation is restricted; designated caregivers continue to be permitted. Exceptions for general visitation exist (e.g., end of life).

Monitoring Outbreak Status	🔍 Maintain a line list per site/regional/SDO process. 🔍 Communicate and track outbreak status within your site and to regional IPC&/designate per established processes, e.g., sharing line list or other reporting, in accordance with privacy policies re: sharing personal health information.

Declaring Outbreak Over and Evaluation	☑ Regional/SDO IP&C/designate will review and declare outbreak over for Facility/unit outbreaks (this may require consultation with others). ☑ Community Health Program outbreaks are declared over by Public Health and/or IP&C/Designate in consultation with SDO program providing support. ☑ Following an outbreak, evaluate and/or debrief to identify lessons learned.

SECTION 2: ROLES AND RESPONSIBILITIES

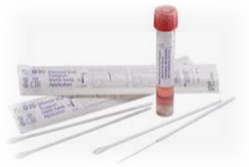
All Health Care Workers (HCW) in Acute and Long-Term Care (LTC) facility settings including physicians, students, and volunteers have a role in outbreak prevention and management.

When an outbreak is identified, an Outbreak Management Team (OMT) should be convened to ensure a timely and coordinated response to control the outbreak. At minimum, OMT members should include Nursing, Medicine, Microbiology Laboratory, Environmental Services/Housekeeping, Communications, Workplace Health and Safety, Infection Prevention and Control, Occupational Health, and Facility Management. Composition of the OMT will depend on disease, outbreak spread and facility type. Each OMT should identify a team lead for the duration of the outbreak.

For facility outbreaks, **all staff** will refer to the Respiratory Illness and Gastrointestinal Illness Outbreak Management: Acute and Long-Term Care Facilities

1. Unit Staff

- Monitor for signs and symptoms of illness and document assessment findings
- Initiate Additional Precautions immediately for suspect/confirmed respiratory or gastrointestinal cases
- Follows Additional Precautions signage as posted
- Inform primary care provider of respiratory and/or gastrointestinal illness symptoms
- Report suspicion of outbreak to IP&C/designate for the site
- Populate line list with details of the symptoms and other demographics
- Update line listing and share with IP&C/designate daily
- Post appropriate signage (i.e. Additional Precaution signage, outbreak signage)
- Collect specimens as recommended by IP&C/designate from those identified as symptomatic

If Respiratory Outbreak	If GI Outbreak
 Ensure universal transport media and nasopharyngeal (NP) swabs are available and have not expired	Ensure stool specimen containers are available 

- Assist with outbreak communication (e.g., shift report).
- Inform management of concerns of an outbreak
- Communicate outbreak status to physicians and other staff
- Provide appropriate information sheets as required
- Inform patients, visitors, families, and Powers of Attorney, as necessary.
- Promote hand hygiene, cough/respiratory etiquette, and physical distancing with patients, staff, families, and visitors
    - Respiratory Hygiene (French)
    - Clean Hands Saves Lives (French)
    - Information for Visitors During Outbreak
- If a respiratory outbreak, gather patient information if antivirals are to be administered

2. Unit Management

- Liaise with Occupational Health/designate when there are symptomatic staff
- Collaborate with IP&C/designate through the course of the outbreak
- Ensure the site/unit specific outbreak management binder/toolkit is up to date
- Ensure staff have access to PPE
- Notify site Environmental Services/Housekeeping an outbreak has been declared
- Cohort staff to specific units or patient assignments, if possible
- Restrict staff movement in the daily assignments from outbreak affected areas to non-affected areas, if possible
- Review initial outbreak measures with staff (i.e., staff huddle):
    - Outbreak signage posted upon entry to unit/facility
    - Implementation of Additional Precautions
    - Specimen collection and identification of outbreak code on requisition
    - Screening patients for symptoms
    - Communication plan to patients, family and visitors
    - Hand Hygiene
        - Review 4 moments for hand hygiene for staff
        - Remind staff to assist patients with hand hygiene before meals, after using bathroom and when they touch high touch surfaces if unable to manage independently
    - Review plan for admissions/transfers
    - Review visitation plan
    - Review plan for activities on unit/facility
    - Reinforce importance of equipment cleaning
    - Where to direct media calls

- Ensure IP&C auditing is performed regularly during outbreak
- Promote hand hygiene, cough/respiratory etiquette, and physical distancing with patients, staff, families and visitors
- Ensure outbreak control strategies are maintained until the outbreak is declared over
- Arrange for debriefing as needed when outbreak declared over

3. Infection Prevention and Control

Outbreak Preparedness	• Investigate reports of health care associated Respiratory illness (i.e., ILI, COVID- 19) and/or GI illness to determine and/or confirm an outbreak is occurring • Support staff as they prepare in advance for outbreaks, including providing education as needed • Act as a resource for facility staff to promote early recognition of possible outbreaks
Determining if Outbreak Present	• Review data being reported to determine if there is a potential outbreak • If clinical findings indicate the criteria meet the outbreak definition, review information to confirm outbreak status as per regional/SDO process (i.e., with MOH, ID physician, etc.)
Once Outbreak Declared	• Establish a working outbreak case definition that should be used for all cases, even those without lab confirmed cause (but with matching symptoms) • Ensure an outbreak code is obtained from Cadham Provincial Laboratory (CPL) or Communicable Disease Coordinator as per established RHA/SDO processes. ☎ Cadham Lab (204) 945-7473 or (204) 945-7311 • Ensure appropriate IP&C measures are implemented in a timely manner • Notify all appropriate stakeholders and departments there is an outbreak; include all pertinent information • Determine the number of specimens to be performed (usually up to a maximum of 6)

Outbreak Management	• Obtain report on the clinical status and identify new cases from unit daily • Site and Regional IP&C/designate to communicate daily during outbreak. ○ If no site IP&C/designate, regional IP&C to communicate daily with site lead to assess outbreak and determine appropriate control measures. • Direct outbreak control strategies appropriate to the type and scope of outbreak • Provides guidance on contact tracing as required depending on type of outbreak • Initiate, maintain and distribute Outbreak Report • Notify Manitoba Health of the outbreak by completing an outbreak summary using the Canadian Network for Public Health Intelligence (CNPHI) reporting system • Recommend increased auditing, as required, for hand hygiene, PPE use, and equipment cleaning and disinfection in collaboration with site leadership • Recommend outbreak control strategies are maintained until the outbreak is declared over following outlined SDO processes • Report as required by legislation and regional policies. Report deaths per Public Health Act, Reporting of Diseases & Conditions Regulation • Facilitate the acquisition of influenza antivirals as required. See https://www.gov.mb.ca/health/publichealth/cdc/protocol/influenza1.pdf. • Declare outbreak over as per Regional/SDO process
Site Visit(s) during Outbreak	• **If no site IP&C/designate**, regional IP&C to attend site in person to review outbreak measures with a goal to attend within the first 4 days of outbreak being declared. • **If site IP&C/designate present**, communicate daily with regional IP&C/designate If there are questions/concerns or requests from the site, regional IP&C/designate to make site visit.
IP&C Deployment during Outbreak	Redeployment of regional IP&C to outbreak site may be needed: • If site does not have an IP&C/designate • If IP&C/designate is redeployed • On as needed basis in consultation with OMT

4. Support Services (e.g., Housekeeping/Environmental Services)

- Upon notification an outbreak has been declared, collaborate with IP&C/designate to plan and arrange for increased cleaning and disinfection of appropriate areas and surfaces using facility-approved disinfectants

- Clean and disinfect all high touch surfaces in all outbreak affected area(s) at least twice a day. This includes:
    - High-touch surfaces (e.g., handrails, tap handles, faucets, door handles, soap dispensers, furniture, phones, computer keyboards etc.)
    - Care areas and common areas such as dining/activity areas and lounges
- The Housekeeping/Environmental Services Manager/designate should
    - Complete an inventory of stock of the appropriate cleaning/disinfecting supplies
    - Inform and update housekeeping/environmental services staff regarding the outbreak
    - Communicate to staff their role in preventing transmission and the importance of following Additional Precautions
- Recommend increased auditing of environmental cleaning practices.

5. Medical Officer of Health (MOH) / IP&C Physician/Designate

- Collaborate with IP&C/designate
- Facilitate lab testing by recommending type of specimen to be collected and testing required
- Act as a resource
- Review specimen results as required
- Recommends antiviral prophylaxis when indicated
- Where required, in collaboration with IP&C/designate, determine when the outbreak can be declared over

6. Facility/Regional Leadership/Management

- Maintain operations to provide optimal care and services during an outbreak
- Support implementation of recommended outbreak management control strategies
- Support direct care staff and management with their outbreak associated tasks. Examples could include ensuring sufficient staff and supplies for cleaning and disinfection, accommodation for patients when flow may be impacted, assisting with facility communication with visitors and family, and supporting increased hand hygiene and Additional Precautions auditing
- Enforce appropriate outbreak measures (e.g., hand hygiene and PPE use) as necessary during an outbreak
- Ensure adequate resources are provided to manage the outbreak
- Disseminate information including internal and external updates and media releases as required
- Reviews Outbreak Evaluation Tool summary with Outbreak Management Team and guides implementation of improvement measures/recommendations

7. Occupational Health

- Compiles list(s) of unvaccinated staff and considers immunization for future outbreaks, if applicable.
- Provides direction for absenteeism, according to the recommendations of OMT/established Occupational Health policies/current Communicable Disease Guidelines
- Provides direction for staff specimens to be collected in collaboration with Public Health if applicable.
- Maintains documentation for staff and provides information on individual and aggregate data as appropriate

8. Primary Care Provider (Physician, Nurse Practitioner)

- Orders laboratory testing as indicated and as directed by the MOH/IP&C Physician/designate during an outbreak
- Consults with MOH/IP&C physician on an as needed basis
- If influenza or COVID-19 outbreak:
    - Orders antiviral treatment as required
    - Orders antiviral prophylaxis in an influenza outbreak if recommended

9. Public Health/Communicable Disease Control

- Provides consultation as needed on suspected clusters of illness or outbreaks, per regional/SDO established processes

10. Recreation/Activities

- Cancel or postpone scheduled activities (e.g., entertainers, church services, school groups, community presentations and/or communal meals for special holidays) until the outbreak is declared over, as recommended by IP&C/designate

11. Rehabilitation/Therapy Staff

- Restricts group activities on affected unit/area
- Conducts more one-to-one activities within affected unit/area
- Cleans and disinfects shared client care equipment prior to use with another client. Consider use of more single use/non-sharing items.
- Follows Additional Precautions signage as posted

12. Cadham Provincial Laboratory (CPL)

- Assigns outbreak code upon request

- Facilitates timely identification of causative organism(s) and communicates to IP&C/designate

  NOTE: if *Clostridioides difficile* outbreak – testing performed at Shared Health laboratory

- Advises on additional testing in multi-organism outbreaks or outbreaks in large facilities with multiple or distinct units

13. Nutritional Services

- Patients on Additional Precautions will be served meals/snacks in their rooms
- Work with management to stagger mealtimes as needed

SECTION 3: OUTBREAK PREVENTION AND PREPAREDNESS

Being prepared for a potential outbreak is vital. Ensure your facility has supplies (e.g., hand hygiene, PPE, cleaning/disinfecting etc.) and required resources (e.g., line lists, signage, contact lists etc.) that can be quickly accessed and implemented.

Refer to Quick Reference: Outbreak Preparedness for steps your facility can take to ensure you are prepared if an outbreak occurs.

IDENTIFICATION OF RESPIRATORY SEASON

Using a number of traditional and syndromic indicators, including but not limited to the Emergency Department (ED) Daily Respiratory Illness Surveillance Report (where available), the Manitoba Health Influenza Surveillance Report, the Public Health Agency of Canada, data from Cadham Provincial Laboratory (CPL) as well as communication with other programs in the Service Delivery Organization's (SDO), Population and Public Health (PH), Infection Prevention and Control (IP&C) and Occupational Health (OH) monitor and report on the start of the annual respiratory season. Monitoring includes awareness of the start of the annual Respiratory Syncytial Virus (RSV) Prophylaxis program in Manitoba. Once the respiratory season is identified, testing for multiple respiratory viruses such as influenza, RSV and others becomes more frequent. A subsequent rise in positive results indicates the start of the season.

CHALLENGES CONTINUE WITH COVID-19

The COVID-19 pandemic continues to create a series of challenges within our health care system:

- need for measures to avoid transmission of COVID-19 to staff, volunteers and patients (many of whom are at increased risk of severe disease from both influenza and COVID-19)
- availability of personnel to provide immunizations (influenza, pneumococcal, and/or COVID-19), as staff may be deployed
- access to sufficient Personal Protective Equipment (PPE) supplies
- risk of a resurgence of COVID-19 activity concurrently with scheduled influenza immunization delivery
- logistics of providing immunization to the public in a way that maintains physical distancing and other required COVID measures
- uncertainty between temporal reaction to receipt of immunization and COVID-19 signs and symptoms

IMMUNIZATION

INFLUENZA VACCINATION

- Annual immunization with influenza vaccine is the most effective way to prevent or minimize influenza infection or its complications; influenza vaccine protection wanes over time
- All Manitobans 6 months of age and older are eligible to receive the seasonal influenza (flu) vaccine for the upcoming influenza season
- Studies demonstrate recommendation from a health care provider on immunization is a major contributing factor in a person's decision to be immunized. As a result, health care providers are urged to recommend immunization against influenza as early as possible in the influenza season to all their patients
- For information regarding influenza vaccine eligibility, recommendations for use, contraindications, and types of vaccines available refer to Manitoba's Seasonal Influenza Immunization Program Plan (gov.mb.ca)

COVID-19 VACCINATION

- Immunization with COVID-19 vaccine is the most effective way to prevent or minimize COVID-19 infection or its complications; COVID-19 vaccine protection wanes over time
- For information regarding eligibility, recommendations for use, contraindications, and types of vaccines available refer to Province of Manitoba Information for Health Care Professionals (gov.mb.ca)

PNEUMOCOCCAL VACCINATION

- Individuals 65 years of age and older and those 2 to < 65 years of age at increased risk for invasive pneumococcal disease are eligible to receive a dose of pneumococcal polysaccharide (Pneu-P-23) vaccine free-of-charge.
  - For more details on the eligibility for this vaccine, and all other vaccines, please refer to Manitoba's Eligibility Criteria for Publicly-Funded Vaccines
- Eligibility criteria for the Pneu-P-23 vaccine and Pneu-C-13 vaccine were updated in 2019, and a frequently asked questions and answers document for health care providers is available at: https://www.gov.mb.ca/health/publichealth/factsheets/pneumofaq.pdf

Refer to:

- Manitoba Health Informed Consent Guidelines for Immunization
- Immunization Recommendations for Patients in Acute and Long-Term Care Facilities: Influenza, COVID-19 and Pneumococcal

ROUTINE PRACTICES AND ADDITIONAL PRECAUTIONS

Routine Practices and Additional Precautions are required within all healthcare settings. Also see Manitoba Health guidelines.

Elements of Routine Practices include:

- ☐ Point of Care Risk Assessment
  - Hand Hygiene - **staff must follow the 4 moments of Hand Hygiene**
- ☐ Source Control
- ☐ Patient Accommodation, Placement and Flow
  - To prevent transmission of respiratory viruses, **physical distancing should be maintained** as much as possible
- ☐ Aseptic Technique
- ☐ Personal Protective Equipment
  - Of note, in context of COVID-19 **all health care workers who provide direct patient care, shall continue to wear PPE** according to Shared Health's requirements
- ☐ Specimen Collection
- ☐ Sharps Safety and Prevention of Exposure to Bloodborne Pathogens
- ☐ Management of Patient Care Environment
- ☐ Visitor Management

Minimize exposure of immunocompromised patients to respiratory viruses.

See: 'People at High-Risk of Respiratory Virus-Related Complications' (Respiratory Viruses Table) for more details.

SURVEILLANCE

Conduct ongoing screening and active case finding by assessing patients for signs/symptoms of respiratory viruses (e.g., fever, cough, shortness of breath).

SYMPTOMS POST VACCINATION:

Some side effects experienced following vaccine administration (COVID-19, pneumococcal or influenza) may be confused for COVID-19 symptoms or other respiratory virus symptoms. To manage this:

1. **Vaccinate** according to recommended schedule.
2. **Continue** to monitor for symptoms. **If patients develop symptoms temporarily (within**

48 hours of vaccination):

IF new onset of cough, or increase in amount of coughing, shortness of breath or new onset of sore throat/hoarse voice → **ISOLATE and COLLECT SPECIMEN FOR COVID-19**

IF fever, headache, muscle ache/ joint pain, fatigue → **MONITOR**

IF symptoms continue beyond 48 hours, worsen or additional symptoms develop → **ISOLATE and COLLECT SPECIMEN FOR COVID-19**

IF recovered within the past 180 days → **CONSULT WITH IP&C / Designate** prior to testing

3. **Staff** continue to **wear PPE** as per Shared Health Recommendations

ADDITIONAL PRECAUTIONS

IMPLEMENTATION OF ADDITIONAL PRECAUTIONS

NOTIFY IP&C DESIGNATE FOR PATIENTS/RESIDENTS ON ADDITIONAL PRECAUTIONS AND CLUSTERS OF RESPIRATORY ILLNESS

In all health care settings (Acute, LTC and community) considering the context of COVID-19, in addition to Routine Practices, implement Droplet/Contact Precautions plus Airborne Precautions for AGMPs for patients who present or develop new onset of ILI and/or COVID-19 symptoms

Refer to Respiratory Viruses Table for additional information regarding incubation period, period of communicability etc. for respiratory viruses

DISCONTINUATION OF ADDITIONAL PRECAUTIONS

CONSULT as required **WITH IP&C/DESIGNATE IS REQUIRED PRIOR TO DISCONTINUATION OF ADDITIONAL PRECAUTIONS**

RESPIRATORY AND INFLUENZA-LIKE ILLNESS	COVID-19 CONFIRMED OR SUSPECT
• Discontinuation of precautions is not based on duration of treatment or negative laboratory results. If the NP swab result is negative, **DO NOT** immediately discontinue precautions if the patient continues to have symptoms of a febrile respiratory illness • Patients may have chronic respiratory symptoms and/or a post–viral cough, which do not require continuation of precautions • Discontinue precautions for suspected or confirmed **non-ventilated cases** based on resolution of symptoms/clinical improvement (e.g., COPD as baseline) • Discontinue precautions for suspected or confirmed **ventilated cases** based on clinical improvement for 48 hours	For most up to date guidance on discontinuing Additional Precautions, refer to COVID-19-highlights-provincial.pdf (sharedhealthmb.ca) and https://sharedhealthmb.ca/files/COVID-19-highlights-provincial-ltc.pdf

Routine Practices are the foundation for preventing the transmission of microorganisms during patient care in all health care settings. It is a comprehensive set of IP&C measures developed for use in the routine care of all patients at all times in all health care settings.

IMMUNIZATION

- Influenza and COVID-19 morbidity and mortality can have significant impact on the operations of the health care system.
- Immunization with influenza and COVID-19 vaccine is the most effective way to prevent or minimize influenza and COVID-19 infection and their complications. Influenza vaccine is needed each year as it may change according to which virus is circulating and immunity wanes over time. COVID-19 vaccination should be administered according to MH recommendations.
- Influenza vaccination provides benefits to health care workers (HCWs) and to the patients to whom they provide care. Immunization of care providers decreases their own risk of illness, as well as the risk of death and other serious outcomes among the patients to whom they provide care. NACI considers the receipt of influenza vaccination to be an essential component of the standard of care for all HCWs and other care providers for their own

protection and that of their patients, regardless of whether the high-risk individual has been vaccinated. HCWs with direct patient contact should consider it their responsibility to provide the highest standard of care, which includes annual influenza and COVID-19 vaccination.

- Offer immunization to patients and staff who meet the criteria established by the National Advisory Committee on Immunization (NACI) and MH.

EDUCATION

- Outbreak preparedness/management education should be on-going for staff. At a minimum, this should occur once/year.

SURVEILLANCE

- Every facility must have a surveillance program in place to identify and report health care associated infections including respiratory and gastrointestinal illness.

Early recognition and reporting of suspected outbreaks is vital!

DON'T WAIT, ISOLATE!

BE PREPARED!

- Refer to Quick reference: Outbreak Preparedness for steps your facility can take to ensure you are prepared if an outbreak occurs.
- Refer to Shared Health Respiratory Virus Season: Infection Prevention and Control Planning & Response
- Have a current site/unit specific outbreak binder/toolkit that HCWs can refer to during an outbreak. Examples of information to include are:
    - Testing and collection
    - Reporting tools (line lists)
    - PPE information
    - Staff resources (e.g., Mental Health, IP&C information/education)
    - Nutrition and Hydration
    - Patient screening tools
    - Provincial Outbreak posters
    - Provincial Posters Cough Etiquette and Hand Hygiene
    - Visitor signage

- PPE, Additional Precaution and Hand Hygiene audits
- Facility floorplan/layout

TESTING

Collect nasopharyngeal (NP) specimens using flocked swabs or provincially approved swabs as soon as possible when a respiratory viral illness is suspected. In patients with a tracheostomy, laryngectomy, etc. a tracheal aspirate may be collected and submitted in viral transport media, but NP specimen should also be collected. Retesting may be considered on a case-by-case basis; prior consultation with IP&C/designate required. Refer to Respiratory Virus Specimen Collection

ANTIVIRAL TREATMENT AND PROPHYLAXIS

- Current provincial recommendations related to Influenza antiviral treatment and prophylaxis can be found here: Seasonal Influenza protocol (gov.mb.ca)
- Current provincial recommendations related to COVID-19 antiviral treatment can be found here: Treatment Options for COVID-19 - Shared Health (sharedhealthmb.ca)

OCCUPATIONAL HEALTH

Contact Occupational Health/designate for vaccination information, staff assessment and/or concerns. Managers should support Occupational Health in direction for staff to remain home if they have respiratory and/or gastrointestinal symptoms.

SECTION 4: RESPIRATORY VIRUS OUTBREAKS

Respiratory outbreaks occur in all healthcare sectors: acute, long term, and community. These cause significant morbidity and mortality. Through preparedness, planning, and careful management, the outbreak can be prevented or the morbidity and mortality can be decreased.

Respiratory viral infections are often spread when people cough or sneeze and droplets of their respiratory secretions come into direct contact with the mucous membranes of the eyes, mouth, nose, or airway of another person. Because some microorganisms can survive in droplets on other surfaces, droplet-spread infections can also be spread indirectly when people touch contaminated hands, surfaces and objects.

Outbreaks of respiratory viral infections can occur at any time during the year. A number of viruses and several bacteria can cause outbreaks, such as influenza, parainfluenza, respiratory syncytial virus (RSV), coronavirus (including COVID-19), rhinovirus, human metapneumovirus, or adenovirus. While no single protocol can cover all the aspects that might be necessary for specific organism outbreaks, all respiratory outbreaks can initially be managed in a similar fashion with basic measures to prevent further respiratory transmission, at least until the organism is identified and more specific measures can be put into place (e.g., antiviral prophylaxis for influenza).

COMMON CAUSES OF RESPIRATORY OUTBREAKS

There are several types of viral agents that can infect persons receiving care and cause a respiratory illness. The microorganism causing the illness usually cannot be identified from the symptoms as they are often similar. Most cases of respiratory infection result in cough and fever.

Once introduced into a population, respiratory viral illnesses can spread rapidly because they are highly contagious and have a relatively short incubation period. The most common causes of facility-based outbreaks are listed below.

VIRUS	INCUBATION PERIOD
Influenza	1-4 days
Respiratory Syncytial Virus (RSV)	2-8 days
Human Rhinovirus	2-3 days
Human Parainfluenza	2-6 days
Human Coronovirus (229E, NL63, OC43)	2-4 days
COVID-19	Up to 14 days
Human Metapneumovirus	3-5 days
Human Adenovirus	1-10 days
Boca Virus	Not documented
Human Enterovirus	3-5 days

RESPIRATORY CASE AND OUTBREAK DEFINITIONS

Ongoing surveillance of patients and HCWs should be conducted for early detection of clusters of respiratory illness.

Outbreaks can be caused by many organisms. Review positive laboratory reports when received to determine if there may be an outbreak occurring in one unit/area. If healthcare associated cases start to occur, an investigation is required. Accordingly, if multiple persons receiving care in the same area at the same time have similar respiratory symptoms, it is recommended to treat the cases as a potential outbreak until it is confirmed.

Surveillance definitions are designed to identify trends in a population, whereas clinical diagnoses are patient specific and consider a range of diagnostic data. It is possible to meet a surveillance case definition and not meet a clinical definition and vice-versa. Therefore, failure to meet a surveillance definition should never override clinical judgement during diagnosis, management or treatment of patients. Respiratory case surveillance definitions can be found below in Tables 1, 2 and 3. Additional definitions can be found in Definitions.

TABLE 1: INFLUENZA-LIKE ILLNESS

ILI Case Definition

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

- Sore throat
- Arthralgia (joint pain)
- Myalgia (muscular pain)
- Prostration (extreme exhaustion) that could be due to influenza

In children < 5 years of age, gastrointestinal symptoms (e.g., nausea, vomiting, diarrhea) may be present.

In patients < 5 years or ≥ 65 years old, fever may not be prominent.

NOTE: Illness associated with novel influenza viruses may present with other symptoms

Source: MH Seasonal Influenza protocol (gov.mb.ca)

NOTE FOR LTC SETTINGS:

1. fever definition is single oral temperature >37.8°C **or**
2. Repeated oral temperatures >37.2°C or rectal temperatures >37.5°C **or**
3. Single temperature >1.1°C over baseline from any site (oral, tympanic, auxiliary).

Source for Fever Definition: Infection Prevention and Control Canada (IPAC Canada). Can J Infect Control. Fall 2017 (Suppl):10-17.

Influenza-like Illness Outbreak Definition	Two or more patients (who are not roommates, do not share a bathroom between two patient rooms and/or are not tablemates), acquire health care associated ILI (including at least one influenza laboratory–confirmed case) occurring within a seven-day period in an institution/unit/area. **Source:** Expert Consensus
Influenza-like Illness Outbreak Termination Criteria	Where the causative agent is unknown, in consultation with IP&C/designate, the outbreak may usually be considered over after 8 days with no new cases following appropriate isolation of the last case. **Source:** PICNet, Respiratory Infection Outbreak Guidelines for Healthcare Facilities (2011)

TABLE 2: COVID-19

COVID-19 Case Definition	Confirmed case is a person with confirmation of infection with SARS-CoV-2 documented by: • The detection of at least one specific gene target by a validated laboratory-based nucleic acid amplification test (NAAT) assay (e.g., real-time PCR or nucleic acid sequencing) performed at a community, hospital, or reference laboratory (the National Microbiology Laboratory or a provincial public health laboratory) **OR** • The detection of at least one specific gene target by a validated point-of-care (POC) nucleic acid amplification test (NAAT) that has been deemed acceptable to provide a final result (i.e., does not require confirmatory testing) **OR** • Seroconversion or diagnostic rise (at least four-fold or greater from baseline) in viral specific antibody titre in serum or plasma using a validated laboratory-based serological assay for SARS-CoV-2 **NOTE:** serological assays are not routinely done for diagnostic purposes **Source:** Manitoba Health Interim Guidance Public Health Measures Managing Novel Coronavirus (COVID-19 Cases and Contacts in Community.
COVID-19 Outbreak Definition & Outbreak Termination Criteria	**For Acute Care Facilities**: see Outbreak Section in COVID-19 Specific Disease Protocol (Provincial) – Acute and Community Health-care Settings **For Long Term Care Facilities:** see Outbreak Management, in COVID-19 Infection Prevention and Control Guidance for Personal Care Homes
COVID-19 Community Health Program Outbreak Definition	Refer to Public Health and/or IP&C/designate according to SDO/Region reporting structure to review and determine if cases and outbreak criteria met.

OTHER RESPIRATORY VIRUSES INFECTIONS

There are many types of respiratory viruses that can cause a wide range of symptoms (e.g., cough, runny nose, fever, shortness of breath etc.) and these viruses may have different infectious and/or incubation periods (refer to Respiratory Virus Table). There may be times when patient(s) develop respiratory symptoms while in our care that do not meet ILI or COVID-19 case definitions as above.

For these types of situations, please consult with Regional IP&C/designate to investigate further if outbreak measures are needed. Site/unit to implement initial outbreak management measures pending lab confirmation.

TABLE 3: OTHER RESPIRATORY VIRUSES INFECTIONS

Respiratory Outbreak Definition (non-ILI and non COVID outbreak)	As determined by IP&C/designate, two or more HAI cases of respiratory illness with similar symptoms, who are not roommates or tablemates, occurring within a 7-day period in an institution/unit/area. Ideally this includes at least one laboratory-confirmed case, but this is not necessary. **Source**: Expert Consensus
Respiratory Outbreak Termination Criteria	If the causative agent is known, an outbreak is usually considered to have ended when there are no new cases after 2 incubation periods following appropriate isolation/discharge of the last case. Where the causative agent is unknown, in consultation with IP&C/designate, the outbreak may usually be considered over after 8 days with no new cases following appropriate isolation of the last case. **Source:** PICNet, Respiratory Infection Outbreak Guidelines for Healthcare Facilities (2018)

RESPIRATORY OUTBREAK (INCLUDING INFLUENZA and COVID-19) MANAGEMENT

If a facility **respiratory outbreak** is suspected or confirmed, refer to the following documents:

- Respiratory Illness and Gastrointestinal Illness Outbreak Management: Facilities Quick Reference: Outbreak Management
- Respiratory Virus Highlights (for all respiratory outbreaks except COVID-19)
- If a confirmed **Influenza Outbreak**, in addition to above resources, refer to:
    - Manitoba Seasonal Influenza CDC Protocol

- If a confirmed **COVID-19 Outbreak,** in addition to the above resources, refer to:
    - Acute Care Facilities
        - COVID-19 Acute Care Highlights – Provincial
        - IP&C COVID-19 Contact Management in Acute Care Facilities
    - Long Term Care Facilities
        - IP&C guidance for Personal Care Homes
        - COVID-19 Long Term Care Highlights
        - PCH Outbreak Checklist
        - Individual Case Management Checklist
        - Daily patient/resident/client screening tool
        - IP&C COVID-19 Contact Management in Long Term Care Facilities

If a Region/SDO community health Program (i.e., Supportive Housing) **Respiratory Outbreak** is suspected or confirmed, refer to the following documents:

- Respiratory Illness and Gastrointestinal Illness Outbreak Management in Community Programs

SECTION 5: GASTROINTESTINAL ILLNESS OUTBREAKS

There are several types of viral and bacterial infectious agents that can infect/impact persons receiving care and cause a GI illness. The organism causing the illness usually cannot be identified from the symptoms as they are often similar. Most cases of GI infection result in nausea, vomiting and/or diarrhea. Outbreaks of GI illness can occur any time of the year, regardless of the season. GI illness symptoms may be associated with an outbreak without a determined cause.

Once introduced into a population, GI illness can spread quickly and easily because they are highly contagious and often have a fairly short incubation period.

The symptoms are based on the specific organism. Some infections do not have symptoms while others can cause diarrhea, nausea, vomiting, abdominal pain, bloody stools, fever or feeling unwell. Onset of symptoms may start slowly or suddenly and typically last 24 hours but can last for several days. Symptom severity may vary, depending on the causative organism, from asymptomatic to severe disease leading to dehydration and death. Symptoms include sudden onset of vomiting and non- bloody, watery diarrhea, with abdominal cramps and nausea. Low grade fever may also occur. Diarrhea is more common in children than vomiting. Symptoms usually last anywhere from 48 to 72 hours; dehydration is the most common complication. People of all ages may be infected but the greatest severity is at extreme ages such as young children and the elderly.

PATHOGEN	INCUBATION PERIOD
Norovirus	Usually 24-48 hours
Rotavirus (in children)	1-3 days
C. difficile	variable
Adenovirus	3-10 days
Sapovirus (in children)	12-48 hours
Campylobacter	1-10 days
E. coli	1-8 days
Salmonella	6-72 hours
Shigella	1-7 days
Listeria	3-70 days (mean 21 days)

GASTROINTESTINAL ILLNESS CASE AND OUTBREAK DEFINITION

Ongoing surveillance of patients and HCWs should be conducted using the following definitions for early detection of unusual clusters of GI illness.

Review of laboratory reports when received is required to determine if there may be an outbreak. If healthcare associated cases start to occur, an investigation is required. Accordingly, if multiple persons receiving care in the same area at the same time have similar GI illness symptoms, it is recommended to treat the cases as a potential outbreak until it is confirmed.

Surveillance definitions are designed to identify trends in a population, whereas clinical diagnoses are patient specific and consider a range of diagnostic data. It is possible to meet a surveillance case definition and not meet a clinical definition and vice-versa. Therefore, failure to meet a surveillance definition should never override clinical judgement during diagnosis, management or treatment of patients. Gastrointestinal illness case surveillance definitions can be found below in Table 4.

TABLE 4: GASTROINTESTINAL ILLNESS

<table>
<tr>
<td>Gastroenteritis Case Definition – LTC</td>
<td>Gastroenteritis (at least 1 of the following criteria must be present):
1. Diarrhea: 3 or more loose or watery stools above what is normal for the patient within a 24h period.
2. Vomiting: 2 or more episodes in a 24h period
3. Both of the following sign or symptom sub criteria
a. A stool specimen testing positive for a pathogen (e.g., Salmonella, Shigella, Escherichia coli O157: H7, Campylobacter species, rotavirus)
b. At least 1 of the following GI sub criteria
i. Nausea
ii. Vomiting
iii. Abdominal pain or tenderness
iv. Diarrhea
v. Mucous in stool
NOTE: Care must be taken to exclude noninfectious causes of symptoms. For instance, new medications may cause diarrhea, nausea, or vomiting; initiation of new enteral feeding may be associated with diarrhea; and nausea or vomiting may be associated with gallbladder disease. Presence of new GI symptoms in a single patient may prompt enhanced surveillance for additional cases. In the presence of an outbreak, stool specimens should be sent to confirm the presence of norovirus or other pathogens (e.g., rotavirus or E. coli O157: H7).
Source: Canadian LTC Surveillance Definitions</td>
</tr>
<tr>
<td>Gastrointestinal Infection Case Definitions – Acute Care</td>
<td>A case of GI infection is defined as any one of the following conditions that cannot be attributed to another cause (e.g., laxative use, medication side effect, diet, prior medical condition):
• Three or more episodes of diarrhea in a 24 hour period – above what is considered normal for that individual or</td>
</tr>
</table>

	• Two or more episodes of vomiting in a 24 hours period ***or*** • One episode each of vomiting and diarrhea in a 24 hours period ***or*** • One episode of bloody diarrhea A case of confirmed GI infection is defined as positive detection for a known enteric pathogen with a symptom of GI infection (e.g., vomiting, abdominal pain, diarrhea). **Source:** Gastrointestinal Infection Outbreak Guidelines for Healthcare Facilities (2016)
Gastroenteritis Outbreak Definition (Acute & LTC)	Three or more cases of GI infection, potentially related, occurring within a four-day period, within a specific geographic area (i.e., unit, ward). **Source**: Gastrointestinal Infection Outbreak Guidelines for Healthcare Facilities (2016)
Gastroenteritis Outbreak Termination Criteria	If the causative agent is known, an outbreak is usually considered to have ended when there are no new cases after 2 incubation periods following appropriate isolation/discharge of the last case. If the causative agent is unknown usually the outbreak is considered to have ended when there have been no new cases 72 hours after the resolution of acute symptoms of the last identified case. It is important that vigilant observation for new cases continues even after the outbreak is declared over, especially when the causative agent has not yet been identified. **Source:** Gastrointestinal Infection Outbreak Guidelines for Healthcare Facilities (2016)

***Clostridioides difficile* Infection (CDI) Case Definition**	A "primary" episode of CDI is defined as either the 1st CDI episode ever experienced by the patient or a new episode of CDI occurring greater than 8 weeks after diagnosis of a previous episode in the same patient. A patient is identified as having CDI if: • the patient has diarrhea* or fever, abdominal pain and/or ileus AND a laboratory confirmation of a positive toxin assay or positive polymerase chain reaction (PCR) for *C. difficile* (without reasonable evidence of another cause of diarrhea) ***or*** • the patient has a diagnosis of pseudomembranes on sigmoidoscopy or colonoscopy (or after colectomy) or histological/pathological diagnosis of CDI ***or*** • the patient is diagnosed with toxic megacolon (in adults only) *Diarrhea is defined as one of the following: • 6 or more watery/unformed stools in a 36-hour period • 3 or more watery/ unformed stools in a 24-hour period and this is new or unusual for the patient (in adult patients only) Exclusions: • Any patients less than one year of age. • Any pediatric patients (aged one year to less than 18 years) with alternate cause of diarrhea found (i.e., rotavirus, norovirus, enema or medication etc.) are excluded even if *C. difficile* diagnostic test result is positive. **Source:** *Clostridioides difficile* Infection (CDI) Protocol (manitoba.ca)
***C. difficile* Outbreak Definition**	When there is evidence of continued *C. difficile* transmission within a facility or when the incidence rate is higher than the site's baseline rate **Source***:* *Clostridioides difficile* Infection (CDI) Protocol (manitoba.ca)
***C. difficile* Outbreak Termination Criteria**	The outbreak is considered to have ended when there have been no new cases for 3 weeks following appropriate isolation of the last identified case. **Source**: Expert Consensus
***C. difficile* Outbreak Termination Criteria**	Refer to Public Health and/or IP&C/designate according to SDO/Regionally reporting structure to review and determine GI cases and if outbreak criteria met.

GASTROINTESTINAL ILLNESS (GI) OUTBREAK MANAGEMENT

If a facility GI illness outbreak is suspected or confirmed, refer to the following documents:

- Respiratory Illness and Gastrointestinal Illness Outbreak Management: Facilities
- Quick Reference: Outbreak Management
- Visitor Access Acute and Long Term
- Gastrointestinal Illness Highlights

If a Region/SDO community health program (i.e., Supportive Housing) GI illness outbreak is suspected or confirmed, refer to the following documents:

- Respiratory Illness and Gastrointestinal Illness Outbreak Management in Community Programs

SECTION 6: OUTBREAK IP&C RESOURCES

1. Respiratory Illness and Gastrointestinal Illness Outbreak Management: Facilities
2. Respiratory Illness and Gastrointestinal Illness Outbreak Management: Community Health Program
3. Quick Reference: Outbreak Preparedness
4. Quick Reference: Outbreak Management
5. Respiratory Virus Specimen Collection
6. GI Illness Specimen Collection
7. Outbreak Sample Cadham Lab Requisition
8. Respiratory Virus Highlights Sheet
9. COVID-19 Acute Care Highlights Sheet
10. COVID-19 Long Term Care Highlights Sheet
11. Gastrointestinal Highlights Sheet
12. Information for Families and Visitors During an Outbreak
13. Additional Precautions signage
14. Outbreak Signage
15. Outbreak Line Lists
16. Outbreak Management Evaluation Questionnaire
17. Outbreak Management Team Meeting Template
18. **COVID-19 PCH Outbreak Resources:**
    a. PCH Outbreak Checklist
    b. Individual Case Management Checklist

SECTION 7: REFERENCES

Alberta Health Services (2019) Guidelines for Outbreak Prevention, Control and Management in Supportive Living and Home Living Sites. Available at: https://www.albertahealthservices.ca/assets/info/hp/cdc/if-hp-cdc-ob-guide-for-outbreak-prevention-and-control-ltc-dsl-hospice.pdf

American Academy of Pediatrics (2021) *Red Book.* Norovirus and Sapovirus Infections. Pages 548- 550.

Canadian Nurses Association (2012). Influenza Immunization of Registered Nurses. Available at: https://hl-prod-ca-oc-download.s3-ca-central-1.amazonaws.com/CNA/2f975e7e-4a40-45ca-863c-5ebf0a138d5e/UploadedImages/documents/PS_Influenza_Immunization_for_RNs_e.pdf

Centers for Disease Control and Prevention (2012). Principles of Epidemiology in Public Health Practice, 3rd edition. Available at: https://www.cdc.gov/csels/dsepd/ss1978/lesson1/section10.html.

Centers for Disease Control and Prevention (2021). National Healthcare Safety Network. Available at https://www.cdc.gov/nhsn/faqs/faqs-miscellaneous.html

Government of Canada (2014). Guidance document - Safety and efficacy requirements for hard surface disinfectant drugs (archived). Available at: https://www.canada.ca/en/health-canada/services/drugs-health-products/drug-products/applications-submissions/guidance-documents/disinfectants/safety-efficacy-requirements-hard-surface-disinfectant-drugs.html#a2111.

Infection Prevention and Control Canada (IPAC Canada). Can J Infect Control. Fall 2017 (Suppl): 10-17. Available at https://ipac-canada.org/photos/custom/CJIC/IPAC_News_Fall2017_RICH.pdf

Manitoba Health and Seniors Care (2016). Seasonal Influenza Communicable Disease Management Protocol. Available at: https://www.gov.mb.ca/health/publichealth/cdc/protocol/influenza1.pdf.

Manitoba Health and Seniors Care (2019). Routine Practices and Additional Precautions. Available at: https://www.gov.mb.ca/health/publichealth/cdc/docs/ipc/rpap.pdf.

Manitoba Health and Seniors Care (2019). *Clostridioides difficile* Infection (CDI) Management Protocol. Available at: https://www.gov.mb.ca/health/publichealth/cdc/protocol/cdi.pdf

Manitoba Health and Seniors Care (2020). Healthcare Associated Infections Monitoring and Reporting. Available at: https://www.gov.mb.ca/health/publichealth/cdc/docs/hai.pdf

Manitoba Health and Seniors Care (201) Enteric Illness Protocol. Available at https://www.gov.mb.ca/health/publichealth/cdc/protocol/enteric.pdf

Ministry of Health and Long-Term Care (Ontario) (2018). Control of Respiratory Infection Outbreaks in Long-Term Care. Queen's Printer for Ontario. Available at: http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/reference/RESP_Infectn_ctrl_guide_LTC_2018_en.pdf.

Provincial Infection Control Network of British Columbia (2018) Respiratory Infection Outbreak Guidelines for Health care Facilities. Available at: Respiratory-Infection-Outbreak-Guidelines-for-Healthcare-Facilities_November-2018.pdf (picnet.ca).

Provincial Infection Control Network of British Columbia (2016) Gastrointestinal Infection Outbreak Guidelines for Healthcare Facilities. Available at: PICNet-GI-Outbreak-Guidelines_Revised-June-2016.pdf.

Provincial Infectious Diseases Advisory Committee (PIDAC) (2018). Best practices for environmental cleaning for prevention and control of infections in all health care settings. 3rd ed. Toronto. Available at: https://www.publichealthontario.ca/-/media/documents/B/2018/bp-environmental- cleaning.pdf.

Public Health Ontario (2021) Managing COVID-19 Outbreaks in Congregate Living Settings. Available at: https://www.publichealthontario.ca/-/media/documents/ncov/cong/2020/05/managing-covid-19-outbreaks-congregate-living-settings.pdf?la=en

CHANGE LOG

DATE	DETAILS
September 2022	1. Individual case definitions updated for Influenza-like illness and Gastrointestinal illness 2. Outbreak definitions updated for Respiratory (non COVID, non ILI), Influenza-like illness and Gastrointestinal illness 3. Recommendations for visitation during outbreaks updated 4. Removed document titled “Oseltamivir Treatment and Prophylaxis”. Document now links user to Manitoba Health Seasonal Influenza Protocol 5. Gastrointestinal outbreak signage and Respiratory outbreak signage adapted and made into one generalized Outbreak Signage