

Guide for Outbreak Prevention and Control in Acute Care Sites

**Includes COVID-19, Respiratory Illnesses, Influenza, and
Gastrointestinal Illness**

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Introduction

This manual provides current best practice/evidence-based guidance for outbreak control and management of COVID-19, Respiratory Illness (RI) including confirmed Influenza, and Gastrointestinal Illness (GI) in Acute Care sites.

Notes:

1. This is not a comprehensive IPC document as it outlines minimum outbreak management strategies and may be enhanced or modified depending on identification of the causative agent. It is important to consider the potential impact of outbreak management measures on the well-being of patients and HCWs (e.g., end of life, dependent adult, communication barriers, etc.). For detailed information about IPC, please consult IPC or Public Health.
2. Direction about best practices for outbreak management of possible or confirmed outbreaks due to an unusual, infrequent, or emerging/novel infectious disease will be provided by the MOH, and may extend beyond this document.
3. It is beyond the scope of this document to include *Clostridioides difficile*, multi-drug resistant organisms (e.g., methicillin-resistant *Staphylococcus aureus* [MRSA], carbapenem-resistant organisms [CPO]) and rash-causing organisms due to their unique epidemiological properties.

Background

Infectious disease outbreaks occur year round and in different settings, including acute care facilities. Early recognition of unusual clusters of illness and swift responses are critical to protect high-risk and vulnerable patients who are in close contact with each other in acute care facilities.

The notification of outbreaks and other infectious disease threats in Alberta is mandated under Section 26 of the provincial [Public Health Act](#), and each Medical Officer of Health (MOH) is accountable for outbreak investigation and management (Section 29).

Effective outbreak management requires a multidisciplinary approach to facilitate a prompt response to help minimize the impact of the outbreak. This document discusses the roles of Public Health, including Medical Officers of Health; Infection Prevention and Control (IPC); Acute Care Operational Leads; Workplace and Safety (WHS)/ Occupational Health and Safety (OHS); and on-site healthcare workers (HCWs). Public Health, IPC and WHS/OHS in acute care work collaboratively with operational leads and health care workers to facilitate a prompt response to help minimize the impact of the outbreak.

SECTION 1: Preparing for Potential Outbreaks

It is the responsibility of acute care to always be prepared for the possibility of a COVID-19, RI (including influenza) or GI outbreak. Each site should:

- Ensure staff have access to and are familiar with current AHS outbreak management protocols.
- Review and update internal protocols and procedures for outbreak management as necessary, including, but not limited to:
 - symptoms which require investigation
 - reporting to IPC, WHS/OHS and/or Public Health [Table 2A](#),
 - case and outbreak definitions for:
 - COVID-19 [Table 3A](#)
 - Respiratory illness (RI) [Table 3B](#)
 - Influenza [Table 3C](#)
 - Mixed Pathogen [Table 3D](#)
 - Gastrointestinal illness (GI) [Table 3E](#)
- Work with key site personnel to ensure adequate availability of supplies for outbreak management including on-site specimen collection kits for respiratory and stool patient specimen collection.
- Review routine IPC practices and additional outbreak-related measures with staff and physicians.

1.1 Roles and Responsibilities for Outbreak Prevention and Management

The RACI matrix outlines the specific responsibilities of the key stakeholder roles by function and task for the major actions associated with outbreak preparation and management.

RACI

R = Responsible = Does the work

A = Accountable = Delegates the work

C = Consulting = Provides Input

I = Informed = Needs to be told

See [Table 1A](#) RACI Outbreak Matrix.

Table 1A: RACI Outbreak Matrix

Functions	Context	Stakeholder						
		Outbreak Management Team (OMT) Lead ¹	IPC	WHS	Public Health (MOH/Designate) [CDC or SHE/EPH] ^{2,3}	Site or Unit Manager	Site Leadership	Provincial Lab
Surveillance/Case Finding (Investigate)	HCW (acquired at work)		C	R/A	C/I	C	I	
	HCW (acquired in community)			R/A	C/I			
	HCW (at work while communicable)		C	R/A	C/I	C	I	
	Patient (inpatient unit)		R/A	C	C/I	C	I	
	Patient (outpatient unit)		R/A	C	C/I	C	I	
	Visitor to unit		C	C	C/I	C	I	
Outbreak Declaration		A	C	C	R/A	C	I	I
Notification to AH					R/A			
Notification to AHS (e.g. Zone Leads)		A	R				R	
Communication with affected unit(s)	Patients		A	C	C/I	R	I	
	Staff	A	C	A	C/I	R	I	
	Visitors	A	C	C	C/I	R	I	
Implementation of IPC measures		A	C	C	C	R		
Testing Strategy - Staff			C	R/A	R/A	R	I	C
Testing Strategy - Patients			R/A	I	R/A		I	C
Monitoring Outbreak control strategies		A	R	R	C	R		
Reporting Outbreak status (tracking and communication)			R	R	R/A	R	I	R
Declaring Outbreak over		A	C	C	R/A	C	I	I

¹ The OMT Lead:

- Should be an expert in outbreak management such as a MOH or IPC physician.
- Alternatively, a co-lead model could be used in which an IPC physician/MOH and site operations/medical lead are partnered.
- OMT Lead is an independent role (i.e. separate from usual functions and responsibilities).

² CDC = Communicable Disease Control

³ SHE = Safe Healthy Environments; EPH = Environmental Public Health

The steps in declaring an outbreak are as follows:

Step 1

The accountable individual that identifies symptomatic patients or HCWs or at least two (2) confirmed cases notifies the designated Outbreak Management Team (OMT) Lead/designate by the Fastest Means Possible (FMP) (direct voice communication and email).

Step 2

The OMT Lead/designate confirms that cases meet definition, consults with Public Health to declare an outbreak and identifies subsequent management/control strategies.

Step 3

The OMT Lead/designate determines whether there is a need to convene an OMT meeting based on the type and magnitude of outbreak. If a meeting is required, the OMT Lead/designate convenes a conference call as soon as possible after the initial notification. Regardless of whether a formal meeting is convened, communication of direction must be provided via email to all key stakeholders.

- OMT membership is site-specific but **must** include the following membership:
 - IPC
 - WHS
 - Public Health
 - Site Operations – situational dependent at discretion of Outbreak Team Lead
- Optional members of the OMT may include:
 - Unit Manager
 - Environmental Services
 - Site Manager
 - Physician leader for the outbreak unit
 - Communication representative
 - Site Administration
 - Site Medical Director
 - IPC Site Medical Director
 - Program Chief
 - Program Executive Director
 - Patient Care Manager
 - Bed Management
 - Pharmacy
- See agenda template in [Appendix 5](#).

Section 2: Assessing a Potential Outbreak

2.1 Surveillance and Threshold for Investigation

All acute care sites are responsible for conducting ongoing monitoring for unusual clusters of illness in patients and HCWs. This occurs prior to, during, and after outbreaks.

- If patients show signs or symptoms of illness, notify IPC.
- If HCWs show signs or symptoms of illness, notify WHS/OHS.
- IPC and/or WHS/OHS will investigate further as needed.
- IPC and WHS/OHS will report to Public Health when indicated.

Table 2A: Symptoms Which Require Investigation and Reporting to IPC or WHS/OHS to Initiate an Outbreak Investigation

Patients	Healthcare Workers (HCWs)
<p>Any new/worse/unexplained respiratory or core symptoms:</p> <ul style="list-style-type: none"> • Cough (new cough or worsening chronic cough) • Shortness of breath/difficulty breathing (new or worsening) • Decreased oxygen saturation or increased oxygen requirement • Sore throat/painful swallowing/hoarse voice • Runny nose/nasal congestion/sneezing • Fever/chills/rigors <ul style="list-style-type: none"> - Adults: greater than 37.8°C - Paeds: greater than or equal to 38.0°C • Loss of/change in sense of smell or taste <p>New or unusual symptoms including but not limited to:</p> <ul style="list-style-type: none"> • Headache • Conjunctivitis/red eye/chemosis • Vomiting/diarrhea • Nausea/unexplained loss of appetite • Myalgia (muscle aches) or arthralgia (joint aches) • Fatigue/severe exhaustion • Any additional symptoms at clinician's discretion (e.g. skin manifestations such as "COVID toes", altered/change in mental status, etc) 	<p>Any symptoms that are new or worsened (if associated with allergies, chronic or pre-existing conditions):</p> <ul style="list-style-type: none"> • Cough • Shortness of breath/difficulty breathing • Runny or stuffy nose • Sore throat • Fever/chills • Nausea/Diarrhea • Loss of sense of smell or taste

Note: Symptoms not listed in [Table 2A](#) may still be indications of illness and should be managed at the discretion of the care team for the individual experiencing the symptoms. However, symptoms not listed in Table A do not need to be reported to Public Health and/or IPC and/or WHS.

Section 3: Outbreak Definitions and Determining Outbreak Type

Both symptoms and laboratory results play a role in determining the type of outbreak. Once laboratory results are available (including if patients or HCWs decline testing), a decision can be made about:

- i. whether the unit/site meets an outbreak definition, and
- ii. the type of outbreak occurring.

Case Confirmation

Patient case(s)

IPC will determine and document:

- if case is hospital-acquired and/or epidemiologically linked
- whether patient was in the outbreak area during the communicable period
- patient movement during the communicable period

There may be instances when two (2) or more patients present with respiratory symptoms that are not case-defining, but are the same as each other and within a 14-day period. When this occurs, the unit/site should contact IPC to determine next steps (e.g. continued monitoring, specific interventions, etc).

HCW case(s)

WHS will determine:

- if case is workplace-acquired and/or epidemiologically linked
- if HCW was in the outbreak area during their communicable period
- HCW vaccination status (if applicable) at time of exposure

This must be done prior to calling Public Health to open the outbreak. However, Public Health is also consulted as needed in the initial investigation to determine hospital acquisition and/or any epidemiological links.

Case Definitions and Outbreak Criteria

Table 3A: COVID-19 Illness

COVID-19 Illness Case Definition ¹	<u>COVID-19 Illness Outbreak Definition</u>
<p>A person with confirmation of infection with the virus (SARS-CoV-2) that causes COVID-19 by:</p> <p>1. A positive result on a molecular test² regardless of whether symptoms are present</p> <p>OR</p> <p>2. One (1) positive result on a Health Canada approved rapid/point-of-care (POC) antigen test in a person with COVID-19 symptoms</p>	<p>Two (2) or more confirmed hospital-acquired COVID-19 patient case(s)³ within a 14-day period⁴</p> <p>OR</p> <p>Two (2) or more confirmed⁴ COVID-19 cases in HCWs assigned/linked to a unit⁵ within a 14-day time period AND where at least one of the HCWs was in the work place during the communicable phase of illness⁶ AND/OR it is suspected there has been work site transmission as cause for one or more of the infections. The transmission could have been:</p> <ul style="list-style-type: none"> • Patient to HCW transmission; or • HCW to HCW transmission; or • Visitor to HCW transmission; or

<p>OR</p> <p>3. Two (2) positive results on a Health Canada approved rapid/POC antigen test completed at least 24 hours apart in an asymptomatic person</p>	<ul style="list-style-type: none"> • If after detailed review it is clear there was no community risk for infection acquisition for either HCW then even if the transmission link remains thus far unknown, outbreak criteria may be met (for example, HCWs who only go between work and home during “lock-down” periods). <p>Note: If variant testing results are available & results are discordant, then re-assess outbreak status.</p>
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¹ Refer to [Alberta Health COVID-19 Public Health Management Guidelines](#) for more details.

² A molecular test is a nucleic acid amplification test [NAAT] such as polymerase chain reaction [PCR], loop-mediated isothermal amplification [LAMP] or rapid molecular test that is Health Canada approved or approved by the lab accreditation body of the jurisdiction in which the test was performed at a community, hospital or reference laboratory (NML or a provincial public health laboratory) OR at the point of care OR at home. Positive results by the Abbott ID NOW™ COVID-19, Simplexa®, GeneXpert®, Aptima or BD Max™ nucleic acid amplification test are deemed acceptable to provide a final result (i.e. does not require confirmatory testing).

³ One (1) confirmed case in a patient admitted to hospital at least 7 days before symptom onset and who had a swab test positive when collected ≥7 days after admission; OR a patient admitted to hospital for less than 7 days who is deemed to have a confirmed hospital-acquired infection for any reason.

⁴ If one (1) hospital-acquired patient case or one (1) HCW case occurs: patient and HCW contact tracing will occur, and it will be used as an opportunity for heightened surveillance and reinforcement of routine measures and processes. Recommendations or measures specific to a particular exposure event will be made, as appropriate (e.g. patient and/or HCW prevalence testing). Any key learnings and/or actions for quality improvement that may stem from the exposure event will be reviewed and communicated.

⁵ “Unit” may refer to a single acute care unit or area, but some units/areas may be viewed as contiguous and should be viewed as though they are one unit for the purposes of this definition due to the flow of staff (e.g. Obstetrical Assessment, labour and delivery, and post-partum care). In some settings, a “unit” may refer to those staff who during the 14 days preceding the infections were sharing breakrooms or meeting spaces or work spaces.

⁶ The communicable phase of illness includes the pre-symptomatic phase (48 hours before first symptom onset) and the 10 days after symptom onset or until symptoms have improved AND afebrile for 24 hours without the use of antipyretic medication, whichever is longer. There are situations where the communicable phase of illness is longer, e.g. immune compromised individuals. Consult with IPC and/or WHS as appropriate.

COVID-19 Site on Watch

To be defined as a “Site on Watch,” an acute care site must meet **both** (1) and (2) below:

(1) COVID-19 outbreaks affecting more than 30% of patient care units at a single acute care site AND significant impact on capacity for key services (including but not limited to Medicine, Family Medicine, Critical Care, Surgery).

OR

COVID-19 outbreaks called in two (2) or more support services groups who are itinerant across an acute care site (e.g. Protective Services, Environmental Services, lab collection staff, etc).

AND

(2) As determined by the Site Outbreak Management Team.

Table 3B: Respiratory illness (RI)

Patient RI Case Definition¹		<u>RI Outbreak Definition</u>
New/acute onset of respiratory illness with TWO (2) or more symptoms below, at least ONE (1) of which MUST be respiratory:		Two (2) or more patient RI cases within a 14-day period with a common epidemiological link ² OR Two (2) or more HCW RI cases ³ within a 14-day period with a common epidemiological link ² Note: 1. Patient cases must be hospital-acquired. 2. HCW cases must have a common occupational link. 3. RI case or outbreak includes any non-influenza, non-COVID pathogen. 4. Where laboratory confirmation is available, a RI outbreak would be called if at least two RI cases are due to the same confirmed pathogen.
RESPIRATORY	OTHER	
Cough	Fever - Adults greater than 37.8° - Pediatrics greater than or equal to 38.0° C	
Shortness of breath/difficulty breathing/dyspnea	Headache	
Decreased O2 saturation or increased O2 requirement	Myalgia (muscle ache) or arthralgia (joint pain)	
Sore throat/painful swallowing/hoarse voice	Fatigue (significant and unusual)	
Runny nose/nasal congestion/sneezing	Nausea/vomiting/diarrhea	
Loss of/change to sense of taste or smell		

¹It is recognized that the definitions for respiratory illness (RI) may differ slightly between this document and the Point of Care risk assessment for patients with RI or COVID-19 (see: <https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-covid-19-expanded-testing.pdf>). These definitions serve different purposes, this definition is for population surveillance whereas the Point of Care risk assessment is a means for HCW to assess the infectious risk of patients to themselves and others and implement appropriate preventive measures.

²Epidemiological link means the cases were acquired in the same location or from the same person in the workplace setting/facility (i.e. during their incubation period or period of communicability), and there is evidence of health care-associated transmission within the facility.

³Use symptom list in [Table 2A](#).

Table 3C: Influenza Illness

Influenza Illness Case Definition	<u>Influenza Illness Outbreak Definition</u>
Clinical illness (as defined by RI above) with laboratory confirmation of infection by: <ul style="list-style-type: none"> • detection of influenza RNA OR • demonstration of influenza virus antigen in an appropriate clinical specimen OR • isolation of influenza virus from an appropriate clinical specimen OR • significant rise (e.g. fourfold or greater) in influenza IgG titre between acute and convalescent sera 	Two (2) or more confirmed hospital-acquired patient influenza cases within a 7-day period with a common epidemiological link ¹ OR Two (2) or more confirmed HCW influenza cases within a 7-day period with a common epidemiological link ¹

¹Epidemiological link means the cases were acquired in the same location or from the same person in the workplace setting (i.e. during their incubation period or period of communicability), and there is evidence of health care-associated transmission within the facility.

Table 3D: Mixed Pathogen Outbreak (Respiratory)

Mixed Pathogen Outbreak Definition
<p>A mixed pathogen outbreak could result when a combination of infections with different pathogens/viruses are identified on a unit or in a facility. This could result in a combination of:</p> <ul style="list-style-type: none"> • Influenza and COVID-19 cases • Influenza and Respiratory Illness cases • COVID-19 and Respiratory Illness cases • Respiratory Illness outbreak with two different RI organisms or pathogens <p>Note: The IPC and/or WHS teams, in discussion with Public Health, will advise which recommendations are applied where there is a discrepancy due to a mixed pathogen outbreak. The general principle of applying the more conservative recommendation will be followed.</p>

Table 3E: Gastrointestinal Illness

Gastrointestinal (GI) Illness Case Definition	<u>GI Illness Outbreak Definition</u>
<p>At least ONE (1) of the following criteria must be met and not be attributed to another cause (e.g., <i>Clostridioides difficile</i> diarrhea, medication, laxatives, diet or prior medical condition etc.):</p> <ul style="list-style-type: none"> ▪ 2 or more episodes of diarrhea (i.e., loose or watery stools) in a 24-hour period, above what is normally expected for that individual <p>OR</p> <ul style="list-style-type: none"> ▪ 2 or more episodes of vomiting in a 24-hour period <p>OR</p> <ul style="list-style-type: none"> ▪ 1 or more episodes of vomiting AND diarrhea in a 24-hour period <p>OR</p> <ul style="list-style-type: none"> ▪ 1 episode of bloody diarrhea <p>OR</p> <ul style="list-style-type: none"> ▪ Laboratory confirmation of a known enteric pathogen AND at least one symptom compatible with a GI infection e.g., nausea, vomiting, diarrhea, abdominal pain or tenderness 	<p>Two (2) or more hospital-acquired patient GI cases with initial symptom onset within a single 48-hour period with a common epidemiological link¹</p> <p>OR</p> <p>Two (2) or more HCW GI cases with initial symptom onset within a single 48-hour period with a common epidemiological link¹</p> <p>Note: Where laboratory confirmation is available, GI outbreak would be called if at least two GI cases due to the same confirmed pathogen. Discuss with MOH/designate. Consider organism, incubation period, etc.</p>

¹Epidemiological link means the cases were acquired in the same location or from the same care setting or workplace contact (i.e. during their incubation period or period of communicability), and there is evidence of health care-associated transmission within the facility.

Section 4: Confirmed COVID-19 Outbreak

Review this section if there are one or more patients or HCWs with COVID-19 positive laboratory results.

4.1 Acute Care COVID-19 Outbreak Definition

Refer to:

- COVID-19 Illness - [Table 3A](#)

Refer to [Appendix 6](#) for Outbreak Checklist template.

4.2 Case Confirmation

Refer to [Section 3: Case Confirmation](#).

4.3 Duration of Outbreak

- 14 days (i.e. One (1) complete incubation period for SARS-CoV-2) from last day of possible exposure provided that serial asymptomatic patient testing is performed i.e. close outbreak on day 15
- Otherwise use 28 days (i.e. Two (2) incubation periods) and close outbreak on day 29
- See [Section 7: Closing an Outbreak](#)

4.4 Outbreak Communication

4.4.1 *Initial communication* (when outbreak first declared)

- IPC or WHS to request EI# from Public Health as per zone process; include the following information as part of EI# request:
 - Number of COVID-positive patients
 - Number of COVID-positive HCWs
 - Symptom onset date of cases
 - Number of patient close contacts
 - Number of HCW close contacts
 - Number of at-risk patients
 - Number of at-risk HCWs
 - Name and contact information for unit/area manager
 - Designated IPC contact person
- IPC to notify (if not already done):
 - Environmental Services
 - Bed Management/equivalent
 - Workplace Health & Safety
 - Unit/Program/Site Leadership
- IPC/ Site Command Post (SCP)/Site Leadership/Communications to send out on-site outbreak memo/email notification
- IPC to enter initial outbreak information into Provsurv IPC Outbreak Tracker Database
- Unit/unit managers to notify patients & DFSPs
- Unit to arrange shift huddles: consider initial and ongoing (as needed)
- SCP to notify Zone Emergency Operations Centre (ZEOC) if ZEOC still standing

- If no SCP, then Operational/Site Leadership or IPC to send communication to ZEOC using zone/site process
- If Incident Command Structure (ICS) not in place, use site/zone non-ICS communication processes

4.4.2 Ongoing communication

- Unit to notify IPC of new symptomatic or COVID-19 positive patients
 - “Unit” can be charge nurse, assistant head nurse, unit manager, patient care manager, or any other individual who has been delegated this responsibility
- Unit to notify WHS if new symptomatic or COVID-19 positive HCWs
- Communicable Disease Outbreak Daily Report (i.e. REDCap entry) completed and submitted to CDC as per site/zone process
- IPC to update Provsurv IPC Outbreak Tracker Database as needed
- Outbreak Management Team (OMT) meetings – frequency to be determined by OMT
- Communication to ZEOC and/or Zone leadership (i.e. daily check-in)
 - SCP to do if in Incident Command Structure
 - If Incident Command Structure (ICS) not in place, use site/zone non-ICS communication processes

The following are baseline/ minimum recommendations and considerations for a confirmed COVID-19 outbreak in an acute care setting. Additional or more restrictive recommendations may be put in place at the discretion of IPC, WHS, Public Health and/or the OMT.

4.5 Patient Movements [Admissions/Discharges/Transfers]

4.5.1 Admissions and incoming transfers

- OMT will determine if
 - Unit will close to admissions and incoming transfers, or
 - Remain open with any restrictions/exceptions

4.5.2 Patient movements out

- Minimize patient transfers off unit – should be medically necessary or repatriation to home zone (i.e. no transfers of convenience)
- Notify IPC of all transfers or discharges for patients from outbreak unit and any identified close contacts on other units. See Table 4A below.

Table 4A: Decision Table for Discharges and Outgoing Transfers from a COVID-19 Outbreak Unit

Scenario	Action by Unit/ Bed Co-ordinator/ Transition Team
Intra-facility or Inter-facility transfer [i.e. within acute care and acute tertiary rehabilitation]	<ul style="list-style-type: none"> ○ Ensure receiving unit/site is made aware of outbreak and Additional Precautions as necessary. ○ Notify IPC¹
Transfers/Discharges to Continuing Care/ other congregate care settings	<ul style="list-style-type: none"> ○ Refer to Risk Assessment Matrix to determine if Risk Assessment Worksheet (RAW) and MOH approval is required. ○ Ensure receiving unit/site is made aware of outbreak and any Additional Precautions plus any pertinent direction based on risk assessment. ○ Notify IPC¹
Discharges home	<ul style="list-style-type: none"> ○ Provide the completed COVID-19 Patient Discharge Instructions² letter to the patient. See Appendix 4. ○ Notify IPC

¹IPC at the sending site may also directly notify receiving site's IPC team/designate as per site/zone processes.

²Please note that most patients being discharged from outbreak unit are considered to have a COVID-19 exposure and this should be checked off in the letter. Possible exception is a recently COVID-recovered patient (<90days) – consult IPC.

4.6 Patient Considerations

4.6.1 Patient symptom monitoring

- Increase patient symptom monitoring to every 8 hours. (i.e. minimum of three (3) times daily)
 - Symptom Identification and Monitoring Form (Form 21616): <https://www.albertahealthservices.ca/fm-21616.pdf>
 - Seniors/altered cognition: <https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-covid-19-recognizing-early-symptoms-in-seniors.pdf>
 - Wandering patients: <https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-covid-19-care-of-wandering-covid19-patient-acute-care.pdf>
- If patient develops new, changed or worsening symptoms, place patient on Modified Respiratory precautions, and private accommodation when available. Notify IPC.

4.6.2 Additional Precautions/PPE requirements

- Symptomatic patients:
 - Institute Modified Respiratory precautions.
 - Always place patient in private accommodation, when available. If private space is not available, then maintain at least two (2) metres of physical separation between bed/stretchers spaces or ensure that there is a barrier between patients (e.g. curtain or screen).
- Asymptomatic patients:
 - Use Routine Practices – during COVID-19 pandemic response, this includes continuous masking +/- eye protection
- Universal Modified Respiratory precautions are not recommended for COVID-19 outbreaks.
- For more information, refer to the [AHS COVID-19 Personal Protective Equipment website](#).

4.6.3 COVID-19 Testing

- Add EI number to any COVID-19 swabs and to mark the requisition (top right corner) and top of nasopharyngeal (NP) swab tube with an X (this is to expedite the results for the test).
- Symptomatic patient testing may be directed by the most responsible healthcare provider (MRHP) or IPC.
- Asymptomatic patient testing (close contacts and unit-wide) is directed by IPC or Public Health

4.6.4 Discontinuation of Modified Respiratory precautions

- [Discontinuation of Modified Respiratory Precautions for Suspected or Confirmed COVID-19 Form \(Form 21624\)](#)
- IPC should be consulted or notified as per agreed upon site process when discontinuing Additional Precautions for patients on the outbreak unit

4.6.5 Patient Cohorting Considerations

- Cohorting considerations need to be discussed based on the circumstances of each outbreak.

4.6.6 Patient Contact Tracing

- IPC is responsible for patient contact tracing.
 - Exposure period for COVID-19 starts 48 hours prior to symptom onset of first chronological case
- All admitted close contacts to be placed on Modified Respiratory precautions and in private accommodation (or consult IPC prior to cohorting). Asymptomatic COVID-19 testing to be directed by IPC or Public Health.
- Notification of COVID-19 exposure for:
 - Inpatients: IPC to follow up with unit(s)
 - Patients discharged to other levels of care or congregate/facility living site: IPC to notify appropriate IPC team or CDC to notify facility.
 - Patients discharged home: IPC to provide close contact line list and further direction to unit manager/delegate for follow up as needed.
 - See 4.7.6 for DFSP/Visitor close contact tracing
- IPC to follow all close contacts (inpatients/discharged/transferred) for duration of outbreak.

4.6.7 Early Antiviral Treatment of Respiratory Illness (i.e. before causative pathogen identified)

- Treatment decisions are the responsibility of the MRHP.
 - **Hospitalized patients with respiratory symptoms should be empirically treated with oseltamivir for suspected influenza.**
 - Re-assess once laboratory results are available.
- Start antivirals within 48 hours of onset of symptoms to be effective in reducing the duration and severity of illness, and decreasing the rate of complications. Current recommendations will be discussed at the time of the outbreak.
- Note: [COVID-related therapy](#) is usually considered after laboratory confirmation in conjunction with clinical presentation and immunization status (i.e. is not early antiviral treatment).

4.7 Unit Outbreak Control Measures

4.7.1 Cleaning and Disinfection

- Enhanced/outbreak cleaning by Environmental Services.
- Frequent cleaning of high touch surfaces by unit staff.

- Only AHS-approved products are to be used.

4.7.2 Unit/Area Entrances

- Signage at entry points:
 - [COVID-19: This Unit on Outbreak](#)
 - [COVID-19: Outbreak Measures in Place](#)
 - [COVID-19: Outbreak Measures in Place \[fillable text\]](#)
- Access to alcohol-based and PPE as applicable at entrance.
- Screening staff at area/unit entrance to ensure sign in, hand hygiene, and mask +/- eye protection for anyone entering the unit.
 - If no screening staff, then ensure clear signage that anyone entering unit must check-in at main desk.
- Minimize unnecessary traffic onto unit.

4.7.3 Personal Protective Equipment

- Institute PPE coaches.
- Keep record of noted breaches/errors/gaps and report to UM/CNE and OMT

4.7.4 Supplies

- Ensure adequate supplies for specimen collection
- Ensure adequate PPE supplies

4.7.5 Additional restrictions

- Group activities/therapy: restrict as applicable
- Rehabilitation restrictions:
 - Patients on Modified Respiratory precautions: complete rehabilitation in patient's room.
 - All other patients: complete rehab on unit
 - Exceptions may be made for discharge planning/assessment; consult IPC.
 - Site-specific processes to be discussed
- Communal dining: restrict if applicable.
- Nutrition centre should only be accessed by staff. Ensure signage posted to cue hand hygiene. Closed to patients and DFSPs/Visitors.

4.7.6 Designated Family/Support Persons (DFSPs)/Visitors

- DFSPs/Visitors access restrictions may be required during a COVID-19 outbreak.
 - This should be discussed by OMT. Ensure ZEOC notification is followed as per the [Acute Care Visitation Guidance](#).
 - Exceptions can be made for end-of-life or other extenuating circumstances. Ensure a site approval process is in place.
- DFSPs/Visitors should be advised of the potential risk of acquiring illness if they choose to enter the outbreak unit.
- DFSPs/Visitors are encouraged to receive COVID-19 immunization.
- DFSPs/Visitors who choose to visit during an outbreak must:
 - Follow Additional Precautions when required; unit staff or PPE coaches should assist with proper donning and doffing
 - Practice good hand hygiene,
 - Limit visit to one (1) patient only, and
 - Exit the facility immediately after the visit.
- DFSPs/Visitors must not visit when symptomatic or sick.
- DFSPs/Visitors contact tracing

- Maintain DFSPs/Visitor log. OMT to decide if DFSPs/Visitors should log in at the unit entrance or at the room entrance.
- IPC and unit to determine if any potential DFSPs/Visitor close contacts
- Unit to notify DFSPs/Visitors close contact (if applicable).

4.8 WHS Actions

- Obtain staff list of those exposed (including students, physicians, allied health, others)
 - Conduct HCW contact tracing. Unit/area manager to pre-screen: [WHS Notification Steps Regarding Occupational Exposures/Outbreaks to COVID-19](#)
 - Provide direction about work restrictions and return to work.
 - Ensure contracted workers are included in the contact tracing of any AHS HCW cases.
 - Any exposed contracted worker should report to their leader and will be managed using that company's protocols.
- WHS to provide direction about asymptomatic HCW testing as appropriate.

4.9 HCW Outbreak Control Measures

(including volunteers, students, physicians, resident physicians)

- Increase Fit for Work screen/self-symptom monitoring to two (2) times per shift.
- Emphasize messaging for staff to not work while symptomatic and follow return to work guide to determine when they can return to the workplace.
 - [COVID-19 Return to Work Decision Chart For Healthcare Workers](#)
 - [COVID-19 Return to Work Guide for Healthcare Workers](#)
- Sites must follow WHS' guidelines for work restrictions as applicable.
 - Despite the excellent efficacy of most vaccines against severe illness, infection can occur in immunized individuals. Therefore, regardless of immunization status individuals need to continue daily self-assessment for illness.
 - In addition, immunized individuals should continue to use PPE to protect against new strains of virus and other infectious respiratory agents.
- Institute a unit/area HCW log to assist with any ongoing contact tracing efforts.
- Consider cohorting of staff – single unit or site requirements.
- Review staff considerations such as:
 - distancing during breaks
 - hand hygiene
 - masking
 - shared foods/drinks
- Break areas
 - Monitor staff break areas for safe IPC practices.
 - Develop a process to track staff who may be on break together (proactive for potential contact tracing).
 - Encourage outdoor breaks when warm enough.
- Parties, sharing of food, etc. is prohibited.
- Other off-unit events/gatherings (e.g. Connect Care training, BLS training etc.)
 - Review recently occurred events – consider for contact tracing purposes and to assess potential linkages in the transmission chain
 - Upcoming events - HCWs may attend; additional measures may be needed.
- Consulting teams including physicians, and others who come into the unit like PT/OT/SLP etc should be included in contact tracing.
 - May have limitations to access during outbreak

4.9.1 HCW Personal Protective Equipment (PPE)

- Continuous masking and eye protection for staff is required on the affected unit
- Asymptomatic patients: Routine Practices including continuous masking and eye protection.
- Symptomatic patients: Modified Respiratory precautions (including a fit tested N95 respirator when involved in an [AGMP](#)).
- For more information, refer to the [AHS COVID-19 Personal Protective Equipment website](#).
- Unit/IPC to report back on issues identified with PPE/HH/IPC practices etc. Consider use of PPE coach/dofficer/buddies.

4.9.2 Non-essential personnel (volunteers, students)

- Limit non-essential personnel in the outbreak unit/area; OMT should discuss and re-assess regularly
- Non-essential personnel who continue to assist during an outbreak must follow the same control measures as HCWs (see 4.9.1)
- Advise non-essential personnel of the potential risk of acquiring illness during outbreaks.

4.9.3 Symptomatic HCW and Testing Recommendations

- WHS will provide direction about:
 - Any COVID-19 (+/- other respiratory virus) testing required for symptomatic HCWs
 - Any HCW who tests COVID-19 positive or who Public Health considers a COVID-19 case should be excluded from work for 5 days or until symptoms improve (including afebrile for 24 hours without the use of fever reducing medications), whichever is longer.
 - Work restriction may be extended to 14 days at the discretion of the MOH/WHS Medical Consultant.
 - **Note:** Isolation is recommended in public settings, whereas work restriction is mandatory.
 - Immunocompromised HCW cases should consult their physician/specialist regarding the duration of their work restriction period and if any additional testing is recommended.
- See [Attending Work with COVID-19 Symptoms or a Positive COVID-19 Test Directive 1188 \(ahsnet.ca\)](#) for more information.

4.9.4 Exposure Assessment

- WHS will assess all potential exposures using their internal communicable disease management guideline for COVID-19.

Section 5: Confirmed Respiratory Illness (RI) Outbreak Including Confirmed Influenza (excludes COVID-19: see Section 4)

5.1 Acute Care Outbreak Definition – Respiratory Illness, Influenza, Mixed Pathogen

Refer to:

- Respiratory Illness (RI) [Table 3B](#)
- Influenza – [Table 3C](#)
- Mixed Pathogen – [Table 3D](#)

Refer to [Appendix 6](#) for Outbreak Checklist template.

5.2 Case Confirmation

Refer to [Section 3: Case Confirmation](#).

5.3 Duration of Outbreak

5.3.1 *RI Outbreak*

- If a non-influenza, non-COVID-19 respiratory pathogen is identified, the outbreak will remain open for two incubation periods for that pathogen.
 - See [Table 5A](#) for incubation periods for common respiratory pathogens.
e.g. the incubation period for RSV is 2-8 days, so an RSV outbreak would remain open until the 17th day following symptom onset of the last patient case.
- If no pathogen is identified, an RI outbreak would remain open for 7 days i.e. would close on the 8th day following symptom onset of the last case.

5.3.2 *Influenza Outbreak*

- Outbreak remains open for two incubation periods (incubation period is 1-3 days), therefore the outbreak would be closed on the 8th day following symptom onset of the last patient case.

5.3.3 *Mixed Pathogen Outbreak*

- Outbreak remains open for a single incubation period based on the pathogen with the longest incubation period.
- If COVID-19 is one of the pathogens, then follow COVID-19 outbreak duration [Section 4: Confirmed COVID-19 Outbreak](#)

5.3.4 *Closing an Outbreak*

- See [Section 7: Closing an Outbreak](#)

Table 5A: Organisms Commonly Associated with RI
(Reference: [IPC Diseases and Conditions Table for Management of Patients in Acute Care](#))

ORGANISM	COMMON SYMPTOMS/ CLINICAL PRESENTATIONS	INFECTIOUS SUBSTANCE/HOW IT IS TRANSMITTED	INCUBATION PERIOD	PERIOD OF COMMUNICABILITY	OUTBREAK RESTRICTIONS/ RECOMMENDATIONS for ACUTE CARE ¹
INFLUENZA, SEASONAL TYPE A OR B	<ul style="list-style-type: none"> - Sudden onset of cough, ↑O₂ requirement, ↓O₂ saturation, fever, muscle or joint aches, fatigue, sore throat - In children under age 5, GI symptoms may also be present. - In patients <5 or ≥65, fever may not be prominent. 	Respiratory secretions transmitted person-to-person by: <ul style="list-style-type: none"> - large respiratory droplets - aerosols e.g. AGMP² - direct/indirect contact with surfaces, equipment, or body parts recently contaminated with respiratory secretions. 	1 to 3 days	<ul style="list-style-type: none"> - Communicable for duration of symptoms - Maintain precautions until symptom resolution/ improvement/ stabilization for at least 48 hours - For immunocompromised patients: consult with IPC on a case-by-case basis due to prolonged viral shedding 	Refer to Section 5
COVID-19 (SARS-CoV-2)	<ul style="list-style-type: none"> - See Table 2A - All symptoms listed are possible COVID-19 symptoms (core and expanded) 	Respiratory secretions transmitted person-to-person by: <ul style="list-style-type: none"> - large respiratory droplets - aerosols e.g. AGMP² - direct/indirect contact with surfaces, equipment, or body parts recently contaminated with respiratory secretions. 	1 to 14 days	<ul style="list-style-type: none"> - Begin up to 48 hours prior to symptom onset - Continue until patient is considered to be recovered. In acute care, this is usually until 14 days from symptom onset (or from the initial COVID-positive test if symptom onset unknown) and symptoms have improved /stabilized for at least 48 hours, whichever is longer. - See Discontinuation of Modified Respiratory 	Refer to Section 4

ORGANISM	COMMON SYMPTOMS/ CLINICAL PRESENTATIONS	INFECTIOUS SUBSTANCE/HOW IT IS TRANSMITTED	INCUBATION PERIOD	PERIOD OF COMMUNICABILITY	OUTBREAK RESTRICTIONS/ RECOMMENDATIONS for ACUTE CARE ¹
				Precautions for Suspected or Confirmed COVID-19 Form (Form 21624) for more specific information.	
RESPIRATORY SYNCYTIAL VIRUS (RSV)	<ul style="list-style-type: none"> - Cough, ↑O₂ requirement, ↓O₂ saturation, fever, muscle or joint aches, fatigue, sore throat, runny nose, sneezing, wheezing 	Respiratory secretions transmitted person-to-person by: <ul style="list-style-type: none"> - large respiratory droplets - aerosols e.g. AGMP² - direct/indirect contact with surfaces, equipment, or body parts recently contaminated with respiratory secretions. 	2 to 8 days	<ul style="list-style-type: none"> - Communicable for duration of symptoms - Maintain precautions until symptom resolution /improvement/stabilization for at least 48 hours - For immunocompromised patients: consult with IPC on a case-by-case basis due to prolonged viral shedding 	Refer to Section 5
PARAINFLUENZA Type 1, 2, 3, 4	<ul style="list-style-type: none"> - Cough, ↑O₂ requirement, ↓O₂ saturation, fever, muscle or joint aches, fatigue, sore throat, runny nose, sneezing, wheezing, croup, bronchitis 	Respiratory secretions transmitted person-to-person by: <ul style="list-style-type: none"> - large respiratory droplets - aerosols e.g. AGMP² - direct/indirect contact with surfaces, equipment, or body parts recently contaminated with respiratory secretions. 	2 to 6 days	<ul style="list-style-type: none"> - Communicable for duration of symptoms; however, cough may persist for 1 to 3 weeks post-acute infection - Maintain precautions until symptom resolution /improvement/stabilization for at least 48 hours - For immunocompromised patients: consult with IPC on a case-by-case basis due to prolonged viral shedding 	Refer to Section 5

ORGANISM	COMMON SYMPTOMS/ CLINICAL PRESENTATIONS	INFECTIOUS SUBSTANCE/HOW IT IS TRANSMITTED	INCUBATION PERIOD	PERIOD OF COMMUNICABILITY	OUTBREAK RESTRICTIONS/ RECOMMENDATIONS for ACUTE CARE ¹
HUMAN METAPNEUMOVIRUS (hMPV)	<ul style="list-style-type: none"> - Cough, ↑O₂ requirement, ↓O₂ saturation, fever, muscle or joint aches, fatigue, sore throat, nasal congestion, shortness of breath 	Respiratory secretions transmitted person-to-person by: <ul style="list-style-type: none"> - large respiratory droplets - aerosols e.g. AGMP² - direct/indirect contact with surfaces, equipment, or body parts recently contaminated with respiratory secretions. 	3 to 5 days	<ul style="list-style-type: none"> - Communicable for duration of symptoms - Maintain precautions until symptom resolution/improvement/stabilization for at least 48 hours - For immunocompromised patients: consult with IPC on a case-by-case basis due to prolonged viral shedding 	Refer to Section 5
Other Common Respiratory Viruses such as: Entero/Rhinovirus, Non-COVID-19 Coronaviruses Adenovirus	<ul style="list-style-type: none"> - Sore throat, runny nose, coughing, ↑O₂ requirement, ↓O₂ saturation, sneezing 	Respiratory secretions transmitted person-to-person by: <ul style="list-style-type: none"> - large respiratory droplets - aerosols e.g. AGMP² - direct/indirect contact with surfaces, equipment, or body parts recently contaminated with respiratory secretions. 	Entero / Rhinoviruses: usually 2-3 days Seasonal Coronaviruses (NOT SARS-CoV-2): usually 2-4 days Adenovirus: 2-14 days	<ul style="list-style-type: none"> - Communicable for duration of symptoms - Maintain precautions until symptom resolution/improvement/stabilization for at least 48 hours - For immunocompromised patients: consult with IPC on a case-by-case basis due to prolonged viral shedding 	Refer to Section 5

¹First day is designated as Day 0; after the first 24 hours is Day 1. If IPC/Public Health/WHS declares the outbreak to be over 7 days after onset of symptoms in the last case, then outbreak closes on the morning of Day 8.

²AGMP=[aerosol-generating medical procedure](#)

5.4 Outbreak Communication

5.4.1 Initial communication (when outbreak first declared)

- IPC or WHS to request EI# from Public Health as per zone process; include the following information as part of EI# request:
 - Number of symptomatic/positive patients
 - Number of symptomatic/positive HCWs
 - Symptom onset date of cases
 - Number of patient close contacts
 - Number of HCW close contacts
 - Number of at-risk patients
 - Number of at-risk HCWs
 - Name and contact information for unit/area manager
 - Designated IPC contact person
- IPC to notify (if not already done):
 - Environmental Services
 - Bed Management/equivalent
 - Workplace Health & Safety
 - Unit/Program/Site Leadership
 - Pharmacy (to coordinate chemoprophylaxis if Influenza; see [Appendix 2](#))
- IPC/Site Command Post (SCP)/Site Leadership/Communications to send out on-site outbreak memo/email notification
- IPC to enter initial outbreak information into Provsurv IPC Outbreak Tracker Database
- Unit/unit managers to notify patients & DFSPs
- Unit to arrange shift huddles: consider initial and ongoing (as needed)
- SCP to notify Zone Emergency Operations Centre (ZEOC) if ZEOC still standing
 - If no SCP, then Operational/Site Leadership or IPC to send communication to ZEOC using zone/site process
 - If Incident Command Structure (ICS) not in place, use site/zone non-ICS communication processes

5.4.2 Ongoing communication

- Unit to notify IPC of new symptomatic or positive patients as per site/zone process
 - “Unit” can be charge nurse, assistant head nurse, unit manager, patient care manager, or any other individual who has been delegated this responsibility
- Unit to notify WHS if new symptomatic or positive HCWs as per zone process
- Communicable Disease Outbreak Daily Report (i.e. REDCap entry) completed and submitted to CDC as per site/zone process.
- IPC to update Provsurv IPC Outbreak Tracker Database as needed
- Outbreak Management Team (OMT) meetings – frequency to be determined by OMT
- Communication to ZEOC and/or Zone leadership (i.e. daily check-in)
 - SCP to do if in Incident Command Structure
 - If Incident Command Structure (ICS) not in place, use site/zone non-ICS communication processes

The following are baseline/ minimum recommendations and considerations for a Respiratory Illness (RI) outbreak in an acute care setting. Additional or more restrictive recommendations may be put in place at the discretion of IPC, WHS, Public Health and/or the OMT.

5.5 Patient Movements [Admissions/Discharges/Transfers]

5.5.1 Admissions and incoming transfers

- OMT will determine if:
 - Unit will close to admissions and incoming transfers in, or
 - Remain open with any restrictions/exceptions
- **Note:** For confirmed influenza outbreaks, **admission restrictions will remain in place at minimum for seven (7) days following the onset of symptoms in the last case**, based on recommendations from the Association of Medical Microbiology and Infectious Disease (AMMI) Canada, and as directed by the Public Health.

5.5.2 Patient movements out

- Minimize patient transfers off unit – should be medically necessary or repatriation to home zone (i.e. no transfers of convenience)
- Notify IPC of all transfers or discharges for patients from outbreak unit and any identified close contacts on other units

Table 5B: Decision for Discharges and Outgoing Transfers from a RI or Influenza A/B Outbreak Units

Scenario	Action by Unit/ Bed Co-ordinator/ Transition Team
Intra-facility or Inter-facility transfer [i.e. within acute care and acute tertiary rehabilitation]	<ul style="list-style-type: none"> ○ Ensure receiving unit/site is made aware of outbreak and Additional Precautions as necessary. See Table 5E ○ Outbreak unit and receiving unit to notify site IPC¹
Transfers/Discharges to Continuing Care/ other congregate care settings	<ul style="list-style-type: none"> ○ Refer to Risk Assessment Matrix to determine if Risk Assessment Worksheet (RAW) and MOH approval is required. ○ Ensure receiving unit/site is made aware of outbreak and any Additional Precautions plus any pertinent direction based on risk assessment. See Table 5E ○ Outbreak unit to notify site IPC¹
Discharges home	<ul style="list-style-type: none"> ○ No further direction.

¹IPC at the sending site may also directly notify receiving site's IPC team/designate as per site/zone processes.

Table 5C: IPC Management for Outgoing Transfers from a Non-Influenza RI Outbreak Unit (For Influenza A/B Outbreak See [Table 5D](#))

	Current site	Receiving Site	
		Transfer to another acute care unit/facility (i.e. medically necessary)	Transfer to Continuing Care or Corrections
Symptomatic patient	Maintain Contact and Droplet Precautions until asymptomatic x 48 hrs.	Place patient in private room. Continue to symptom monitor. Maintain Contact and Droplet Precautions until asymptomatic x 48 hrs.	Private room preferred. Continue to symptom monitor. Maintain Contact and Droplet Precautions until asymptomatic x 48 hrs.
Asymptomatic patient	Continue to symptom monitor.	No isolation necessary but private room preferred x 48 hrs. Continue to symptom monitor.	No isolation necessary but private room preferred x 48 hrs. Continue to symptom monitor.

Table 5D: IPC Management for Outgoing Transfers from an Influenza A/B Outbreak Unit

		Current site	Receiving Site	
			Transfer to another acute care unit/facility (i.e. medically necessary)	Transfer to Continuing Care or Corrections
Symptomatic patient	Osetamivir (Treatment)	Continue to symptom monitor. Maintain Contact and Droplet Precautions until asymptomatic x 48 hrs. Re-assess osetamivir as needed.	Place patient in private room. Continue to symptom monitor. Maintain Contact and Droplet Precautions until asymptomatic x 48 hrs. Re-assess osetamivir as needed.	Private room preferred. Continue to symptom monitor. Maintain Contact and Droplet Precautions until asymptomatic x 48 hrs. Re-assess osetamivir as needed.
	No Osetamivir	Continue to symptom monitor. Maintain Contact and Droplet Precautions until asymptomatic x 48 hrs. Re-assess osetamivir as needed.	Place patient in private room. Continue to symptom monitor. Maintain Contact and Droplet Precautions until asymptomatic x 48 hrs. Re-assess osetamivir as needed.	Private room preferred. Continue to symptom monitor. Maintain Contact and Droplet Precautions until asymptomatic x 48 hrs. Re-assess osetamivir as needed.
Asymptomatic patient [Note: Osetamivir prophylaxis is recommended for all patients on influenza A/B outbreak units.]	Osetamivir (Prophylaxis)	Continue to symptom monitor. IPC to determine need for Additional Precautions for roommate/close contacts. Re-assess osetamivir as needed.	Private room preferred x 48 hrs. Continue to symptom monitor. Maintain any measures in place (including osetamivir chemoprophylaxis). Re-assess measures as needed.	Private room preferred x 48 hrs. Continue to symptom monitor. Maintain any measures in place as able. Continue osetamivir for 72 hrs.
	No Osetamivir	Continue to symptom monitor. IPC to determine need for Additional Precautions for roommate/close contacts. Re-assess osetamivir as needed.	Private room preferred x 48 hrs. Continue to symptom monitor. Maintain any measures in place. Re-assess measures and osetamivir as needed.	Private room preferred x 48 hrs. Continue to symptom monitor. Maintain any measures in place as able. Re-assess measures and osetamivir, as needed.

5.6 Patient Considerations

5.6.1 Patient symptom monitoring and Additional precautions/PPE requirements

- Increase patient symptom monitoring to every 8 hours. (i.e. minimum of three (3) times daily)
 - Symptom Identification and Monitoring Form (Form 21616):
<https://www.albertahealthservices.ca/fm-21616.pdf>
- Symptomatic patients (i.e. new or changed or worsening symptoms):
 - Always place patient in private accommodation, when available. If private space is not available, then maintain at least two (2) metres of physical separation between bed/stretchers spaces or ensure that there is a barrier between patients (e.g. curtain or screen).
 - Notify IPC.

Table 5E: Additional precautions for Respiratory Symptoms

	Prior to pathogen being identified	Pathogen identified as SARS-CoV-2	Non-SARS-CoV-2 pathogen identified (i.e. seasonal respiratory virus)	No specific pathogen identified (i.e. COVID-negative and RPP-negative)
Respiratory symptoms present	Modified Respiratory	Modified Respiratory	Contact + Droplet	Modified Respiratory

- Asymptomatic patients:
 - Use Routine Practices – during COVID-19 pandemic response, this includes continuous masking +/- eye protection
- Universal Contact and Droplet or Modified Respiratory precautions are not recommended for RI outbreaks.
- For more information, refer to [Personal Protective Equipment | Alberta Health Services](#).

5.6.2 RI Testing

- Symptomatic patient testing will be directed by MRHP or IPC. Add EI number to any nasopharyngeal (NP) swabs for RI.
 - Request Respiratory Pathogen Panel (RPP) and COVID-19 testing.
 - Check off “outbreak investigation” on Microbiology requisition.
- There is no asymptomatic testing for RI/Influenza outbreaks.

5.6.3 Discontinuation of Additional Precautions

- IPC should be consulted or notified as per agreed upon site process when discontinuing Contact and Droplet or Modified Respiratory precautions for patients on the outbreak unit.

5.6.4 Patient Cohorting Considerations

- Cohorting considerations need to be discussed based on the circumstances of each outbreak.

5.6.5 Patient Contact Tracing

- IPC is responsible for patient contact tracing and will determine if there are any patient close contacts who require follow-up (i.e. additional precautions +/- chemoprophylaxis).

5.6.6 Antivirals for Early Treatment (Symptomatic Patients)

- Treatment decisions are the responsibility of the MRHP.
 - Hospitalized patients with respiratory symptoms should be empirically treated with oseltamivir for potential influenza.
 - This can be re-assessed based on laboratory results.
- Start antivirals within 48 hours of onset of symptoms to be effective in reducing the duration and severity of illness, and decreasing the rate of complications. Current recommendations will be discussed at the time of the outbreak.

5.6.7 INFLUENZA ONLY: Post-Exposure Antiviral Chemoprophylaxis (see [Appendix 2](#))

The recommendation to implement antiviral prophylaxis for outbreak management is made by the IPC physician/MOH.

- Chemoprophylaxis is for asymptomatic at-risk patients. Symptomatic individuals require treatment (not antiviral prophylaxis).
- Refer to [Appendix 2](#) for chemoprophylaxis guidelines.
- Pharmacy should be included in the OMT for suspect and confirmed Influenza outbreaks to help co-ordinate post-exposure chemoprophylaxis for patients.

5.7 Unit Outbreak Control Measures

5.7.1 Cleaning and Disinfection

- Enhanced/Outbreak Cleaning by Environmental Services.
- Frequent cleaning of high touch surfaces by unit staff.
- Only AHS-approved products are to be used.

5.7.2 Unit/Area Entrances

- Signage at entry points: Outbreak sign
- Access to alcohol-based hand rub and PPE as applicable at entrance.
- Screening staff at area/unit entrance to ensure sign in, hand hygiene, and mask +/- eye protection for anyone entering the unit.
 - If no screening staff, then ensure clear signage that anyone entering unit must check-in at main desk.
- Minimize unnecessary traffic onto unit.

5.7.3 Personal Protective Equipment

- Institute PPE coaches.
- Keep record of noted breaches/errors/gaps and report to UM/CNE and OMT.

5.7.4 Supplies

- Ensure adequate supplies for specimen collection.
- Ensure adequate PPE supplies.

5.7.5 Additional restrictions

- Appointments: Patients may be allowed to attend medically necessary appointments.
 - Ensure receiving unit/site is notified of any Additional Precautions required.
- Group activities/therapy:
 - Group therapy on unit: Consider canceling for the duration of the outbreak, if able.
 - If on-unit group therapy is deemed safe to proceed by OMT, then only asymptomatic patients from outbreak unit may attend.
 - Non-therapy group activities on unit: cancel for the duration of the outbreak.
 - Symptomatic patients should not participate in any group activities.

- Outbreak unit patients should not leave the unit for group therapy.
- Rehabilitation restrictions:
 - Patients on Contact and Droplet/Modified Respiratory precautions: complete rehabilitation in patient's room.
 - All other patients: complete rehab on unit
 - Exceptions may be made for discharge planning/assessment; consult IPC.
 - Site specific processes to be discussed
- Communal dining: restrict if applicable.
- Nutrition centre should only be accessed by staff. Ensure signage posted to cue hand hygiene. Closed to patients and DFSPs/Visitors.

5.7.6 Designated Family/Support Persons (DFSPs)/Visitors

- DFSPs/Visitors should be advised of the potential risk of acquiring illness if they choose to enter the outbreak unit.
- DFSPs/Visitors are strongly encouraged to receive annual influenza immunization when available.
- DFSPs/Visitors who choose to visit during an outbreak must:
 - Follow Additional Precautions when required; unit staff or PPE coaches should assist with proper donning and doffing
 - Practice good hand hygiene,
 - Limit visit to one (1) patient only, and
 - Exit the facility immediately after the visit.
- DFSPs/Visitors must not visit when sick.

5.8 HCW Outbreak Control Measures

(including volunteers, students, physicians, resident physicians)

- Obtain staff list of those exposed (including students, physicians, allied health, others)
 - Conduct HCW contact tracing
 - Provide direction about work restrictions and return to work
- Increase Fit for Work/self-symptom monitoring to 2x per shift.
 - Messaging for staff regarding not working while symptomatic.
- Continuous masking and eye protection for staff is required on the affected unit
- HCW PPE for asymptomatic patients: Routine Practices **including continuous masking and eye protection.**
- HCW PPE for symptomatic patients: Contact & Droplet precautions.
 - For more information, refer to the [AHS COVID-19 Personal Protective Equipment website](#)
- Sites must comply with staff Influenza immunization policy applicable at their site and follow WHS' guidelines for work restrictions as applicable.
 - See WHS [Influenza Outbreak Management](#) guideline.
 - Continue daily self-assessment for illness regardless of immunization status since influenza vaccine efficacy varies.
 - Immunized individuals should continue to use appropriate PPE.
- Review staff considerations such as: distancing during breaks, HH, masking, shared foods/drinks etc. Monitor staff break areas for safe IPC practices
 - Parties, sharing of food, etc. is prohibited.
- Consider cohorting of staff – single unit or site requirements.
 - *For influenza:* Staff working at more than one facility/unit must inform the alternate facility/unit that an influenza outbreak is in progress in the index facility to determine whether or not they are permitted to work at the alternate facility/unit.

- Consulting teams including physicians, and others who come into the unit like PT/OT/SLP etc.
 - Contact tracing considerations
 - Any limitations to access during outbreak

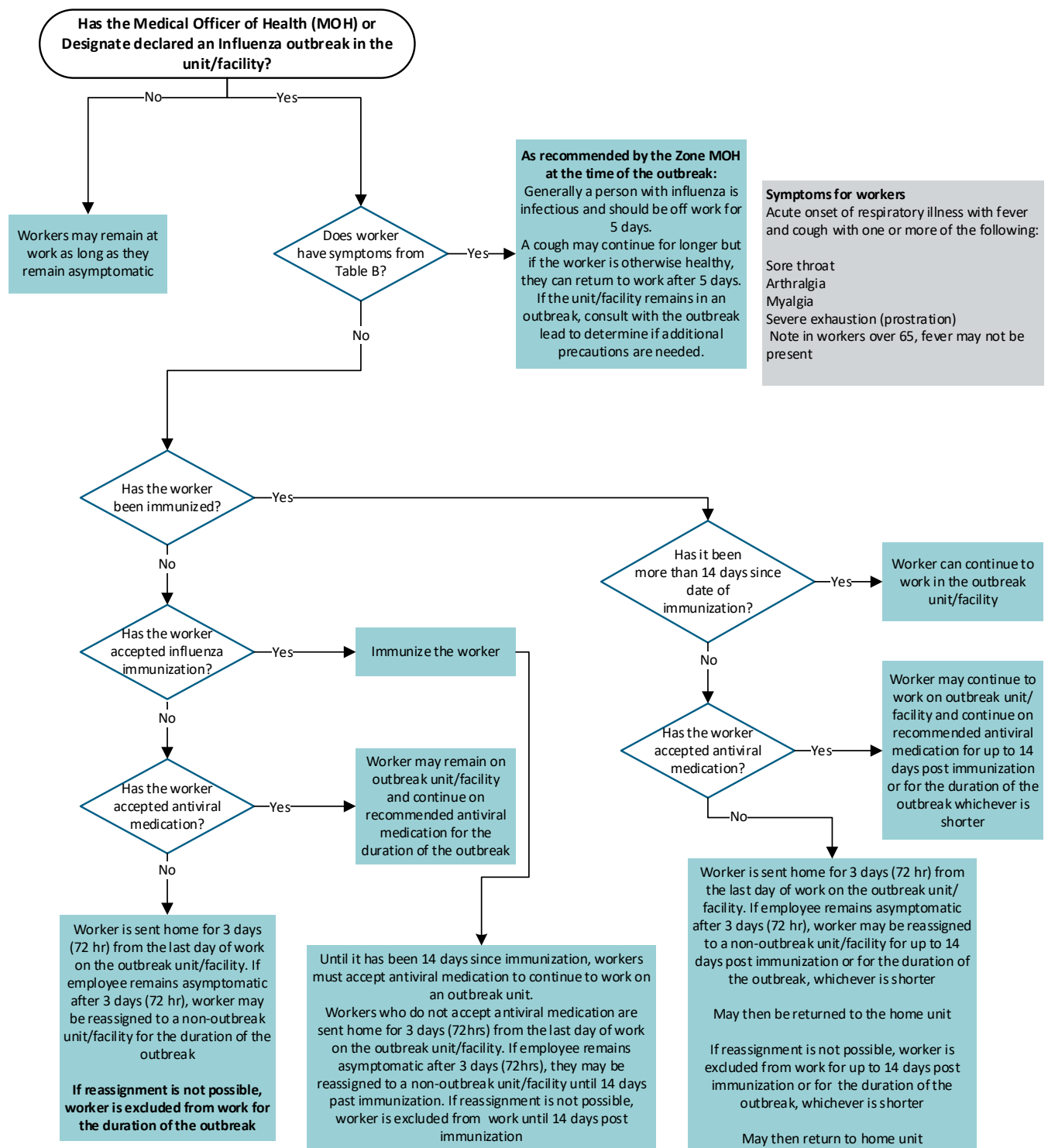
5.8.1 *Non-essential personnel (volunteers, students):*

- Advise non-essential personnel of the potential risk of acquiring illness during outbreaks.
- Have non-essential personnel who continue to assist during an outbreak to follow the same control measures as HCWs.
- See [Figure 5](#).
- Consider excluding non-essential volunteers from working in affected areas of the facility (if any can be deemed “non-essential”).

5.8.2 *Symptomatic HCWs and Testing Recommendations*

- All symptomatic HCWs should continue to receive testing for COVID-19.
 - See [Section 4.9.3](#) for guidance about HCWs who test COVID-19 positive or who Public Health considers to be a COVID-19 case.
- Testing for non-COVID respiratory viruses will be for individual clinical management only, and is at the discretion of the HCW’s care provider in the community.
 - Ongoing: Units/WHS report any new symptomatic HCWs and their test results as applicable (i.e. pending, negative, positive).

Figure 5: Algorithm for HCW management in Influenza Outbreaks
(for more information see [Appendix 3: HCW-Related Outbreak Control Measures for Influenza Outbreaks](#))



Section 6: Confirmed Gastrointestinal Illness Outbreak

6.1 Acute Care Outbreak Definition – Gastrointestinal Illness

Refer to:

- Gastrointestinal Illness (GI) – [Table 3E](#)

Refer to [Appendix 6](#) for Outbreak Checklist template.

6.2 Case Confirmation

Refer to [Section 3: Case Confirmation](#).

6.3 Duration of Outbreak

- 48 hours from symptom resolution in the last case OR 96 hours from onset of symptoms in the last case, **whichever occurs first**
- See [Section 7: Closing an Outbreak](#)

6.4 Outbreak Communication

6.4.1 *Initial communication* (when outbreak first declared)

- IPC or WHS or MOH/Public Health to request EI# from SHE (previously EPH) as per zone process; include the following information as part of EI# request:
 - Number of symptomatic/positive patients
 - Number of symptomatic/positive HCWs
 - Symptom onset date of cases
 - Number of patient close contacts
 - Number of HCW close contacts
 - Number of at-risk patients
 - Number of at-risk HCWs
 - Name and contact information for unit/area manager
 - Designated IPC contact person
- IPC to notify (if not already done):
 - Environmental Services
 - Bed Management/equivalent
 - Workplace Health & Safety
 - Unit/Program/Site Leadership
- IPC/ Site Command Post (SCP)/Site Leadership/Communications to send out on-site outbreak memo/email notification
- IPC to enter initial outbreak information into Provsurv IPC Outbreak Tracker Database
- Unit/unit managers to notify patients & DFSPs
- Unit to arrange shift huddles: consider initial and ongoing (as needed)
- SCP to notify Zone Emergency Operations Centre (ZEOC) if ZEOC still standing
 - If no SCP, then Operational/Site Leadership or IPC to send communication to ZEOC using zone/site process
 - If Incident Command Structure (ICS) not in place, use site/zone non-ICS communication processes

6.4.2 *Ongoing communication*

- Unit to notify IPC of new symptomatic or positive patients as per site/zone process

- “Unit” can be charge nurse, assistant head nurse, unit manager, patient care manager, or any other individual who has been delegated this responsibility
- Unit designate to notify WHS if new symptomatic or positive HCWs as per zone process
- Daily line list/tracking sheet completed and submitted to SHE as per site/zone process.
- IPC to update Provsurv IPC Outbreak Tracker Database as needed
- Outbreak Management Team meetings – frequency to be determined by OMT
- Communication to ZEOC and/or Zone leadership (i.e. daily check-in)
 - SCP to do if in Incident Command Structure
 - If Incident Command Structure (ICS) not in place, use site/zone non-ICS communication processes

The following are baseline/ minimum recommendations and considerations for a Gastrointestinal Illness (GI) outbreak in an acute care setting. Additional or more restrictive recommendations may be put in place at the discretion of IPC, WHS, Public Health and/or the Outbreak Management Team (OMT).

6.5 Patient Movements [Admissions/Discharges/Transfers]

6.5.1 Admissions and incoming transfers

- OMT will determine if
 - Unit will close to admissions and incoming transfers in, or
 - Remain open with any restrictions/exceptions

6.5.2 Outgoing patient movements

- Minimize patient transfers off unit – should be medically necessary or repatriation to home zone (i.e. no transfers of convenience)
- Notify IPC of all transfers or discharges for patients from outbreak unit and any identified close contacts on other units

Table 6A: Decision Table for Discharges and Outgoing Transfers from a GI Outbreak Unit

Scenario	Action by Unit/ Bed Co-ordinator/ Transition Team
Intra-facility or Inter-facility transfer [i.e. within acute care and acute tertiary rehabilitation]	<ul style="list-style-type: none"> ○ Ensure receiving unit/site is made aware of outbreak and Additional Precautions as necessary. See Table 6C ○ Outbreak unit and receiving unit to notify site IPC.¹
Transfers/Discharges to Continuing Care/ other congregate care settings	<ul style="list-style-type: none"> ○ Discuss with OMT as needed to assist with zone-specific processes ○ Ensure receiving unit/site is made aware of outbreak and any Additional Precautions plus any pertinent direction based on risk assessment. See Table 6C ○ Outbreak unit to notify site IPC.¹
Discharges home	<ul style="list-style-type: none"> ○ No further direction.

¹IPC at the sending site may also directly notify receiving site’s IPC team/designate as per site/zone processes.

Table 6B: Decision Table for Transfers from a GI Outbreak Unit

	Current site	Receiving Site	
		Transfer to another acute care unit/facility (i.e. medically necessary)	Transfer to Continuing Care or Corrections
Symptomatic patient	Maintain Additional Precautions ¹ until asymptomatic x 48 hrs.	Place patient in private room. Continue to symptom monitor. Maintain Additional Precautions until asymptomatic x 48 hrs.	Private room preferred. Continue to symptom monitor. Maintain Contact and Droplet Precautions until asymptomatic x 48 hrs.
Asymptomatic patient	Continue to symptom monitor.	Ensure receiving site IPC is aware. Continue to symptom monitor.	No isolation necessary but private room preferred x 48 hrs. Continue to symptom monitor.

¹Use Contact Precautions if diarrhea only. Use Contact and Droplet Precautions if emesis/vomiting present.

6.6 Patient Considerations

6.6.1 Patient symptom monitoring

- Increase patient symptom monitoring to every 8 hours. (i.e. minimum of three (3) times daily)
 - Symptom Identification and Monitoring Form (Form 21616): <https://www.albertahealthservices.ca/fm-21616.pdf>
- If any patient develops new, changed or worsening symptoms:
 - See [Table 6C](#) below for recommended Additional Precautions.
 - Private accommodation recommended.
 - Notify IPC.

6.6.2 Additional Precautions/PPE requirements

- Symptomatic patients:
 - See [Table 6C](#)
 - Always place patient in private accommodation, when available. If private space is not available, then maintain at least two (2) metres of physical separation between bed/stretchers spaces or ensure that there is a barrier between patients (e.g. curtain or screen).
- Asymptomatic patients:
 - Use Routine Practices – during COVID 19 pandemic response, this includes continuous masking +/- eye protection
- Universal Additional Precautions are not recommended for GI outbreaks.
- For more information, refer to [Personal Protective Equipment | Alberta Health Services](#).

Table 6C: Additional Precautions for GI Symptoms

GI Symptoms	Prior to pathogen being identified	Pathogen identified as SARS-CoV-2	Pathogen identified as <i>C. difficile</i>*	Other enteric pathogen identified
Vomiting/Emesis	Modified Respiratory	Modified Respiratory	n/a	Contact + Droplet
Diarrhea	Modified Resp PLUS Contact Sporicidal	Modified Respiratory	Contact-Sporicidal	Contact
Vomiting PLUS diarrhea	Modified Resp PLUS Contact Sporicidal	Modified Respiratory	Contact + Droplet PLUS Contact-Sporicidal	Contact + Droplet

**C. difficile* outbreaks are outside the scope of this document. For further direction about *C. difficile* outbreak management, discuss with site-based IPC team.

6.6.3 GI Testing

- Symptomatic patient testing will be directed by MRHP or IPC.
 - Request:
 - Stool culture (bacterial enteric screen/panel)
 - Gastrointestinal Viral Panel (viruses)
 - *C. difficile* toxin
 - COVID-19 testing
 - Consider:
 - Stool for ova & parasites.
 - Add EI number to any specimens and to Microbiology requisition.
- There is no asymptomatic testing for GI outbreaks.
- [Note: *C. difficile* outbreaks are outside the scope of this document. For further direction about *C. difficile* outbreak management, discuss with site-based IPC team.]

6.6.4 Discontinuation of Additional Precautions

- IPC should be consulted or notified as per agreed upon site process when discontinuing Additional Precautions for patients on the outbreak unit.

6.6.5 Patient Cohorting Considerations

- Cohorting considerations need to be discussed based on the circumstances of each outbreak.

6.6.6 Management of “Relapse” Cases

- GI cases frequently “relapse” (i.e., experience onset of vomiting or diarrhea after being asymptomatic for 24 to 48 hours).
- The relapse is likely due to malabsorption during an existing norovirus or other enteric infection rather than being a new infection.
- Maintain Additional Precautions/isolation for “relapse” GI cases until they are free of vomiting and diarrhea for 48 hours, as they may still be communicable.
- These should NOT be counted as new outbreak cases and should therefore NOT be included on daily case listings.
 - A patient should only be counted as a new case once on a daily case listing.
 - Relapse case(s) alone would not result in the extension of the outbreak and any related restrictions.

- **Note:** If a previously identified GI case has onset of GI symptoms after being symptom-free for **at least seven (7) days**, the patient is considered to be a new case.

6.7 Unit Outbreak Control Measures

6.7.1 Cleaning and Disinfection

- Enhanced/Outbreak Cleaning by Environmental Services.
- Frequent cleaning of high touch surfaces by unit staff.
- Only AHS-approved products are to be used.

6.7.2 Unit/Area Entrances

- Signage at entry points: [Outbreak sign](#)
- Access to alcohol-based hand rub and PPE as applicable at entrance.
- Screening staff at area/unit entrance to ensure sign in, hand hygiene, and mask +/- eye protection for anyone entering the unit.
 - If no screening staff, then ensure clear signage that anyone entering unit must check-in at main desk.
- Minimize unnecessary traffic onto unit

6.7.3 Personal Protective Equipment

- Consider instituting PPE coaches
- Keep record of noted breaches/errors/gaps and report to UM/CNE and OMT.

6.7.4 Supplies

- Ensure adequate supplies for specimen collection
- Ensure adequate PPE supplies

6.7.5 Additional restrictions

- Appointments: Patients may be allowed to attend medically necessary appointments.
 - Ensure receiving unit/site is notified of any Additional Precautions required.
- Group activities/therapy:
 - Group therapy on unit: Cancel for the duration of the outbreak.
 - If on-unit group therapy is deemed safe to proceed by OMT, then only asymptomatic patients from outbreak unit may attend.
 - Non-therapy group activities on unit: cancel for the duration of the outbreak.
 - Symptomatic patients should not participate in any group activities.
 - Outbreak unit patients should not leave the unit for group therapy.
- Rehabilitation restrictions:
 - Patients on any type of Additional Precautions for GI symptoms: complete rehabilitation in patient's room.
 - All other patients: complete rehab on unit
 - Exceptions may be made for discharge planning/assessment; consult IPC.
 - Site specific processes to be discussed
- Communal dining: Restricted. Note: This may not be applicable depending on the unit.
- No shared products (e.g. hand lotions, communal candy bowls, etc)
- Nutrition centre should only be accessed by staff. Ensure signage posted to cue hand hygiene. Closed to patients and DFSPs/Visitors.

Statement on use of Alcohol-based Hand Rub (ABHR) during GI illness Outbreaks

Handwashing with soap and water is preferred during GI outbreaks. However, if a hand hygiene sink is not available, then use ABHR (minimum 60-90% alcohol) when leaving the room prior to accessing a sink within or outside of patient room.

6.7.6 Designated Family/Support Persons (DFSPs)/Visitors

- DFSPs/Visitors should be advised of the potential risk of acquiring illness if they choose to enter the outbreak unit.
- DFSPs/Visitors who choose to visit during an outbreak must:
 - Follow Additional Precautions when required; unit staff or PPE coaches should assist with proper donning and doffing
 - Practice good hand hygiene,
 - Limit visit to one (1) patient only, and
 - Exit the facility immediately after the visit.
- DFSPs/Visitors must not visit when sick.

6.8 HCW Related Outbreak Control Measures

(including volunteers, students, physicians, resident physicians)

- HCW should be advised of the need for daily self-assessment for GI illness symptoms.
- Symptomatic HCW that fit the case definition for GI illness should be excluded from work at all care facilities until 48 hours following the last episode of vomiting and/or diarrhea.
- Asymptomatic HCW may work in the outbreak unit as well as other work locations during different shifts.

6.8.1 Non-essential personnel (volunteers, students):

- Advise non-essential personnel of the potential risk of acquiring illness during outbreaks.
- Have non-essential personnel who continue to assist during an outbreak to follow the same control measures as HCWs.
- See [Figure 5](#)
- Consider excluding non-essential volunteers from working in affected areas of the facility (if any can be deemed “non-essential”).

Section 7: Closing an Outbreak (COVID-19, RI including influenza, or GI)

An outbreak may be closed when:

- Duration criteria are met, including no new patients or HCWs under investigation
- There are no outstanding issues or concerns from
 - IPC
 - WHS
 - Public Health (i.e. CDC/SHE/MOH)
 - Outbreak unit/site

IPC or WHS (as appropriate) will consult with Public Health prior to closing the outbreak.

Ensure that enhanced unit-wide cleaning is done the day that the outbreak is closed prior to officially lifting outbreak-related restrictions.

Following an outbreak:

- Key program leads need to review and evaluate their role in management of the outbreak and revise internal protocols (where necessary) for improvement.
- A debrief may be called by any OMT member to address any aspect of outbreak management.
- Depending on type and scale of the outbreak, a summary report including background, details of the investigation, results and recommendations may be written by a member of the OMT and shared with internal/external partners.

If additional patients or HCWs develop symptoms within 7 days of the outbreak being closed, the unit/site should follow the steps for assessing a potential outbreak in [Section 2: Assessing a Potential Outbreak](#).

Appendix 1: Definition of Terms and Glossary

Acute Care - includes all urban and rural hospitals, psychiatric facilities and urgent care facilities where inpatient care is provided.

Admission and transfer status - determined in consultation with the Outbreak Management Team (OMT) and categorized as follows:

- **“Open”**: The facility/unit remains open to all resident admissions, transfers and discharges.
- **“Restricted”**: Depending upon the circumstances and the infectious agent involved, admission and transfer status may range from NO admission to selected resident admissions, transfers and discharges as permitted under the direction of the zone Medical Officer of Health and in consultation with the OMT. This approach is intended to be flexible allowing for individual assessments to be made based on established criteria without undue risk to residents/program/system.

AHS - Alberta Health Services

Cluster - aggregation of similar, relatively uncommon events or diseases in space and/or time in amounts that are believed or perceived to be greater than could be expected by chance.

Cohorting - controlling the movement of HCW and residents for the purpose of limiting an outbreak to a specific unit/floor/area within a larger facility. To meet the criteria for cohorting, HCW and resident activities are confined to the outbreak area for the full duration of the outbreak i.e., the facility must (i) assign dedicated HCW as required (e.g., night nurses, housekeeping, therapists) that work only in the outbreak area, and (ii) manage all resident activities (e.g., dining, bathing) within the outbreak area, except for specific services that are medically required.

Close Contact - any person suspected to have been exposed to an infected person or a contaminated environment to a sufficient degree to have had the opportunity to become infected or colonized with an organism.

Contact/Droplet Precautions – see [sign](#) and [information sheet](#) for details.

Exclusion - a measure that prevents symptomatic/infected/susceptible HCW from working, until such time that the risk for residents or HCW is low or minimal, as recommended by Public Health or Workplace Health and Safety, or designate.

Exposure Investigation Number (EI#) - a number assigned by the Alberta Precision Laboratory for Public Health for the purpose of tracking laboratory specimens associated to a specific event (e.g., a potential outbreak) at a specific location and time.

Gastrointestinal (GI) Illness - for GI illness case and outbreak definitions refer to [Table 3E](#)

Health Care Workers (HCW) – as defined by Alberta Health (AH) includes all health practitioners and all individuals at increased risk for exposure to, and/or transmission of, a communicable disease because they work, study, or volunteer in one or more of the following health care environments: hospital, nursing home (facility living), supportive living accommodations, or home care setting, mental health facility, community setting, office or clinic of a health practitioner, clinical laboratory.

Infection Control Professional (ICP) - is a health professional with specialized knowledge responsible for infection prevention and control within the facility or area of practice. ICPs come from several

disciplines, including nursing, medicine, microbiology, medical technology and/or epidemiology and may be certified or working toward certification in infection control (CIC®).

IPC - Infection Prevention and Control

Long Term Care (LTC) Facility - Long term care refers to a continuum of medical and social services designed to support the needs of people living with chronic health problems that require the oversight of a registered nurse 24-hours a day. Long term care services include traditional medical services, social services, and housing. Clients admitted into long-term care are required to pay accommodation fees (room and board and other costs associated) as set by government. Long term care may be referred to as auxiliary hospitals and nursing homes.

MOH - Medical Officer of Health physician appointed as Executive Officer under the Public Health Act with focus on the health of the population, reports the health status of the population, controls and manages infectious and communicable diseases, gives direction to Public Health / Environmental Public Health service programs, and to chronic disease and injury prevention

Medical Officer of Health (MOH) Designate – Public Health staff designated by the Zone Medical Officer of Health to assist with decision making regarding outbreak management in the Zone. This may also be the Outbreak Response Lead.

Modified Respiratory Precautions – see [sign](#) for additional details

Occupational/Workplace Health and Safety (OHS/WHS) - designated personnel responsible for staff health and safety in facilities. In some facilities, Employee Health or the Site Management or the Site Medical Leader may fill this role.

Outbreak - “The occurrence of cases of disease in excess of what would normally be expected in a defined community, geographical area or season” (World Health Organization, 2018). A common source of infection or the identification of transmission between cases are not required. The epidemiologic features of an outbreak and subsequent public health actions are assessed through the outbreak investigation process.

Outbreak Management Team (OMT) - a group of key individuals, including but not limited to, representatives from Public Health, Infection Prevention and Control (IPC/ICD), Occupational Health/Workplace Health Safety (WHS), Facility Administration/Facility Management or their Designate who work cooperatively to ensure a timely and coordinated response to a suspect or confirmed outbreak. Composition of the OMT will depend on disease and facility type.

PPE - Personal Protective Equipment

ProvLab - Alberta Precision Laboratory for Public Health

Public Health - for the purpose of this document, Public Health staff refers to Zone Medical Officer of Health/designates within Alberta Health Services. This includes, but is not limited to, Communicable Disease Control Nurses, Public Health Inspectors.

Appendix 2: Antiviral chemoprophylaxis for influenza outbreaks

Alberta Health Services (AHS) supports the National Advisory Committee on Immunization (NACI) recommendations for influenza control published annually in the Canada Communicable Disease Report.

Influenza immunization is the primary strategy for prevention of influenza infection and illness. **Antiviral prophylaxis should not replace annual influenza immunization**; instead, it should be used as an adjunct to immunization during influenza outbreaks. When antiviral prophylaxis is administered simultaneously to all eligible patients and HCW as soon as an outbreak is confirmed, the number of new cases usually decreases quickly.

Both oseltamivir and zanamivir can be used for the prevention of influenza A and B. The mechanism of action of these neuraminidase inhibitors is to prevent release of influenza virus from infected cells. Because of high levels of amantadine resistance in recent years amantadine is not recommended for prophylaxis against influenza; in addition to increasing resistance of influenza A, influenza B is inherently resistant to it. Neither oseltamivir nor zanamivir are effective for prophylaxis in preventing respiratory infections other than influenza (e.g., RSV, Parainfluenza).

The recommendation to implement antiviral prophylaxis for outbreak management is made by IPC, WHS and/or Public Health.

- Patients
 - During an influenza outbreak, [antiviral prophylaxis](#) is recommended for all at-risk asymptomatic patients **regardless of their influenza immunization status**.
 - Each unit/site should develop a process for how antiviral prophylaxis will be ordered for patients.
- Healthcare Workers (HCW)
 - Antiviral prophylaxis is also recommended for unimmunized HCWs unless a contraindication is present.
 - During outbreaks caused by influenza strains that are not well matched by the vaccine, prophylaxis should also be considered for exposed, asymptomatic HCW regardless of their immunization status.
 - HCW who require antiviral prophylaxis should consult with their OHS/WHM or Designate, or their own family physician/prescribing pharmacist for prescriptions and monitoring.
- Duration of antiviral prophylaxis:
 - The recommended length of antiviral prophylaxis is 10 days.
 - If the outbreak continues past 10 days, antiviral prophylaxis should be extended until the outbreak is declared over.
 - If the outbreak duration is less than 10 days, antiviral prophylaxis may be discontinued – consult with IPC.
 - If cases continue beyond the first 72 hours after initiating prophylaxis, this should be discussed by the OMT (including IPC/WHM/Public Health) promptly for further direction.
- **Symptomatic individuals do not require antiviral prophylaxis.**
 - **Use [early treatment](#)** with antiviral medication for any patients or HCWs who have had symptoms for less than 48 hours.
 - Each attending physician is responsible for prescribing antiviral medication for treatment of individual patients.

Aoki FY *et al.* 2021–2022 AMMI Canada guidance on the use of antiviral drugs for influenza in the COVID-19 pandemic setting in Canada. JAMMI 2022 March;7(1):1-7. doi:[10.3138/jammi-2022-01-31](https://doi.org/10.3138/jammi-2022-01-31).

Appendix 3: HCW-Related Outbreak Control Measures for Influenza Outbreaks

(including volunteers, students, physicians, resident physicians)

- HCWs are strongly encouraged to receive an annual dose of seasonal influenza vaccine when available.
- Public Health will advise whether the outbreak influenza strain is covered in the seasonal influenza vaccine. If the outbreak strain is not covered in the seasonal vaccine, Public Health may provide additional direction beyond what is described below.
- Only HCWs who have received the current season's influenza vaccine more than 14 days ago or who are receiving oseltamivir prophylaxis may continue to work on an influenza outbreak unit/area.
 - The affected unit/area should escalate any critical staffing shortage concerns to their Program/Site/Zone leadership.
- With continuous masking in place, potential exposures may be determined on a case by case basis.
- It is the responsibility of an individual who works in more than one facility/unit to inform the alternate facility/unit that an influenza outbreak is in progress in the index facility, and determine whether or not they are permitted to work at the alternate facility/unit.

Management of Asymptomatic Unimmunized HCWs

Recommendations for work restrictions in relation to immunization status and uptake of chemoprophylaxis by the HCW in order to contain influenza A or B outbreaks will be directed by WHS. Oseltamivir (Tamiflu) antiviral treatment and prophylaxis is recommended as per the most current Alberta Health Influenza Antiviral Drug Policy. It is the responsibility of the WHS to clearly communicate instructions to staff on how to access antiviral prophylaxis. See [WHS Influenza Outbreak Management \[Insite\]](#) under Outbreak Resources for further information.

Asymptomatic HCW on the outbreak unit who have not receive a dose of the current season's vaccine (are considered unimmunized) generally fall into three categories, each subject to work restrictions:

- **Unimmunized** HCW who are asymptomatic at time of assessment **and** who agree to be immunized, **but** decline prophylaxis should be:
 - Excluded from work for three (3) days from the last day of work on the outbreak unit/site.
 - If they remain asymptomatic after three (3) days and receive immunization, they may be reassigned to a non-outbreak unit/site for the duration of the outbreak or for fourteen (14) days from date of immunization, whichever occurs first.
 - If reassignment of work is not possible, then the HCW should be excluded from work for fourteen (14) days from the time of immunization or for the duration of the outbreak, whichever occurs first.
- **Asymptomatic** HCW who are not immunized **and** are not taking recommended antiviral prophylaxis should be:
 - Excluded from working in the affected facility/unit(s) until the outbreak is over,
OR
 - Relocated to a non-outbreak unit/site if they remain asymptomatic after waiting three (3) days from the last day of work on the outbreak unit and should not return to the outbreak unit/site for the duration of the outbreak.
- **Asymptomatic HCW immunized less than fourteen (14) days prior to the outbreak and are not taking recommended antiviral prophylaxis should be:**
 - Excluded from working in the affected unit/facility until 14 days from date of immunization, or for the duration of the outbreak whichever occurs first,
OR

- Excluded from working at any site for three (3) working days from the last day of work on the outbreak unit. If they remain asymptomatic after waiting the three (3) working days they can be relocated to a non-outbreak unit until 14 days from the date of immunization or for the duration of the outbreak at the managers' discretion.
- For asymptomatic HCW, no waiting period is required between starting oseltamivir (Tamiflu) prophylaxis and returning to work.
- Staff oseltamivir (Tamiflu) prophylaxis for staff is NOT publically funded. Sites are responsible for developing a site policy on who is responsible for the cost of staff prophylaxis.

Management of Symptomatic HCW

- If HCW on antiviral prophylaxis develop symptoms, they should stay home and contact OHS/WHS or designate for instructions about next steps. (This may ultimately be a referral to their family physician).
 - In addition to OHS/WHS, HCW must also contact their manager or supervisor to let them know that they are off work.
- The length of time for which a symptomatic HCW should stay off work will be recommended by Public Health at the time of the outbreak. Generally, a person with influenza is considered infectious for five (5) days.
- Symptoms such as cough may continue for longer than five (5) days. However, if a HCW is otherwise healthy, he or she is not likely to continue to be infectious after five (5) days following onset of symptoms.

Appendix 4: COVID-19 Patient Discharge Instructions



COVID-19 Patient Discharge Instructions

Site Name: _____

Discharged from Unit: _____

Date of Discharge: _____

Do NOT PRINT
This is a template only.
Request latest version from IPC.

This discharge sheet is for you to understand the actions you need to take when you go home. These instructions are to help protect you and others when going home from your hospital stay.

What do you have to do?

	Immunization status	Directions
<input type="checkbox"/>	Any immunization status and No COVID-19 exposure	Consider on-site vaccination prior to discharge as needed. (Primary series or additional doses) Continue to monitor yourself for any new or changed symptoms.
<input type="checkbox"/>	Any immunization status and COVID-19 exposure	Monitor for new or changed symptoms until: <u>DATE DD/MM/YY</u> (enter date provided by IPC) See below and page 2.

Monitor for signs and symptoms of COVID-19:

- fever and/or chills
- new cough or worsening chronic cough
- new or worse shortness of breath or difficulty breathing
- sore throat or pain when swallowing or hoarse voice
- runny nose or stuffy nose or sneezing
- nausea, vomiting, diarrhea or unexplained loss of appetite
- loss or change of smell or taste

If symptoms develop:

- You are recommended to isolate.
- Go online to see if you are eligible for a COVID-19 PCR test (<https://myhealth.alberta.ca/Journey/COVID-19/Pages/Assessment.aspx>) or call Health Link at 811.
- If you are not eligible for a COVID-19 PCR test, then do a rapid antigen test at home if able.

Additional instructions for patients who had a COVID-19 exposure while in hospital:

- If you develop new symptoms before the date above (with or without an EI #) then please also call:

UNIT: _____ Phone Number: _____

- If you need urgent medical attention, call **911** or go to the Emergency Department immediately. Inform them of these instructions and show them this letter.
- **COVID-19 Testing for Symptomatic Individuals**
 - See: <https://myhealth.alberta.ca/Journey/COVID-19/Pages/Assessment.aspx> for self-assessment questionnaire.
 - If you meet criteria for COVID-19 testing at an Assessment Centre:
 - Book a PCR test at an AHS assessment centre online or by calling Health Link at 811.
 - Provide testing centre with this number (if available) at the time of your swab:
EI #: _____
 - If you don't meet criteria for COVID-19 testing at an Assessment Centre:
 - Perform a home rapid antigen test if available.
 - **If you test positive for COVID-19:** Call the unit at the number above.
 - Follow the recommended isolation guidance for symptomatic individuals at <https://www.alberta.ca/isolation.aspx>
- If you have an essential health care appointment scheduled before the date indicated on page 1 or while you are self-isolating, please contact that office and inform them of the instructions on this letter. Bring this letter with you to the visit.
- **If you had a COVID-19 exposure AND are re-admitted to any health care facility within 14 days after your Date of Discharge, please alert the hospital staff by showing them this letter.**
- If you require additional support please contact Health Link at 811.

Appendix 5: Outbreak Management Team Meeting Agenda

Outbreak Management Team Meeting
TYPE
UNIT
DATE
TIME
MS Teams

AGENDA

- | | |
|---|-----------------|
| 1. Welcome and Introductions | Chair |
| 2. Approval of Agenda | All |
| 3. Review (Last Meeting) Notes | All |
| 4. Update | |
| 4.1. IPC | IPC |
| 4.2. Unit Manager/Charge Nurse | UM/Charge Nurse |
| 4.3. WHS | WHS |
| 4.4. Bed Management | Bed Manager |
| 4.5. Communicable Disease Control/Safe Healthy Environments/Public Health | CDC/SHE/other |
| 5. Patient Movement | Presenter |
| 6. Round Table | Presenter |
| 7. (1 st meeting only) Meeting Chair | All |
| 8. Next Steps (Review of “To Dos”) | Chair |
| 9. Date of Next Meeting | Chair |
| 10. Adjournment | Chair |

Attendees: Site Administration, Site Medical Director, Program Chief, Program Executive Director, Patient Care Manager, Unit Manager, Bed Management, Infection Prevention and Control (IPC), IPC Site Medical Director, Workplace Health and Safety (WHS), Environmental Services, Public Health (when required), Transition Services (when required), Others as applicable

Appendix 6: Outbreak Checklist

Acute Care Outbreak Initial Considerations Checklist

Patient Movements [Admissions/Discharges/Transfers]:

- Admissions and incoming transfers
 - Open/Closed/Exceptions
- Outgoing transfers within facility or to another acute care site:
 - Quarantine/isolation and testing requirements as applicable
 - Minimize intra-facility patient transfers off unit – should be medically necessary (i.e. no transfers of convenience)
- Discharges home:
 - Quarantine and testing requirements as applicable
 - Discharge letter with instructions if unit is on outbreak for COVID-19 ([Appendix 4](#))
- Transfers to congregate living/continuing care:
 - Refer to [Risk Assessment Matrix](#) to determine if [Risk Assessment Worksheet](#) (RAW) and MOH approval is required.
 - Quarantine/isolation and testing requirements as applicable
- Notify IPC of all transfers or discharges for patients on outbreak and any identified close contacts on other units

Patient Considerations:

- Increase patient symptom monitoring to q8h. (i.e. minimum of 3 times daily)
 - Symptom Identification and Monitoring Form 21616:
<https://www.albertahealthservices.ca/fm-21616.pdf>
 - Seniors/altered cognition:
<https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-covid-19-recognizing-early-symptoms-in-seniors.pdf>
- Wandering patients
 - <https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-covid-19-care-of-wandering-covid19-patient-acute-care.pdf>
- Additional Precautions/PPE Requirements:
 - Asymptomatic patients: Use Routine Practices including continuous masking and eye protection.
 - Symptomatic patients: Use appropriate Additional Precautions. Private room preferred.
- Cohorting
 - Yes/No/any other considerations
- Testing:
 - Symptomatic patient testing may be directed by most responsible healthcare provider (MRHP) or IPC.
 - If applicable: asymptomatic patient testing (close contacts and unit-wide) is directed by IPC or Public Health.

- Add **Exposure Identification (EI) number** to any swabs and to mark the requisition (top right corner) and top of NP tube with an X (this is to expedite the results for the test).
- Discontinuation of additional precautions
 - IPC should be consulted or notified as per agreed upon site process when discontinuing Additional Precautions for patients on the outbreak unit
 - For any patient on Modified Respiratory Precautions, complete [Discontinuation of Modified Respiratory Precautions for Suspected or Confirmed COVID-19 Form \(Form 21624\)](#)
- Anti-viral recommendations: Considerations for respiratory illnesses (suspect or confirmed influenza)
 - Suspect/unconfirmed respiratory illness (i.e. before causative organism identified):
 - Hospitalized patients with respiratory symptoms should be empirically treated with oseltamivir for suspected influenza (i.e. treatment dose).
 - Re-assess once laboratory results are available.
 - Confirmed influenza A/B outbreak unit:
 - Prophylaxis for asymptomatic patients
 - Treatment for symptomatic and/or confirmed influenza patients

(Note: [COVID-related therapy](#) is usually considered after laboratory confirmation in conjunction with clinical presentation and immunization status [i.e. is not early antiviral treatment].)
- Contact tracing
 - IPC is responsible for patient contact tracing
 - Determine exposure period
 - Determine if any exposed patients who have been discharged or transferred out require follow-up.
 - IPC and unit to determine if any potential DFSP/visitor close contacts

Unit Measures:

(“Unit” can be charge nurse, assistant head nurse, unit manager, patient care manager, or any other individual who has been delegated this responsibility)

- Cleaning and Disinfection:
 - Frequent cleaning of high touch surfaces by unit staff
 - Connect with Environmental Services for enhanced/outbreak cleaning
 - Use only AHS-approved cleaning products.
- Unit/Area Entrances
 - Signage at all entry points
 - Access to alcohol-based and PPE as applicable at entrance
 - Minimize unnecessary traffic onto unit/into area
- Designated Support Persons (DFSPs)/Visitors: communication, restrictions, log (unit versus room), and exceptions as per OMT/site process
- Additional Measures:
 - Communal dining considerations
 - Group activities/therapy considerations
 - Rehabilitation: on unit, in room
 - Nutrition centre: staff access only, cue hand hygiene prior to accessing
- PPE & Supplies:
 - Institute PPE coaches

- Adequate PPE supplies
- Adequate supplies for specimen collection

WHS Actions:

- Ongoing: Inform units/WHS about any new symptomatic HCWs and their test results
 - a. pending
 - b. negative
 - c. positive
- HCW Contact Tracing
 - Physicians, consulting teams, allied health, ES and other support staff, etc in addition to unit-based staff
 - Include consulting teams including physicians, and others who come into the unit like PT/OT/SLP etc.
- Consider need for HCW testing
- WHS' guidelines for work restrictions as applicable
 - For influenza A/B outbreaks: immunization and oseltamivir consideration
- Minimize HCW movement
 - Consider cohorting of staff – single unit or site requirements.
 - Are there any access restrictions for clinical or support staff during outbreak?
 - Review non-essential staff (volunteers, students etc) – current placement on unit, alternatives, etc
 - *For influenza:* Staff working at more than one facility/unit must inform the alternate facility/unit that an influenza outbreak is in progress in the index facility to determine whether or not they are permitted to work at the alternate facility/unit

HCW Measures:

- Obtain staff list of those exposed (including students, physicians, allied health, others)
 - HCW contact tracing
 - Direction about work restrictions.
- Increase Fit for Work/self-symptom monitoring to 2x per shift.
 - Messaging for staff regarding not working while symptomatic.
 - Return to Work Algorithm: <https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-covid-19-return-to-work-decision-chart-healthcare-worker.pdf>
 - Return to Work Guide: <https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-covid-19-return-to-work-guide-ahs-healthcare-worker.pdf>
- Unit/IPC to report back on issues identified with PPE/HH/IPC practices etc. Consider if PPE coach/dofficer/buddies.
- Breaks/break room considerations
 - Break room log (proactive for contact tracing)
 - Outdoor breaks when warm enough
 - Parties, sharing of food, etc. is prohibited.
- Other measures:
 - Distancing during breaks
 - Hand hygiene
 - Continuous masking

- Consider other off unit events/gatherings of people (e.g. Connect Care training, BLS training etc.)
 - Review recently occurred events for contact tracing purposes and to assess potential linkages in the transmission chain
 - Consider upcoming events - HCWs may go to these events and recommendations may need to be made.
- Institute a unit/area HCW log to assist with any ongoing contact tracing efforts.

Communication:

- IPC/WHS to request EI# from Public Health
- IPC to notify (if not already done)
 - Environmental Services
 - Bed Management/equivalent
 - Workplace Health & Safety
 - Unit/Program/Site Leadership
- Establish Outbreak Management Team (OMT)
 - Schedule meetings
- IPC/SCP/Site Leadership/Communications to send out on-site outbreak memo/email notification
- Unit/unit manager communication:
 - Unit/unit managers to notify patients & DFSPs
 - Unit to arrange shift huddles: consider initial and ongoing (as needed)
 - Unit to notify WHS if new symptomatic or positive HCWs
 - Unit to notify IPC of new symptomatic or positive patients
- IPC to enter outbreak information into Provsurv IPC Outbreak Tracker Database and update as needed
- Communicable Disease Outbreak Daily Report (i.e. REDCap entry per daily line list) to be completed and submitted as per site/zone process
- SCP to notify Zone Emergency Operations Centre (ZEOC) if ZEOC still standing
 - If no SCP, then Operational/Site Leadership or IPC to send communication to ZEOC using zone/site process
 - If Incident Command Structure (ICS) not in place, use site/zone non-ICS communication processes.