



October 5, 2008 to October 11, 2008 (Week 41)

Low levels of influenza activity continue to be reported in Canada; no new laboratory detections reported this week

During week 41, influenza activity in Canada remained low with the majority of the influenza surveillance regions reporting no activity and only six regions (in NS, QC, ON & AB) reported sporadic influenza activity (see map). No specimens tested positive for influenza in Canada this week (percentage positive = 0%; 0/1,167) (see table). In week 41, the ILI consultation rate was 18 ILI consultations per 1,000 patient visits (see ILI graph), and is within the expected range for this week. The sentinel response rate has been slowly increasing over the last several weeks but remained low at 47% for this week. Fluctuations in ILI consultation rates are expected during periods of low influenza activity and low sentinel participation. No new influenza outbreaks were reported in week 41.

Antigenic Characterization:

Since 1 September 2008, National Microbiology Laboratory (NML) has antigenically characterized three influenza viruses: one influenza A/Brisbane/59/2007(H1N1)-like and two influenza B/Florida/4/2006 viruses, which are the influenza A(H1N1) and influenza B components recommended for the 2008-09 influenza vaccine. (see pie chart)

Antiviral Resistance:

The testing results showed that the influenza A(H1N1) isolate was sensitive to amantadine, however, it was resistant to oseltamivir due to the H274Y mutation. Both of the influenza B viruses tested were found to be sensitive to oseltamivir.

Influenza-associated Paediatric Hospitalizations:

No laboratory-confirmed influenza-associated paediatric hospitalizations have been reported through the Immunization Monitoring Program Active (IMPACT) network for the 2008-09 season.

International:

WHO: During the weeks 39 and 40, overall influenza activity in the southern hemisphere continued to decline. Activity was low in the rest of the world. <<http://www.who.int/csr/disease/influenza/update/en/>>

CDC: During week 40, overall influenza activity was low with the majority of the states reporting no activity and only 7 states reported sporadic activity. Of the 1,123 specimens tested for influenza viruses in week 40, 8 (0.7%) were positive. From May 18 - September 27, 2008, the CDC antigenically characterized 6 influenza viruses: 4 influenza A(H1), 1 influenza A(H3), and 1 influenza B. All six viruses are antigenically similar to the components selected for the 2008-09 influenza vaccine. CDC performed oseltamivir and zanamivir resistance testing on 10 influenza A and B viruses collected since May 18. Two of the 6 influenza A(H1N1) viruses tested were found to be resistant to oseltamivir and the influenza A(H3N2) and influenza B viruses tested were sensitive to oseltamivir. All tested viruses retain their sensitivity to zanamivir. Of the 6 influenza A viruses collected since May 18 that were tested for adamantane resistance, 1 influenza A(H3N2) virus and 1 of the 5 influenza A (H1N1) viruses tested were resistant. <<http://www.cdc.gov/flu/weekly/>>

EISS: In week 41, levels of influenza activity in Europe were low, with all countries reporting no or only sporadic influenza activity. Since week 40, 13 influenza viruses were detected of which 8 were influenza A not subtyped, 2 were influenza A(H1), 2 were influenza A(H3) and 1 was influenza B. It is currently too early to determine which virus type or subtype may become dominant in Europe this season. <http://www.eiss.org/cgi-files/bulletin_v2.cgi>

Human Avian Influenza: No new cases of human H5N1 avian influenza infection have been reported by the WHO since 10 September 2008. <http://www.who.int/csr/disease/avian_influenza/en/index.html>

Recommended composition of influenza virus vaccines for use in the 2009 southern hemisphere influenza season:

It is recommended that vaccines for use in the 2009 influenza season (southern hemisphere winter) contain the following:

- an A/Brisbane/59/2007 (H1N1)-like virus
- an A/Brisbane/10/2007 (H3N2)-like virus
- a B/Florida/4/2006-like virus

<<http://www.who.int/wer/2008/wer8341/en/index.html>>

**Total number of influenza tests performed and number of positive tests
by province/territory of testing laboratory, Canada, 2008-2009**

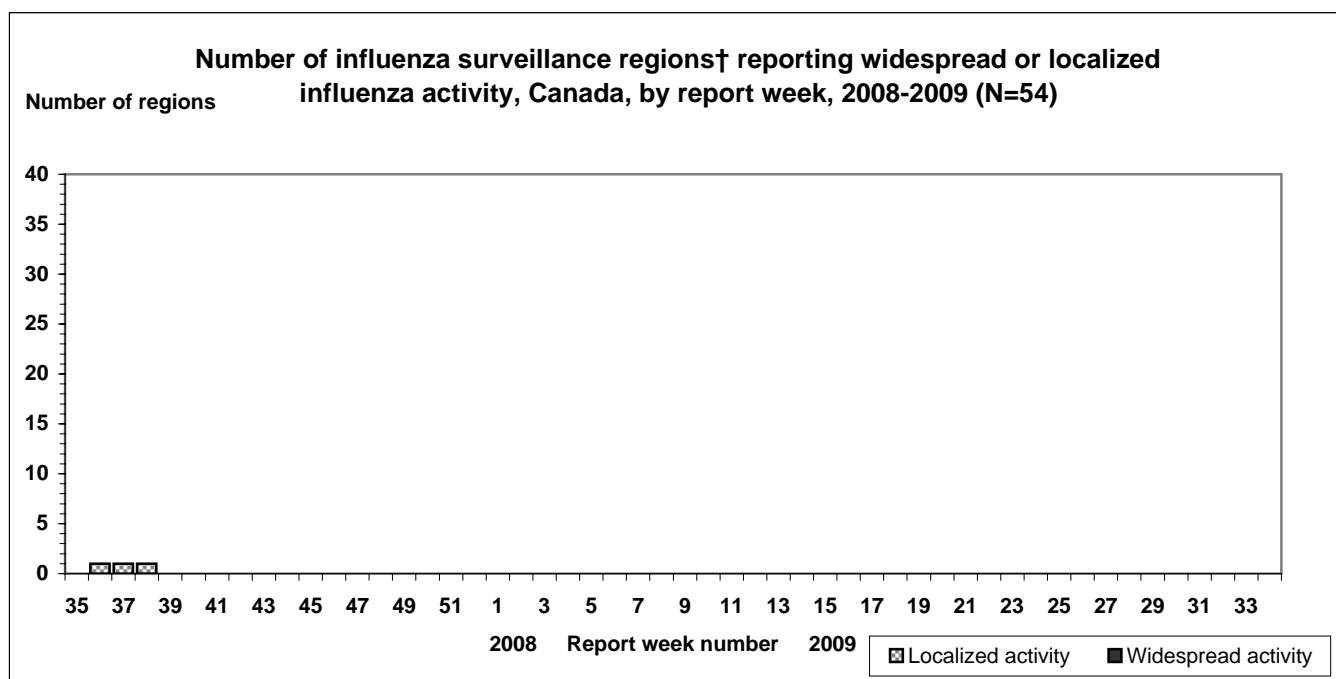
Province of reporting laboratories	Report Period: October 5, 2008 to October 11, 2008				Season to Date: August 24, 2008 to October 11, 2008			
	Total # of influenza	# of positive tests			Total # of influenza	# of positive tests		
		Influenza A	Influenza B	Total		Influenza A	Influenza B	Total
NL	5	0	0	0	24	0	0	0
PE	5	0	0	0	11	0	0	0
NS	11	0	0	0	59	1	0	1
NB	3	0	0	0	32	0	0	0
QC	292	0	0	0	1323	2	0	2
ON	423	0	0	0	1898	0	2	2
MB	32	0	0	0	254	0	0	0
SK	52	0	0	0	415	0	0	0
AB	319	0	0	0	2023	1	3	4
BC	25	0	0	0	120	0	0	0
Canada	1167	0	0	0	6159	4	5	9

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

Note: Cumulative data includes updates to previous weeks; due to reporting delays, the sum of weekly report totals do not add up to cumulative totals.

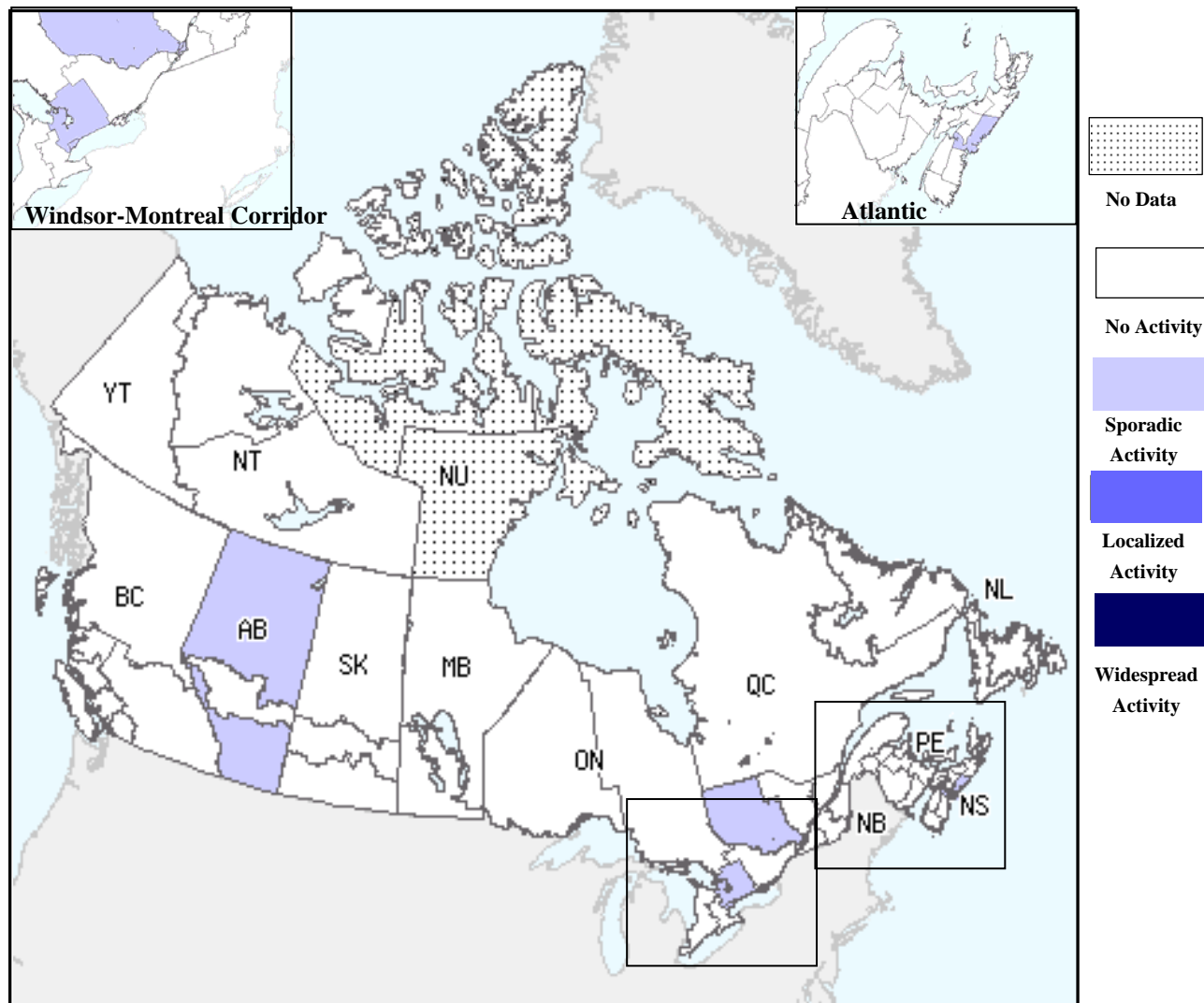
Abbreviations: Newfoundland/Labrador (NL), Prince Edward Island (PE), New Brunswick (NB), Nova Scotia (NS), Quebec (QC), Ontario (ON), Manitoba (MB), Saskatchewan (SK), Alberta (AB), British Columbia (BC), Yukon (YT), Northwest Territories (NT), Nunavut (NU)

Respiratory virus laboratory detections in Canada, by geographic regions, are available weekly on the following website:
<<http://www.phac-aspc.gc.ca/bid-bmi/dsd-dsm/rvdi-divr/index-eng.php>>

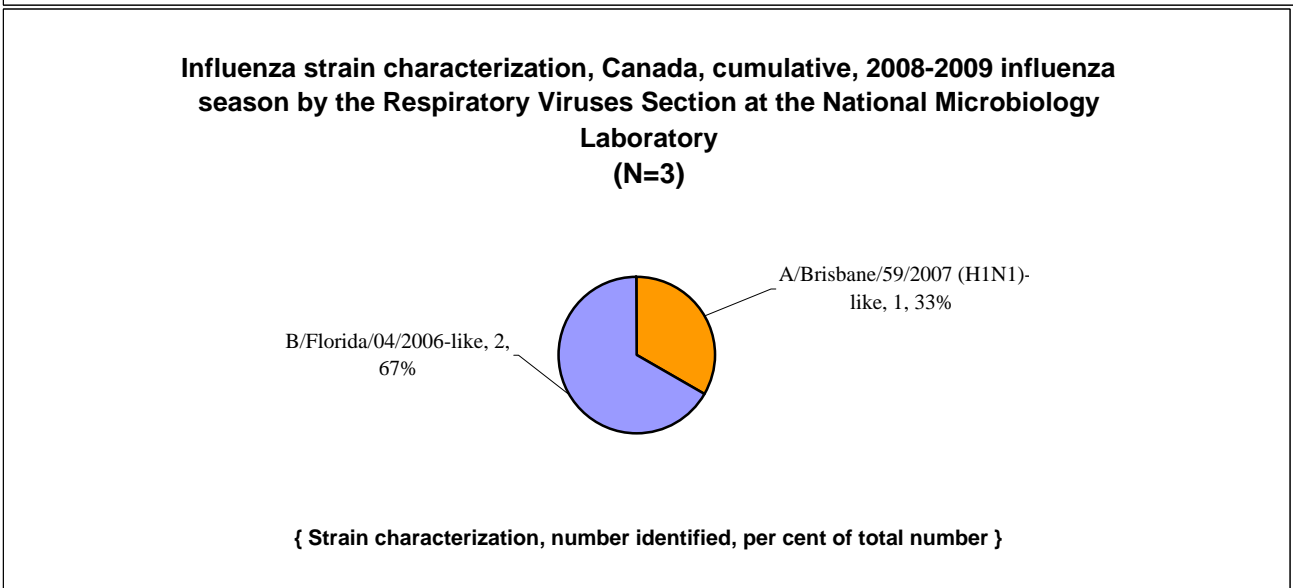
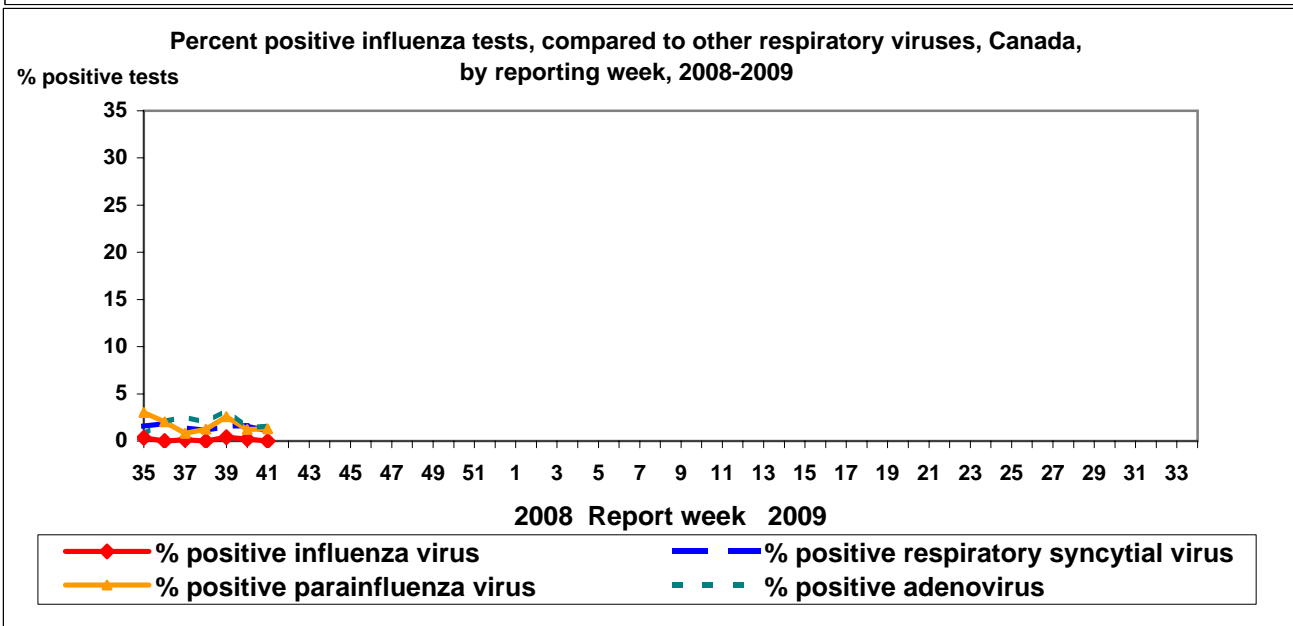
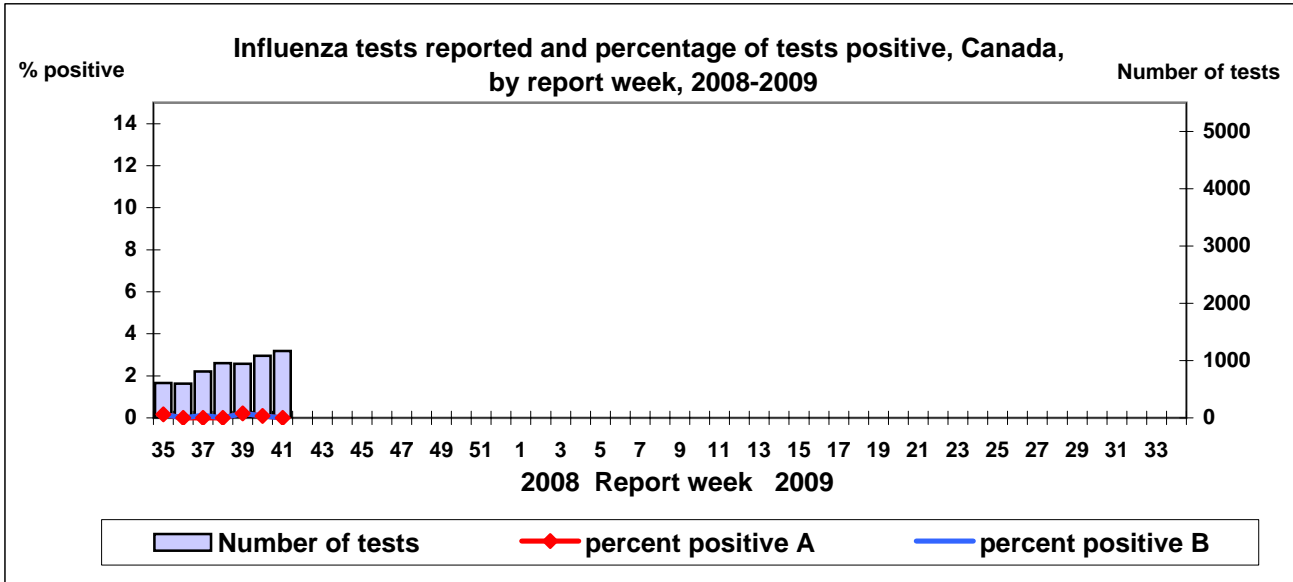


† sub-regions within the province or territory as defined by the provincial/territorial epidemiologist. Graph may change as late returns come in.

**Influenza Activity Level by Provincial and Territorial Influenza Surveillance Regions,
Canada; October 5, 2008 to October 11, 2008 (Week 41)**



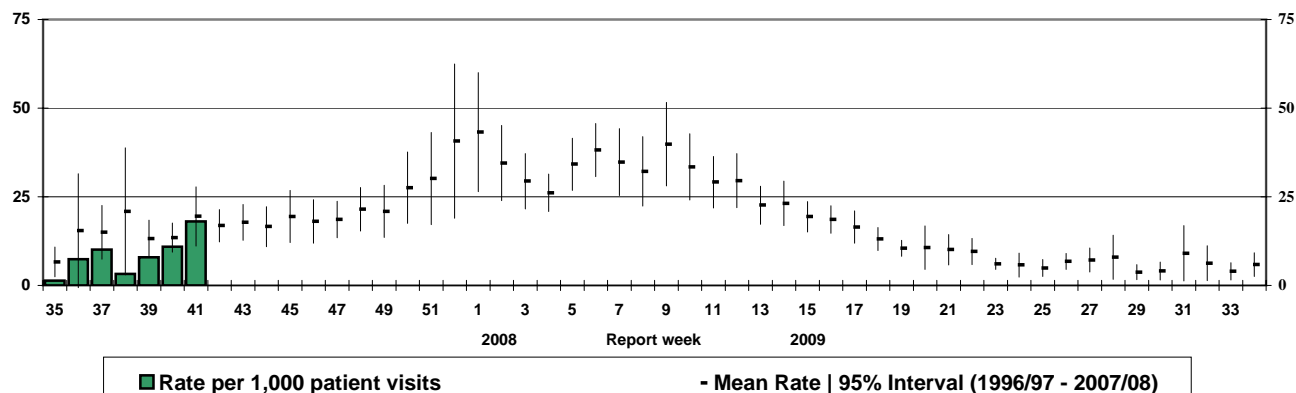
Note: Influenza activity levels, as represented on this map, are assigned and reported by Provincial and Territorial Ministries of Health, **based on laboratory confirmations, sentinel ILI rates (see graphs and tables) and outbreaks.** Please refer to detailed definitions on the last page. For areas where no data is reported, late reports from these provinces and territories will appear on the FluWatch website. Select single maps by report week to get this updated information. <<http://dsol-smed.hc-sc.gc.ca/dsol-smed/fluwatch/fluwatch.phtml?lang=e>>



NACI recommends that the trivalent vaccine for the 2008-2009 season in Canada contain A/Brisbane/59/2007 (H1N1)-like virus; an A/Brisbane/10/2007 (H3N2)-like virus; and a B/Florida/4/2006-like virus.

**Influenza-like illness (ILI) consultation rates, Canada, by report week,
2008-2009 compared to 1996/97 through to 2007/08 seasons**

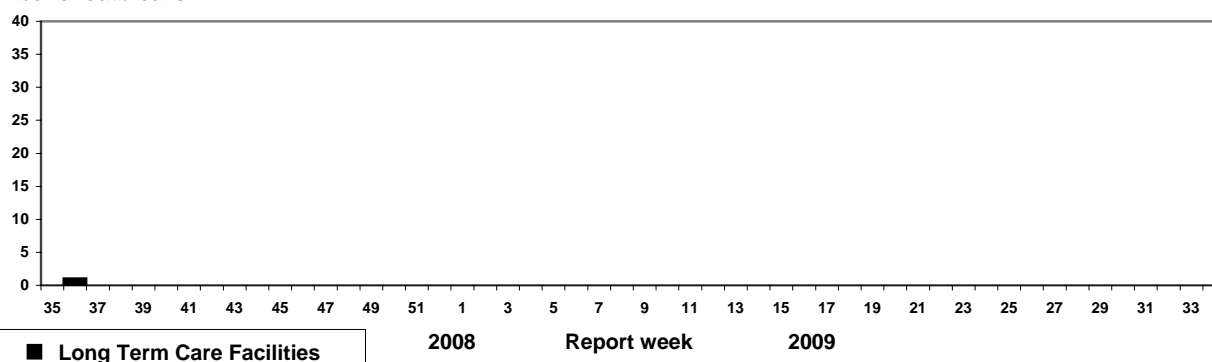
Rate per 1,000 patient visits



Note: No data available for mean rate in previous years for weeks 19 to 39 (1996-1997 through 2002-2003 seasons).

**Number of New Outbreaks in Long Term Care Facilities, Canada,
by Report Week, 2008-2009**

Number of outbreaks



FluWatch reports include data and information from five main sources: laboratory reports of positive influenza tests in Canada; sentinel physician reporting of influenza-like illness (ILI); provincial/territorial assessment of influenza activity based on various indicators, including laboratory surveillance, ILI reporting, school and work site absenteeism, and outbreaks; influenza-associated pediatric hospitalizations; WHO and other international reports of influenza activity.

The map shows influenza activity in the "influenza surveillance regions" † within each jurisdiction, as determined by the provincial/territorial epidemiologists.

ILI definitions for the 2008-2009 season

ILI in the general population: Acute onset of respiratory illness with fever and cough and with one or more of the following - sore throat, arthralgia, myalgia, or prostration which could be due to influenza virus. In children under 5, gastrointestinal symptoms may also be present. In patients under 5 or 65 and older, fever may not be prominent.

Definitions of ILI/Influenza outbreaks for the 2008-2009 season

Schools and work sites: greater than 10% absenteeism on any day most likely due to ILI

Residential institutions: two or more cases of ILI within a seven-day period, **including at least one laboratory confirmed case.**

Institutional outbreaks should be reported within 24 hours of identification.

Influenza Activity levels are defined as:

1 = No activity: i.e. no laboratory-confirmed influenza detections during the past four weeks, however, sporadically occurring ILI may be reported

2 = Sporadic: sporadically occurring **ILI and lab confirmed influenza* with NO outbreaks** detected within the influenza surveillance region†

3 = Localized: sporadically occurring **ILI and lab confirmed influenza* together with outbreaks of ILI** in schools and worksites or laboratory confirmed influenza in residential institutions occurring in less than 50% of the influenza surveillance region(s)†

4 = Widespread: sporadically occurring **ILI and lab confirmed influenza* together with outbreaks of ILI** in schools and worksites or laboratory confirmed influenza in residential institutions occurring **in greater than or equal to 50% of the influenza surveillance region(s)†**

* confirmation of influenza within the surveillance region at any time within the prior four weeks

† sub-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 Public Health Agency website at the following address: <http://www.phac-aspc.gc.ca/fluwatch/index.html>

Ce rapport est disponible dans les deux langues officielles. Pour en recevoir un exemplaire dans l'autre langue chaque semaine, veuillez communiquer avec Estelle Arseneault, Division de l'immunisation et des infections respiratoires au (613) 952-8484