

September 11 to 24, 2016 (Weeks 37-38)

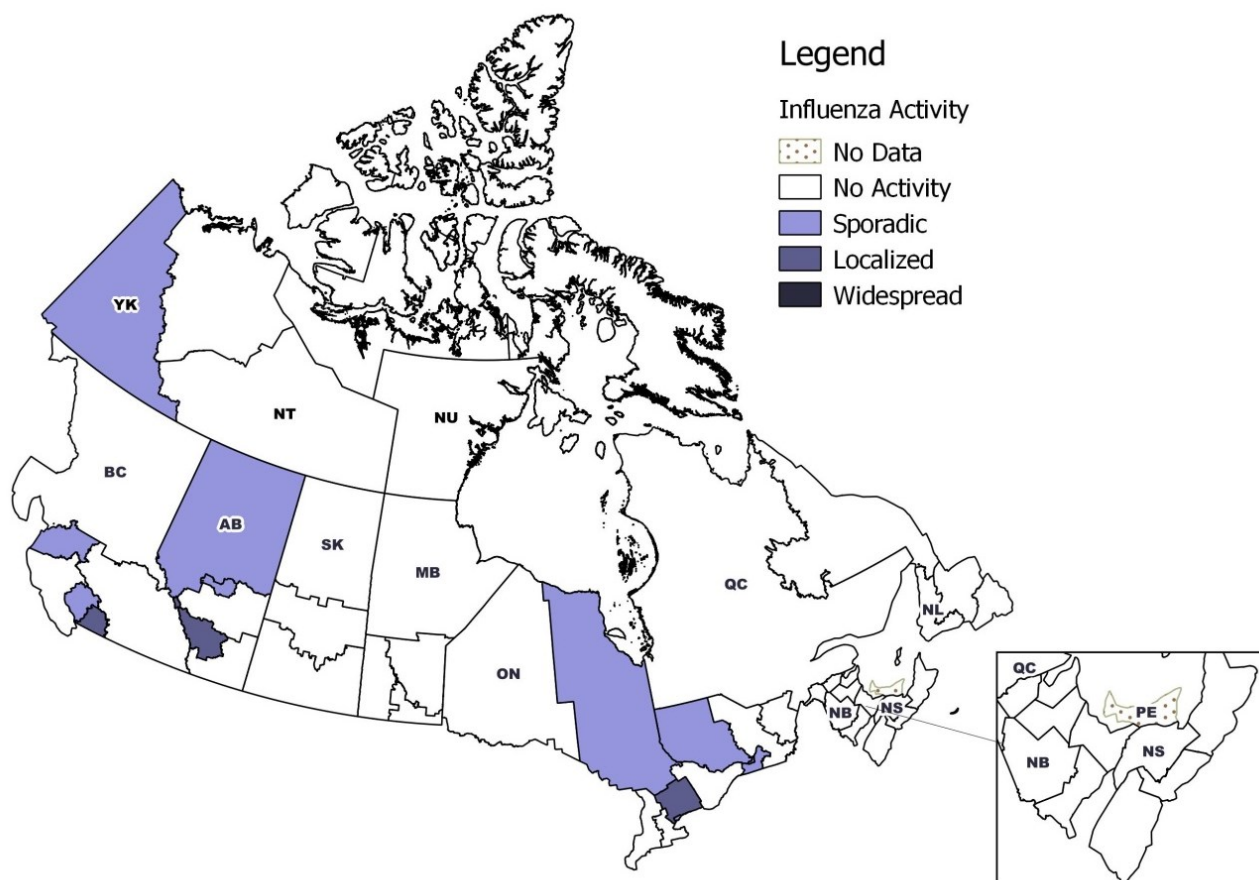
Overall Summary

- Influenza activity is at interseasonal levels with the majority regions of Canada reporting low or no influenza activity.
- In week 38, localized activity was reported in three regions across three provinces (BC, AB, and ON).
- A total of 73 positive influenza detections were reported in weeks 37 and 38; influenza A(H3N2) was the most common subtype detected.
- In week 38, 1% of visits to sentinel healthcare professionals were due to ILI.
- The first laboratory-confirmed influenza outbreak this season was reported in week 37. A total of five outbreaks were reported in weeks 37 and 38.
- Low numbers of hospitalizations were reported in weeks 37 and 38.
- For more information on the flu, see our [Flu\(influenza\)](#) web page.

Influenza/Influenza-like Illness (ILI) Activity (geographic spread)

In week 38, a total of forty of regions in Canada reported no influenza activity. Sporadic influenza activity was reported in nine regions. For the first time this season, localized activity was reported. A total of three regions across Ontario, Alberta and British Columbia reported localized activity in week 38. For more details on a specific region, click on the map.

Figure 1 – Map of overall influenza/ILI activity level by province and territory, Canada, Week 38

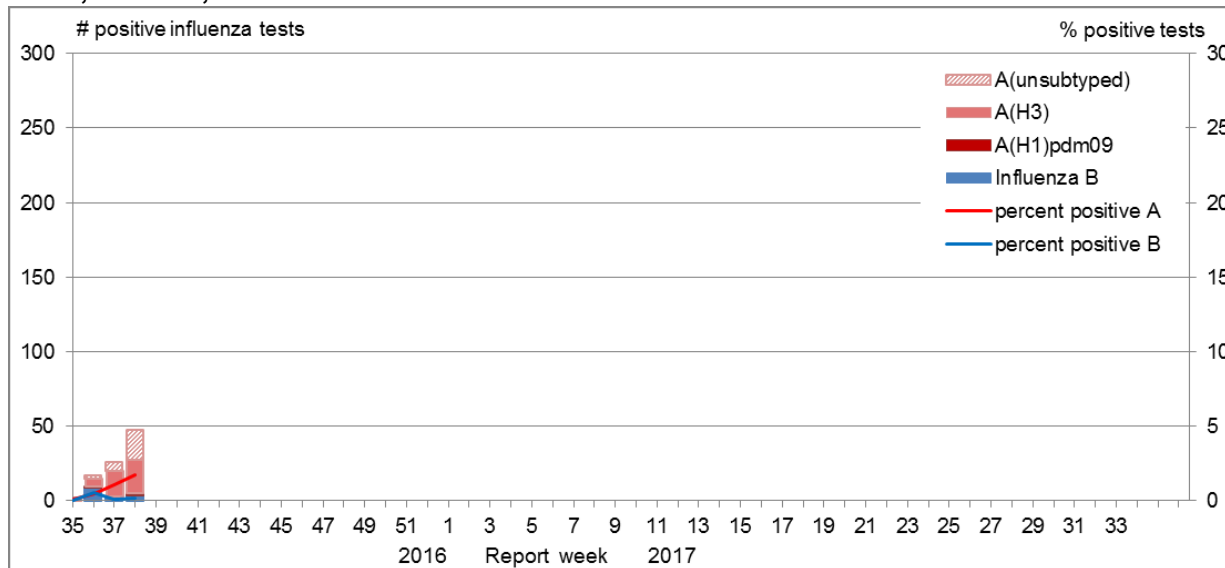


Note: Influenza/ILI activity levels, as represented on this map, are assigned and reported by Provincial and Territorial Ministries of Health, based on laboratory confirmations, sentinel ILI rates and reported outbreaks. Please refer to detailed definitions at the end of the report. Maps from previous weeks, including any retrospective updates, are available in the mapping feature found in the [Weekly Influenza Reports](#).

Laboratory Confirmed Influenza Detections

The percentage of tests positive for influenza remained at interseasonal levels, ranging from 1.2% in week 37 to 1.9% in week 38. For data on other respiratory virus detections, see the [Respiratory Virus Detections in Canada Report](#) on the Public Health Agency of Canada (PHAC) website.

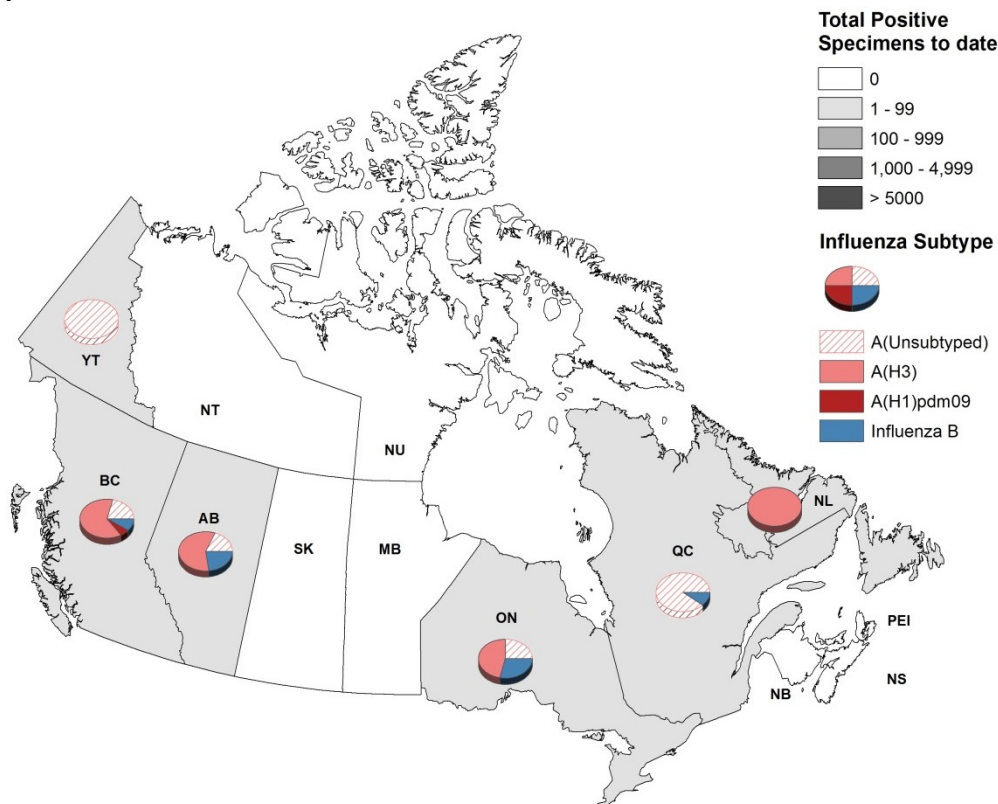
Figure 2 – Number of positive influenza tests and percentage of tests positive, by type, subtype and report week, Canada, 2016-17



The shaded area indicates weeks where the positivity rate was at least 5% and a minimum of 15 positive tests were observed, signaling the start and end of [seasonal influenza activity](#).

Nationally in weeks 37-38, there were 73 positive influenza tests reported. Influenza A(H3N2) was the most common subtype detected in weeks 37 and 38. Many regions across Canada continue to report no influenza detections (SK, MB, NB, NS, PE, NT, NU). For more detailed weekly and cumulative influenza data, see the text descriptions for figures 2 and 3 or the [Respiratory Virus Detections in Canada Report](#).

Figure 3 – Cumulative numbers of positive influenza specimens by type/subtype and province/territory, Canada, 2016-17



To date this season, detailed information on age and type/subtype has been received for 81 cases. Adults aged 65+ accounted for the greatest proportion of influenza cases (Table 1).

Table 1 – Weekly and cumulative numbers of positive influenza specimens by type, subtype and age-group reported through case-based laboratory reporting¹, Canada, 2016-17

Age groups (years)	Weeks (Sept. 11 to Sept. 24, 2016)					Cumulative (Aug. 28, 2016 to Sept. 24, 2016)				
	Influenza A				B	Influenza A				B
	A Total	A(H1) pdm09	A(H3)	A (UnS) ³		A Total	A(H1) pdm09	A(H3)	A (UnS) ³	
<5	6	0	0	6	0	6	0	0	6	0
5-19	<5	0	<5	0	0	<5	0	<5	0	<5
20-44	7	0	<5	<5	<5	>6	0	6	<5	6
45-64	11	0	7	<5	<5	14	0	9	5	<5
65+	34	<5	21	12	<5	36	<5	23	12	<5
Total	>58	<5	33	26	5	69	<5	>38	>23	12

¹Table 1 includes specimens for which demographic information was reported. These represent a subset of all positive influenza cases reported. Cumulative data include updates to previous weeks.

²Percentage of tests positive for sub-types of influenza A are a percentage of all influenza A detections.

³UnS: unsubtype: The specimen was typed as influenza A, but no result for subtyping was available.

Specimens from NT, YT, and NU are sent to reference laboratories in other provinces

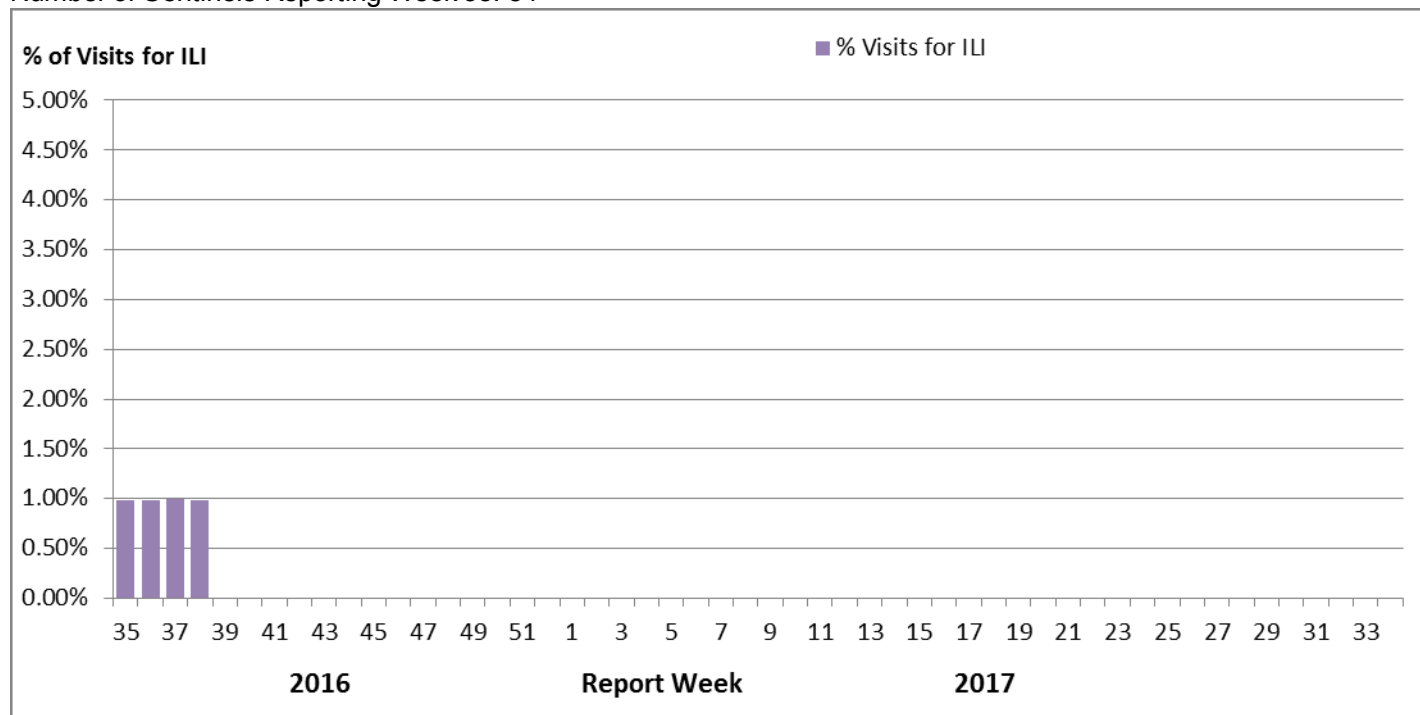
Syndromic/Influenza-like Illness Surveillance

Healthcare Professionals Sentinel Syndromic Surveillance

In week 38, 1% of visits to healthcare professionals were due to ILI. The ILI rate has remained constant since week 35.

Figure 4 – Percentage of visits for ILI reported by sentinels by report week, Canada, 2016-17

Number of Sentinels Reporting Week 38: 84



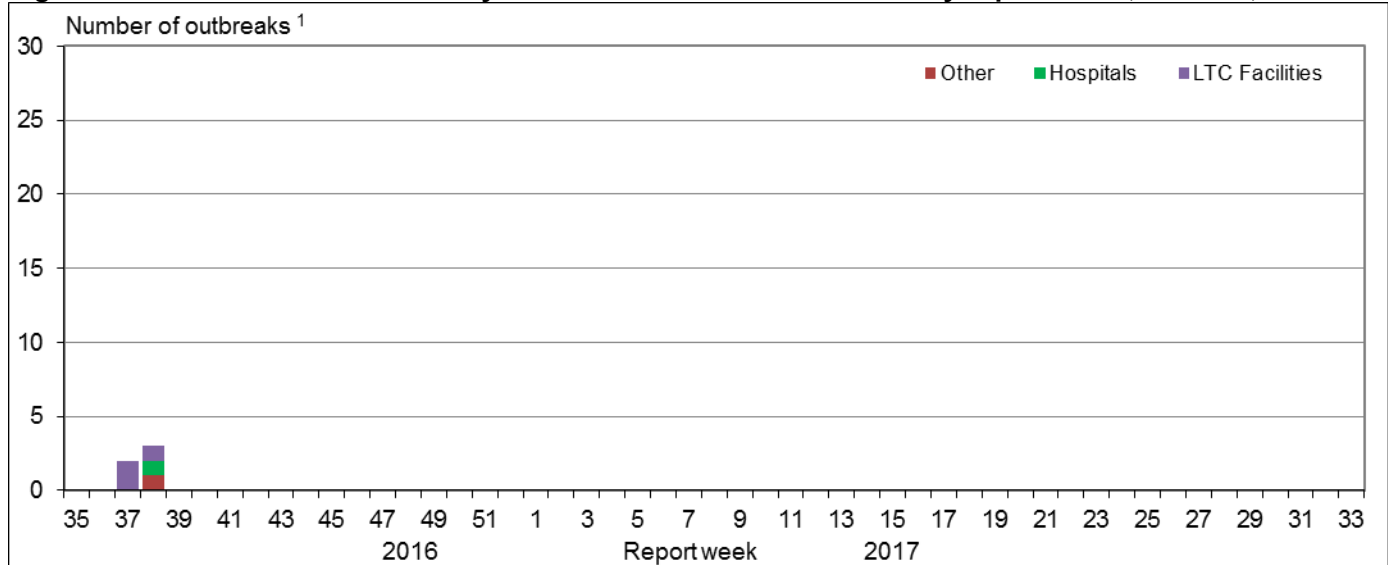
Delays in the reporting of data may cause data to change retrospectively. In BC, AB, and SK, data are compiled by a provincial sentinel surveillance program for reporting to FluWatch. Not all sentinel physicians report every week.

Are you a primary healthcare practitioner (General Practitioner, Nurse Practitioner or Registered Nurse) interested in becoming a FluWatch sentinel? Please visit our [Influenza Sentinel page](#) for more details.

Influenza Outbreak Surveillance

In weeks 37-38, four laboratory confirmed influenza outbreaks were reported. The first outbreak this season was reported in a long term care facility (LTCF) in week 37. Of the three outbreaks with known types or subtypes, one outbreak was due to influenza A (H3N2) and two were due to influenza A (unsubtyped).

Figure 5 –Number of new laboratory-confirmed influenza outbreaks by report week, Canada, 2016-17



¹All provinces and territories except NU report influenza outbreaks in long-term care facilities. All provinces and territories with the exception of NU and QC report outbreaks in hospitals. Outbreaks of influenza or influenza-like-illness in other facilities are reported to FluWatch but reporting varies between jurisdictions. Outbreak definitions are included at the end of this report.

Provincial/Territorial Influenza Hospitalizations and Deaths

In weeks 37-38, less than five influenza-associated hospitalizations were reported by participating provinces and territories*. To date this season, no ICU admissions or deaths have been reported.

Table 2 – Cumulative number of hospitalizations, ICU admissions and deaths by age and influenza type reported by participating provinces and territories, Canada 2016-17

Age Groups (years)	Cumulative (Aug. 28, 2016 to 24 Sept. 2016)						
	Hospitalizations			ICU Admissions		Deaths	
	Influenza A Total	Influenza B Total	Total [# (%)]	Influenza A and B Total	%	Influenza A and B Total	%
0-4	0	0	0 (0%)	0	0%	0	0%
5-19	<5	0	<5 (50%)	0	0%	0	0%
20-44	0	0	0 (0%)	0	0%	0	0%
45-64	0	<5	0 (0%)	0	0%	0	0%
65+	<5	<5	<5 (50%)	0	0%	0	0%
Total	<5	<5	<5 (100%)	0	0%	0	0%

Note: Influenza-associated hospitalizations are not reported to PHAC by BC, NU, and QC. Only hospitalizations that require intensive medical care are reported by SK. ICU admissions are not distinguished among hospital admissions reported from ON. †The hospitalization or death does not have to be attributable to influenza, a positive laboratory test is sufficient for reporting.

Sentinel Hospital Influenza Surveillance

Pediatric Influenza Hospitalizations and Deaths

To date this season, less than five laboratory-confirmed influenza-associated pediatric (≤ 16 years of age) hospitalizations were reported by the Immunization Monitoring Program Active (IMPACT) network.

Influenza Strain Characterizations

During the 2016-17 influenza season, the National Microbiology Laboratory (NML) has characterized two influenza viruses, both influenza B.

Table 3: Influenza strain characterizations, Canada, 2016-17

Strain Characterization Results*	Count	Description
Influenza B		
B/Brisbane/60/2008-like (Victoria lineage)	2	Viruses antigenically similar to B/Brisbane/60/2008, the influenza B component of the 2016-17 Northern Hemisphere's trivalent and quadrivalent influenza vaccine

*The NML receives a proportion of the influenza positive specimens from provincial laboratories for strain characterization and antiviral resistance testing. Strain characterization data reflect the results of hemagglutination inhibition (HI) testing compared to the reference influenza strains recommended by [WHO](http://www.who.int).

Antiviral Resistance

During the 2016-17 season, the National Microbiology Laboratory (NML) has tested two influenza viruses for resistance to oseltamivir and zanamivir. Both viruses were sensitive to oseltamivir and zanamivir (Table 4).

Table 4 – Antiviral resistance by influenza virus type and subtype, Canada, 2016-17

Virus type and subtype	Oseltamivir		Zanamivir		Amantadine	
	# tested	# resistant (%)	# tested	# resistant (%)	# tested	# resistant (%)
A (H3N2)	0	0 (0%)	0	0 (0%)	0	0 (0%)
A (H1N1)	0	0 (0%)	0	0 (0%)	0	0 (0%)
B	2	0 (0%)	2	0 (0%)	NA ¹	NA ¹
TOTAL	2	0 (0%)	2	0 (0%)	0	0 (0%)

¹NA: Not Applicable

Provincial and International Influenza Reports

- [World Health Organization influenza update](#)
- [World Health Organization FluNet](#)
- [WHO Influenza at the human-animal interface](#)
- [Centers for Disease Control and Prevention seasonal influenza report](#)
- [European Centre for Disease Prevention and Control - epidemiological data](#)
- [South Africa Influenza surveillance report](#)
- [New Zealand Public Health Surveillance](#)
- [Australia Influenza Report](#)
- [Pan-American Health Organization Influenza Situation Report](#)
- [Alberta Health – Influenza Surveillance Report](#)
- [BC - Centre for Disease Control \(BCCDC\) - Influenza Surveillance](#)
- [New Brunswick – Influenza Surveillance Reports](#)
- [Newfoundland and Labrador – Surveillance and Disease Reports](#)
- [Nova Scotia - Flu Information](#)
- [Public Health Ontario – Ontario Respiratory Pathogen Bulletin](#)
- [Quebec - Système de surveillance de la grippe](#)
- [Manitoba – Epidemiology and Surveillance – Influenza Reports](#)
- [Saskatchewan – influenza Reports](#)
- [PEI – Influenza Summary](#)

FluWatch Definitions for the 2016-2017 Season

Abbreviations: Newfoundland/Labrador (NL), Prince Edward Island (PE), New Brunswick (NB), Nova Scotia (NS), Quebec (QC), Ontario (ON), Manitoba (MB), Saskatchewan (SK), Alberta (AB), British Columbia (BC), Yukon (YT), Northwest Territories (NT), Nunavut (NU).

Influenza-like-illness (ILI): Acute onset of respiratory illness with fever and cough and with one or more of the following - sore throat, arthralgia, myalgia, or prostration which is likely due to influenza. In children under 5, gastrointestinal symptoms may also be present. In patients under 5 or 65 and older, fever may not be prominent.

ILI/Influenza outbreaks

Schools: Greater than 10% absenteeism (or absenteeism that is higher (e.g. >5-10%) than expected level as determined by school or public health authority) which is likely due to ILI. Note: it is recommended that ILI school outbreaks be laboratory confirmed at the beginning of influenza season as it may be the first indication of community transmission in an area.

Hospitals and residential institutions: two or more cases of ILI within a seven-day period, including at least one laboratory confirmed case. Residential institutions include but not limited to long-term care facilities (LTCF) and prisons.

Workplace: Greater than 10% absenteeism on any day which is most likely due to ILI.

Other settings: two or more cases of ILI within a seven-day period, including at least one laboratory confirmed case; i.e. closed communities.

Note that reporting of outbreaks of influenza/ILI from different types of facilities differs between jurisdictions.

Influenza/ILI Activity Levels

1 = No activity: no laboratory-confirmed influenza detections in the reporting week, however, sporadically occurring ILI may be reported

2 = Sporadic: sporadically occurring ILI and lab confirmed influenza detection(s) with **no outbreaks** detected within the influenza surveillance region†

3 = Localized: (1) evidence of increased ILI* ;

(2) lab confirmed influenza detection(s);

(3) **outbreaks** in schools, hospitals, residential institutions and/or other types of facilities occurring in **less than 50% of the influenza surveillance region†**

4 = Widespread: (1) evidence of increased ILI*;

(2) lab confirmed influenza detection(s);

(3) **outbreaks** in schools, hospitals, residential institutions and/or other types of facilities occurring **in greater than or equal to 50% of the influenza surveillance region†**

Note: ILI data may be reported through sentinel physicians, emergency room visits or health line telephone calls.

** More than just sporadic as determined by the provincial/territorial epidemiologist.*

† Influenza surveillance regions within the province or territory as defined by the provincial/territorial epidemiologist.

We would like to thank all the Fluwatch surveillance partners who are participating in this year's influenza surveillance program.

This [report](#) is available on the Government of Canada Influenza webpage. Ce rapport est disponible dans les deux langues officielles.