



## November 6 to November 12, 2011 (Week 45)

### Overall Influenza Summary

- Influenza activity continues to increase in some regions (AB, BC, ON & QC) but remains low in the rest of the country
- One region (in North region of AB) reported localized influenza activity; six regions reported sporadic influenza activity (within BC, AB, ON & QC)
- In week 45, 11 laboratory detections of influenza were reported (7 A/H3, 2 A untyped and 2 B)
- Two influenza-associated paediatric hospitalizations were reported from BC & AB
- The national ILI consultation rate remains low

### Influenza Activity and Outbreaks

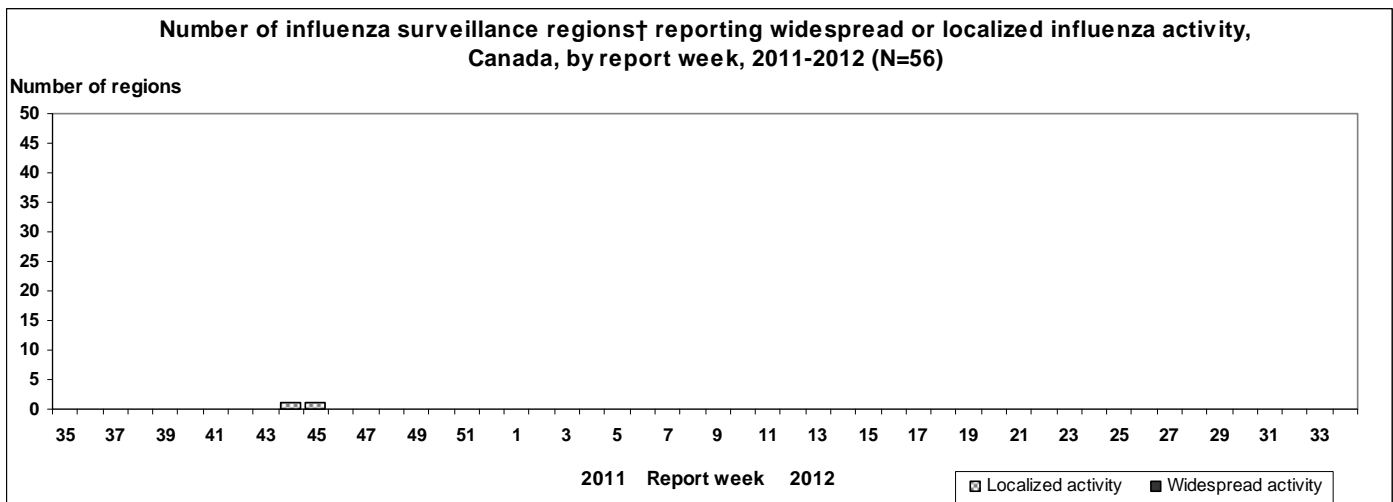
In week 45, one surveillance region (North region of AB) reported localized influenza activity and six surveillance regions within BC, AB, ON and QC reported sporadic influenza activity (see Activity level Map).

One ILI outbreak was reported in a school in the North region of AB in week 45. No laboratory tests were conducted at the school; however, influenza detections have been reported in the region.

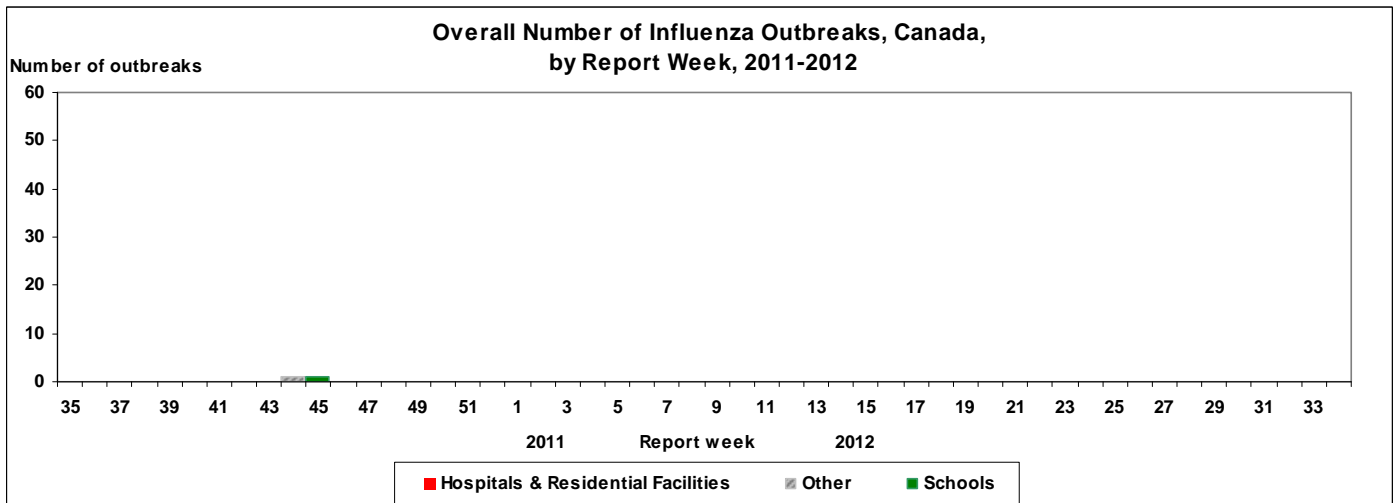
**Map of overall Influenza activity level by province and territory, Canada, Week 45**



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 reported 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.

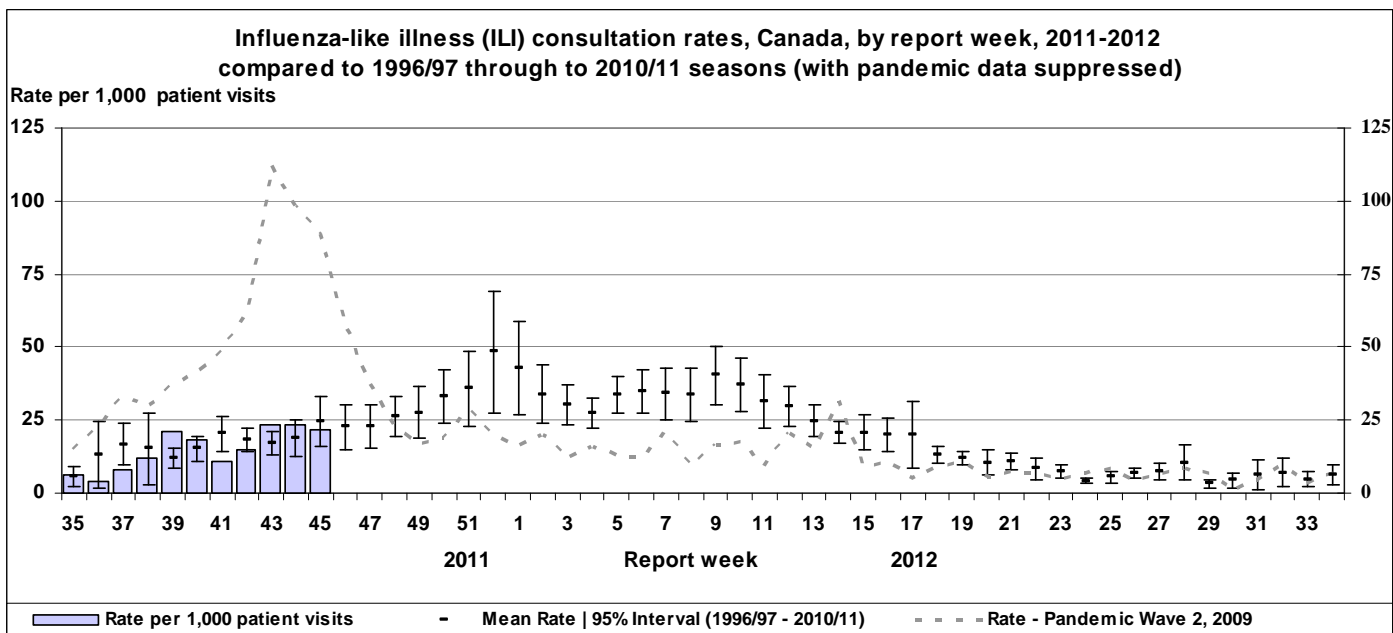


† sub-regions within the province or territory as defined by the provincial/territorial epidemiologist. Graph may change as late returns come in.



### ILI consultation rate

The national ILI consultation rate declined slightly to 21.9 consultations per 1,000 patient visits in week 45 which is within the expected levels for this time of year (see ILI graph). The highest consultation rate this week was observed among those 5 to 19 years of age (46.8 / 1,000 visits) followed by children under 5 (40.4/1,000 visits).



Note: No data available for mean rate in previous years for weeks 19 to 39 (1996-1997 through 2002-2003 seasons). Delays in the reporting of data may cause data to change retrospectively.

## Laboratory Surveillance Summary

In week 45, 2,037 influenza tests were conducted of which 11 (0.5%) were positive for influenza. Although the proportion of tests positive for influenza increased slightly this week compared to previous weeks, the proportion is still low and has remained below 0.6% since the beginning of this season.

The proportion of influenza virus detections by type/subtype this season to date is as follows: 79.2% influenza A (62% - A(H3); 4.8% - A(H1N1)pdm09; 33.3% - untyped) and 20.8% influenza B.

In week 45, the proportion of tests positive for rhinoviruses (13.5%) continued to decline. The proportion of positive tests for the other respiratory viruses remained low (RSV-3.0%; parainfluenza-5.7%; adenovirus-4.2%; hMPV-2.3%; coronavirus-0.8%) (see Respiratory Viruses graph). For more details, see the weekly [Respiratory Virus Detections in Canada report](#).

### Weekly & Cumulative numbers of positive influenza specimens by Provincial Laboratories, Canada, 2011-2012

Reporting provinces	November 6 to November 12, 2011						Cumulative (August 28, 2011 to November 12, 2011)					
	Influenza A					B	Influenza A					B
	A Total	A(H1)	A(H3)	Pand H1N1	A (UnS)*	Total	A Total	A(H1)	A(H3)	Pand H1N1	A (UnS)*	Total
BC	4	0	4	0	0	0	15	0	15	0	0	2
AB	3	0	2	0	1	0	11	0	8	1	2	1
SK	0	0	0	0	0	0	0	0	0	0	0	0
MB	0	0	0	0	0	0	0	0	0	0	0	0
ON	1	0	1	0	0	0	3	0	3	0	0	0
QC	1	0	0	0	1	2	13	0	0	1	12	8
NB	0	0	0	0	0	0	0	0	0	0	0	0
NS	0	0	0	0	0	0	0	0	0	0	0	0
PE	0	0	0	0	0	0	0	0	0	0	0	0
NL	0	0	0	0	0	0	0	0	0	0	0	0
<b>Canada</b>	<b>9</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>42</b>	<b>0</b>	<b>26</b>	<b>2</b>	<b>14</b>	<b>11</b>

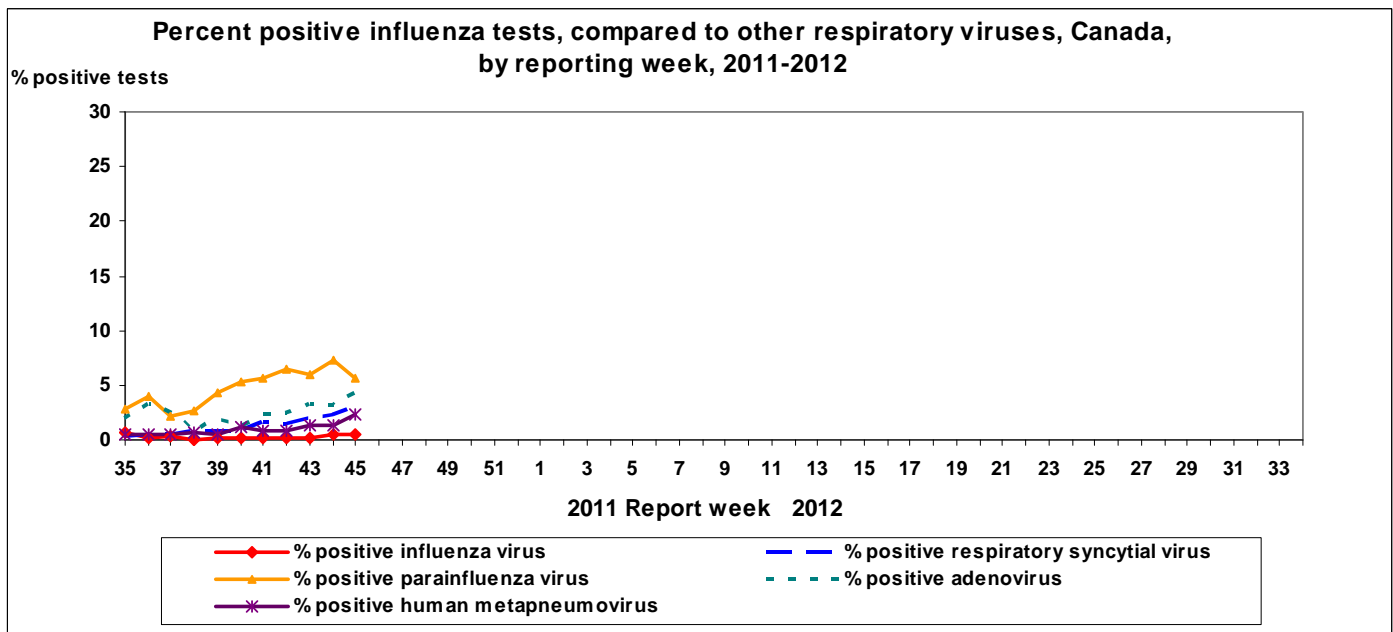
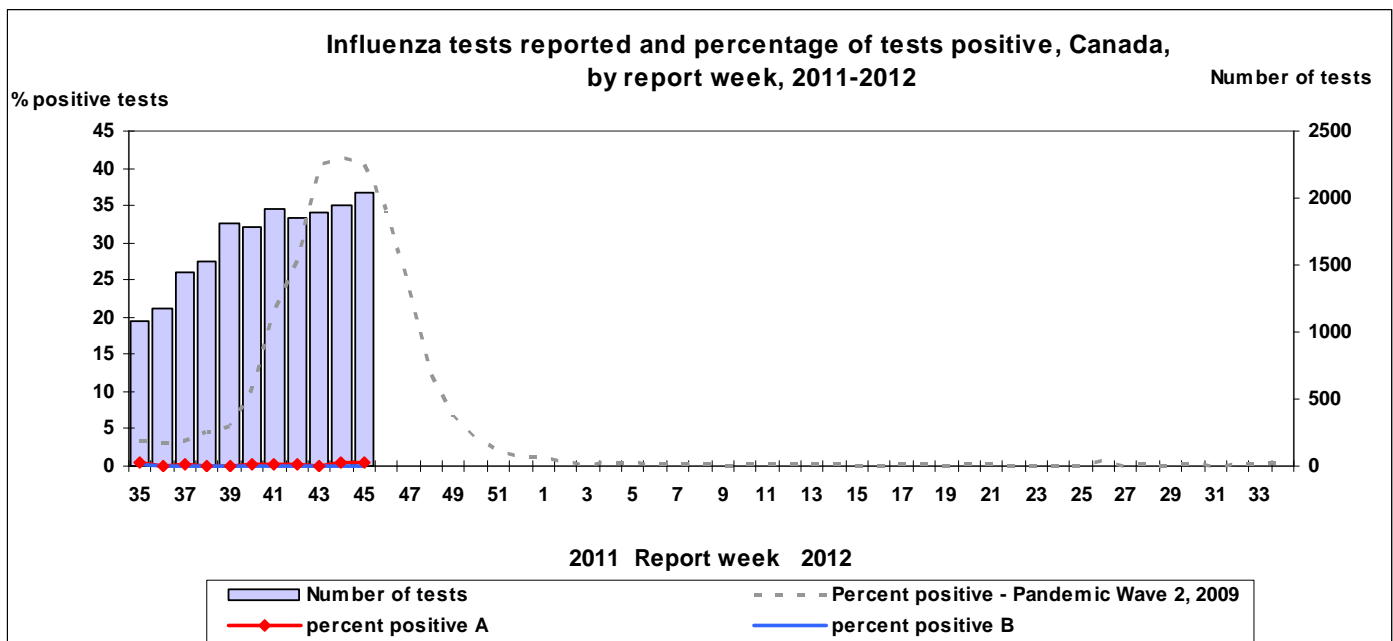
\*Unsubtyped: The specimen was typed as influenza A, but no test for subtyping was performed. Specimens from NT, YT, and NU are sent to reference laboratories in other provinces. Note: Cumulative data includes updates to previous weeks; due to reporting delays, the sum of weekly report totals do not add up to cumulative totals.

### Weekly & Cumulative numbers of positive influenza specimens by age groups reported through case-based laboratory reporting, Canada, 2011-2012\*

Age groups	Weekly (Nov. 6 to Nov. 12, 2011)					Cumulative (Aug. 28, 2011 to Nov. 12, 2011)				
	Influenza A				B	Influenza A				B
	A Total	Pandemic H1N1	A/H3N2	A untyped	Total	A Total	Pandemic H1N1	A/H3N2	A untyped	Total
<5	1	0	1	0	0	3	0	3	0	0
5-19	1	0	0	1	0	3	0	2	1	0
20-44	0	0	0	0	0	4	1	2	1	1
45-64	0	0	0	0	0	0	0	0	0	0
65+	0	0	0	0	0	2	0	2	0	0
Unknown	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>12</b>	<b>1</b>	<b>9</b>	<b>2</b>	<b>1</b>

\*Please note that this table reflects the number of specimens for which demographic information was reported. These represent a subset of all positive influenza cases reported. Delays in the reporting of data may cause data to change retrospectively.

Detailed information on age and subtype were received on 13 cases this season to date. The proportions of cases by age group are as follows: 23.0% were < 5 years; 23.0% were between 5-19 years; 30.8% were between 20-44 years of age; and 15.4% were >= 65 years.



### **Antigenic Characterization**

Since the start of the season, the National Microbiology Laboratory (NML) has antigenically characterized seven influenza viruses (four A/H3N2 and three B). All four A/H3N2 viruses (from BC & ON) are antigenically related to A/Perth/16/2009, which is the influenza A/H3N2 component recommended for the 2011-12 Northern Hemisphere influenza vaccine. One of the influenza B viruses characterized is antigenically related to the vaccine strain B/Brisbane/60/2008 (Victoria lineage) (from AB). The other two influenza B viruses (from BC) are antigenically related to the reference virus B/Wisconsin/01/2010-like, which belongs to the Yamagata lineage.

### **Antiviral Resistance**

Since the beginning of the season, NML has tested six influenza viruses (three A/H3N2 and three B) for resistance to oseltamivir (by phenotypic assay and/or sequencing) and for resistance to zanamivir (by phenotypic assay) and it was found that all six viruses were susceptible to oseltamivir and zanamivir. Five A/H3N2 viruses were tested for amantadine resistance and all five were found to be resistant.

### **Severe Illness Surveillance**

#### **Paediatric Influenza Hospitalizations and Deaths**

In week 45, two new laboratory-confirmed influenza-associated paediatric (16 years of age and under) hospitalizations were reported through the Immunization Monitoring Program Active (IMPACT) network. Both cases were due to influenza A: one A/H3N2 (from AB) and one unsubtype (from BC).

Four cases have been reported this season to date (from BC & AB); all of which were due to influenza A. The proportion of cases by age group is as follows: 50.0% were between 2-4 years; 25.0% were between 5-9 years; and 25.0% were between 10-16 years.

### **International influenza update**

Overall, influenza activity in the temperate regions of the northern hemisphere remains low or undetectable. Significant influenza activity was reported in only a few countries of the tropical zone including Nicaragua in the Americas, Cameroon in central Africa, and Cambodia in South East Asia. Transmission in the temperate countries of the southern hemisphere has returned to intra-seasonal levels, with some persistence of influenza A(H3N2) in Australia.

[World Health Organization influenza update](#)

**United States:** In week 44, the CDC reported that 0.6% (11/1,833) of influenza tests were positive. Since October 1, 2011, the CDC characterized 12 influenza viruses: 11 A/H3N2 and 1 B. All 11 influenza A/H3N2 viruses were A/Perth/16/2009-like. The influenza B virus was characterized as B/Brisbane/60/2008-like. National and regional proportions of visits due to ILI were below baseline levels. One state (Virginia) reported local geographic spread of influenza while the rest reported sporadic or no activity.

[Centers for Disease Control and Prevention seasonal influenza report](#)

**Europe:** In week 45, levels of influenza activity in Europe remained low. Of the 41 countries reporting on geographical distribution of influenza activity, 6 countries reported sporadic spread. Out of 41 countries reporting on trends, 7 reported increasing trends. All countries reported low intensity of influenza activity and low impact on their health care services. Six of the 596 (1.0%) specimens tested were positive for influenza virus: 2 influenza A viruses and 4 influenza B viruses. Since week 40, 5 influenza viruses have been characterized antigenically: 2 were A/California/7/2009 (H1N1)-like; 1 was A/Perth/16/2009 (H3N2)-like; 1 was B/Florida/4/2006-like (B/Yamagata/16/88 lineage), and 1 was B/Brisbane/60/2008-like (B/Victoria/2/87 lineage).

[EuroFlu weekly electronic bulletin](#)

**FluWatch reports include data and information from the following sources:** laboratory reports of positive influenza tests in Canada (National Microbiology Laboratory), sentinel physician reporting of influenza-like illness (ILI), provincial/territorial assessment of influenza activity based on various indicators, including laboratory surveillance, ILI reporting, and outbreaks, influenza-associated paediatric and adult hospitalizations, antiviral sales in Canada, and WHO and other international reports of influenza activity.

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).

**ILI definition for the 2011-2012 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 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.

**Definitions of ILI/Influenza outbreaks for the 2011-2012 season**

**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. Institutional outbreaks should be reported within 24 hours of identification. Residential institutions include but not limited to long-term care facilities (LTCF) and prisons.

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

**Influenza Activity Levels Definition for the 2011-2012 season**

Influenza Regional Activity levels are defined as:

- 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\* and
  - (2) lab confirmed influenza detection(s) together with
  - (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\* and
  - (2) lab confirmed influenza detection(s) together with
  - (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 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) 998-8862.