

5A. Surveillance Tools

Both Ontario and the Public Health Agency of Canada have developed a number of tools and resources to assist with influenza surveillance (see Chapter 4: Resources).

Contents

Preliminary / Weekly Institutional Respiratory Infection Outbreak Form*	1
Final Institutional Respiratory Infection Outbreak Form*	2
Surveillance Activities by Level and by Pandemic Period and Phase	4

*The forms are for use by hospitals operating under the *Public Hospitals Act*, private hospitals, long-term care homes, and retirement homes with more than 10 beds, children's residences and all facilities operating under the *Developmental Service Act*

Preliminary/Weekly Institutional Respiratory Infection Outbreak Form

To track the occurrence, severity and progression of the pandemic, surveillance data for institutional respiratory infection outbreaks during the pandemic are to be reported by each institution using the web-based surveillance system. This information is usually collected by the institution's infection prevention and control practitioner or designate. Long-term care homes, hospitals and retirement homes with more than 10 beds: please submit preliminary and updated reports through the Ministry of Health and Long-Term Care's web-based surveillance system within 24 hours of an outbreak being declared.

Institution Information											
For updates, reporting time period covered: (yyyy/mm/dd) to (yyyy/mm/dd):					Institution Master #:						
Outbreak #:					Institution Name:						
					Institution Address:						
Name of person completing report:					City/Town of Institution:						
Contact Phone #:					Postal Code of Institution:						
Date Outbreak Reported to Health Unit (yyyy/mm/dd):					Date of onset of illness in first case (yyyy/mm/dd):						
Institution Type											
<input type="checkbox"/> Long-Term Care Home <input type="checkbox"/> Retirement Homes					Hospital: Operates under <i>Public Hospitals Act</i> ? <input type="checkbox"/> Yes <input type="checkbox"/> No Type: <input type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Psychiatric <input type="checkbox"/> Rehab						
Outbreak Description					Immunization Information						
		Residents or Patients		Staff *				Residents or Patients		Staff *	
		New Cases ▲	Cumulative Number §	New Cases ▲	Cumulative Number §	New Cases ▲	Cumulative Number §	New Cases ▲	Cumulative Number §		
Total # cases						# cases immunized prior to outbreak ■					
# deaths among cases attributed to outbreak											
Total # in institution		Residents or Patients		Staff*		Of cases who died, # immunized prior to outbreak ■					
Laboratory Data											
Lab Confirmation: <input type="checkbox"/> Yes (check causative organism/s) <input type="checkbox"/> Pending <input type="checkbox"/> Specimens NOT submitted <input type="checkbox"/> No. of lab-confirmed cases											
<input type="checkbox"/> Influenza A				<input type="checkbox"/> Influenza B				<input type="checkbox"/> RSV			
<input type="checkbox"/> Rhinovirus				<input type="checkbox"/> Parainfluenza				<input type="checkbox"/> Adenovirus			
<input type="checkbox"/> Enterovirus				<input type="checkbox"/> Other (specify) _____							

* Staff: All persons who carry on activities in the facility including employees, nurses, students, medical house staff, physicians, contract workers and volunteers.

▲ **Initial Report:** indicate the total number of cases

▲ **Update:** indicate the number of new cases since last update

§ **Update/s:** indicate the cumulative number of cases.

§ For initial reports enter as N/A

■ **Prior to outbreak:** Immunized with two doses of the pandemic vaccine at least 2 weeks before the onset of the outbreak

Final Institutional Respiratory Infection Outbreak Form

Long-term care homes, hospitals and retirement homes with more than 10 beds: please submit final reports through the Ministry of Health and Long-Term Care's web-based surveillance system within three weeks of an outbreak being declared over.

Health Unit Information		Institution Information			
Outbreak #:		Institution Master #:			
Name of individual completing report:		Institution Name:			
Contact Phone #:		Institution Address:			
Date Outbreak Reported to Health Unit (yyyy/mm/dd):		City/Town of Institution:			
Date Outbreak Declared Over (yyyy/mm/dd):		Postal Code of Institution:			
Date form submitted (yyyy/mm/dd):		Date of onset of illness in first case (yyyy/mm/dd):			
Institution Type					
<input type="checkbox"/> Long-term Care Home		Hospital operates under Public Hospitals Act?		<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/> Retirement Home (with more than 10 residents)		Type:	<input type="checkbox"/> Acute	<input type="checkbox"/> Chronic	<input type="checkbox"/> Psych <input type="checkbox"/> Rehab
Outbreak Description			Immunization Information		
	Residents or Patients	Staff*		Residents or Patients	Staff*
Total # in institution			# of cases immunized prior to outbreak ■		
Total # of cases					
# of deaths among cases attributed to outbreak			Of cases who died, # immunized prior to outbreak ■		
# of cases including cases who died who were vaccinated (when pandemic vaccine available)					
Laboratory Data					
Lab Confirmation:	<input type="checkbox"/> Yes (check causative organism /s) # of lab confirmed cases: _____		<input type="checkbox"/> No (no organism /s identified)		<input type="checkbox"/> Specimens NOT submitted
<input type="checkbox"/> Influenza A		<input type="checkbox"/> Influenza B		<input type="checkbox"/> RSV	
<input type="checkbox"/> Rhinovirus		<input type="checkbox"/> Parainfluenza		<input type="checkbox"/> Adenovirus	
<input type="checkbox"/> Enterovirus		<input type="checkbox"/> Other (specify): _____			

***Staff:** All persons who carry on activities in the facility including employees, nurses, students, medical house staff, physicians, contract workers and volunteers.

■ Prior to outbreak Immunized with **two doses** of the pandemic vaccine at least 2 weeks before the onset of the outbreak

Antiviral Use

Were antivirals used during the outbreak? Yes No

If an antiviral medication was prescribed during the outbreak, please complete the chart below:

	Residents/Patients		Staff	
	Oseltamivir	Other (Please specify):	Oseltamivir	Other (Please specify):
Total # of individuals who received EITHER a treatment OR a prophylactic dose of antiviral medication				
# of individuals who received a dose of antiviral medication who developed severe side effects (if applicable)				

Please describe any side effects that were severe enough to discontinue antiviral medication:

Surveillance Activities by Level by Pandemic Period and Phase

WHO Pandemic/ Phase	Federal Level	Provincial Level	Local Level
<p>Interpandemic Period: Phase 1</p> <p>No new influenza virus subtypes have been detected in humans</p>	<p>Review and confirm that all national interpandemic surveillance activities (via FluWatch) are operational</p> <p>Work with P/Ts to develop communication strategy for epidemiological data to be collected during pandemic alert and pandemic phases</p>	<p>Confirm that: all interpandemic surveillance activities (i.e., laboratory surveillance; influenza activity reporting; reports of lab-confirmed influenza cases; respiratory infection outbreaks in institutions) are operational</p> <p>Ensure surveillance data is being collected and forwarded to appropriate authorities</p> <p>Work with PHAC to develop communication strategy for epidemiological data to be collected during pandemic alert and pandemic phases</p> <p>Communicate surveillance information through the <i>Ontario Influenza Bulletin</i></p> <p>Maintain vigilance in FRI screening</p>	<p>Maintain all interpandemic surveillance activities</p> <p>Maintain vigilance in FRI screening</p> <p>Liaise with hospitals and long-term care homes on FRI screening</p> <p>Use iPHIS for electronic transmission of individual level and institutional respiratory infection outbreak reports</p> <p>Ensure surveillance data is being collected and forwarded to MOHLTC</p>
<p>Interpandemic Period: Phase 2</p> <p>A circulating animal influenza virus subtype poses a substantial risk of human disease</p>	<p>Continue with all Phase 1 activities</p> <p>Alert those currently involved in influenza surveillance (e.g., PIC, CCMOH, CPHLN, FluWatch, local HUs) and advise them to remain on alert for further updates</p>	<p>Continue with all Phase 1 activities</p> <p>Disseminate alerts</p>	<p>Continue with all Phase 1 activities</p> <p>Disseminate alerts</p>
<p>Pandemic Alert Period: Phase 3</p> <p>Human infection(s) with a new subtype, but no human-to-human spread or spread to a close contact only</p>	<p>Continue with all Phase 2 activities</p> <p>Disseminate regular updates via e-mail, fax, teleconferencing and web postings as necessary</p> <p>Share surveillance information in a timely manner with provincial and local health authorities and the general public</p> <p>Identify special study needs, develop and disseminate protocols for special studies</p> <p>Report information to WHO as required in regards to human cases of novel influenza, if cases identified in Canada</p> <p>Develop and disseminate additional data elements to be collected from novel influenza cases (e.g., exposure information)</p>	<p>Continue with all Phase 2 activities</p> <p>Disseminate PHAC information, including provincial-specific information.</p> <p>Confirm that surveillance tools required for later phases (e.g., information for institutional respiratory infection outbreaks) are available and up-to-date</p> <p>Report information as needed in regards to human cases of novel influenza, if identified</p> <p>Identify special study needs</p> <p>Disseminate protocols for special studies</p> <p>Identify surveillance/information needs should pandemic progress to next phase</p> <p>Develop and disseminate additional data elements to be collected from novel influenza cases (eg., exposure information)</p>	<p>Continue with all Phase 2 activities</p> <p>Share surveillance information with stakeholders</p> <p>Maintain vigilance in FRI screening. Implement FRI with travel history screening, since human infection with novel influenza virus has occurred.. FRI screening facilitates detection of novel influenza cases in Ontario</p> <p>Investigate and report additional data elements (e.g., exposure information) should cases infected with novel influenza be identified in Ontario</p> <p>Confirm that surveillance tools required for later phases (e.g., information for institutional respiratory infection outbreaks) are available and up-to-date</p> <p>Identify surveillance/information needs for next phase</p>
<p>Pandemic Alert Period: Phase 4</p> <p>Small cluster(s)</p>	<p>Continue with all Phase 3 activities</p> <p>Monitor evolving situation, identify additional needs for</p>	<p>Continue with all Phase 3 activities</p> <p>Disseminate alerts about the pandemic alert phase to increase</p>	<p>Continue with all Phase 3 activities</p> <p>Disseminate alerts about the progress of the pandemic to</p>

WHO Pandemic/ Phase	Federal Level	Provincial Level	Local Level
with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans	<p>enhanced surveillance information should progress to next phase</p> <p>Provide alerts about the pandemic alert phase to increase awareness and inform public health and clinical decision making</p> <p>Review if new or updated surveillance tools are needed</p>	<p>awareness and inform public health and clinical decision making</p> <p>Review if new or updated FRI surveillance tools are needed.</p> <p>Disseminate updated surveillance tools if developed</p>	<p>increase awareness and inform public health and clinical decision making</p> <p>Implement any new/updated FRI/SRI surveillance tools</p>
Phase 5 Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible	<p>Continue with all Phase 4 activities</p> <p>Review/update case definitions</p> <p>Review/revise information required for surveillance purposes for a potential progression to Phase 6 (pandemic)</p> <p>Implement border-based surveillance (depending on origin of cases), including notifications to ill and well travelers</p> <p>Confirm the information to be collected on cases and screening measures and how this will be done (e.g., database issues, data flow)</p>	<p>Continue with all Phase 4 activities</p> <p>Implement:</p> <ul style="list-style-type: none"> any new / updated case definitions any new / updated FRI surveillance tools (especially for areas known to receive a lot of travelers from affected areas) <p>Activate web-based data collection system, as needed</p> <p>Review/revise information required for surveillance purposes for a potential progression to Phase 6 (pandemic)</p>	<p>Continue with all Phase 4 activities</p> <p>Implement any new/updated FRI/SRI surveillance tools (especially for areas known to receive a lot of travelers from affected areas)</p> <p>Review/revise information required for surveillance purposes for potential progression to Phase 6 (pandemic)</p>
Pandemic Period: Phase 6 Increased and sustained transmission in general population	<p>Continue with all Phase 5 activities until no longer sustainable</p> <p>Evaluate current epidemiology of pandemic to direct resources to high risk groups</p> <p>Define clinical spectrum of disease (based on feedback from local level experts), and revise case definitions as necessary</p> <p>Monitor surveillance activities; compile and report outcomes</p> <p>Review protocols for special studies and establish dedicated teams to activate the studies in collaboration with other public health authorities</p> <p>Monitor antiviral effectiveness, safety and resistance</p>	<p>Continue with all Phase 5 activities until no longer sustainable</p> <p>Evaluate current epidemiology of pandemic to direct resources to high risk groups</p> <p>Adopt and implement revised case definitions as necessary</p> <p>Monitor surveillance activities and compile and report outcomes</p> <p>Continue with enhanced surveillance until no longer sustainable</p> <p>Activate web-based data collection system, if not done during 5.2 (streamlined surveillance)</p> <p>Monitor antiviral uptake, effectiveness, safety and resistance</p> <p>Review protocols for special studies and assist with establishment of dedicated teams to activate the studies in collaboration with other public health authorities</p> <p>Disseminate pandemic alerts</p>	<p>Continue with all Phase 5 activities until no longer sustainable</p> <p>Maintain FRI with travel history screening to detect entry of cases infected with pandemic strain</p> <p>Evaluate current epidemiology of pandemic to direct priorities to high risk groups</p> <p>Adopt and implement revised case definitions as necessary</p> <p>Provide timely data, and report to province</p> <p>Participate in special studies and assist with establishment dedicated teams to activate the studies in collaboration with other public health authorities</p> <p>Continue with enhanced surveillance until no longer sustainable</p> <p>Disseminate pandemic alerts</p>
Pandemic Period: Phase 6 cont. Regional and multi-regional epidemics	<p>Continually review/revise surveillance case definitions as necessary</p> <p>Provide epidemiological summaries to characterize outbreaks and impacts</p>	<p>Adopt surveillance case definitions as necessary</p> <p>Disseminate epidemiological summaries to characterize outbreaks and impacts</p> <p>Monitor surveillance activities;</p>	<p>Modify definitions, activities, processes and tools as required based on direction from the province</p> <p>Disseminate epidemiological summaries to characterize</p>

WHO Pandemic/ Phase	Federal Level	Provincial Level	Local Level
	<p>Monitor surveillance activities; compile and report outcomes</p> <p>Monitor and report on progress of special studies</p> <p>Continually monitor data collection, transmission procedures in an attempt to streamline procedures to optimize efficiency and timeliness of data reporting</p> <p>Maintain ongoing surveillance to detect second or later waves early</p> <p>Monitor vaccine effectiveness, adverse reactions and coverage, once vaccine available</p>	<p>compile and report outcomes</p> <p>Monitor and modify (if necessary) data collection/transmission processes/protocols</p> <p>Monitor and report on progress of special studies</p> <p>Maintain ongoing surveillance to detect second or later waves early</p> <p>Monitor vaccine effectiveness, adverse reactions and coverage, once vaccine available</p>	<p>outbreaks and impacts</p> <p>Continue to provide timely data and analysis</p> <p>Maintain ongoing surveillance to detect second or later waves early</p> <p>Monitor vaccine effectiveness, adverse reactions and coverage, once vaccine available</p> <p>Hospitals, long-term care homes and retirement homes with more than 10 beds report aggregate respiratory infection outbreak information using ministry's web-based surveillance system</p>
<p>Pandemic Period: Phase 6 cont.</p> <p>Pandemic Subsiding</p>	<p>Estimate burden of disease during pandemic period (e.g., through special studies), provide epidemiological summaries to characterize the impact of pandemic waves in Canada</p> <p>Review/modify case definition, evaluate the current epidemiology and decreasing levels of activity in Canada</p> <p>Determine ongoing surveillance required to document the end of the first wave and detect any new cases/outbreaks</p>	<p>Estimate burden of disease in the province during pandemic period and develop epidemiological summaries to describe the impact of pandemic waves in Ontario</p> <p>Review/adopt case definition; evaluate the current epidemiology and decreasing levels of activity in Ontario. Determine ongoing surveillance needs for both documentation of end of first wave and detection of any new cases/outbreaks</p>	<p>Work with MOHLTC to estimate burden of disease during pandemic period and develop epidemiological summaries to describe the impact of pandemic waves in local jurisdiction</p> <p>Scale down streamlined surveillance as appropriate and resume inter-pandemic response</p> <p>Review/adopt case definition, evaluate the current epidemiology and decreasing levels of activity in local jurisdiction</p>
<p>Postpandemic Period Return to Interpandemic phase</p>	<p>Collect information required to evaluate surveillance activities</p> <p>Evaluate pandemic surveillance system performance and plan</p> <p>Resume seasonal influenza laboratory and disease surveillance activities and communicate via FluWatch improvements as required</p>	<p>Collect information required to evaluate surveillance activities</p> <p>Evaluate pandemic surveillance system performance and plan improvements as required</p> <p>Resume seasonal influenza laboratory and disease surveillance activities and communicate via Ontario Influenza Bulletin</p>	<p>Collect information required to evaluate surveillance activities</p> <p>Evaluate pandemic surveillance system performance and plan improvements as required</p> <p>Resume seasonal influenza surveillance activities</p>