



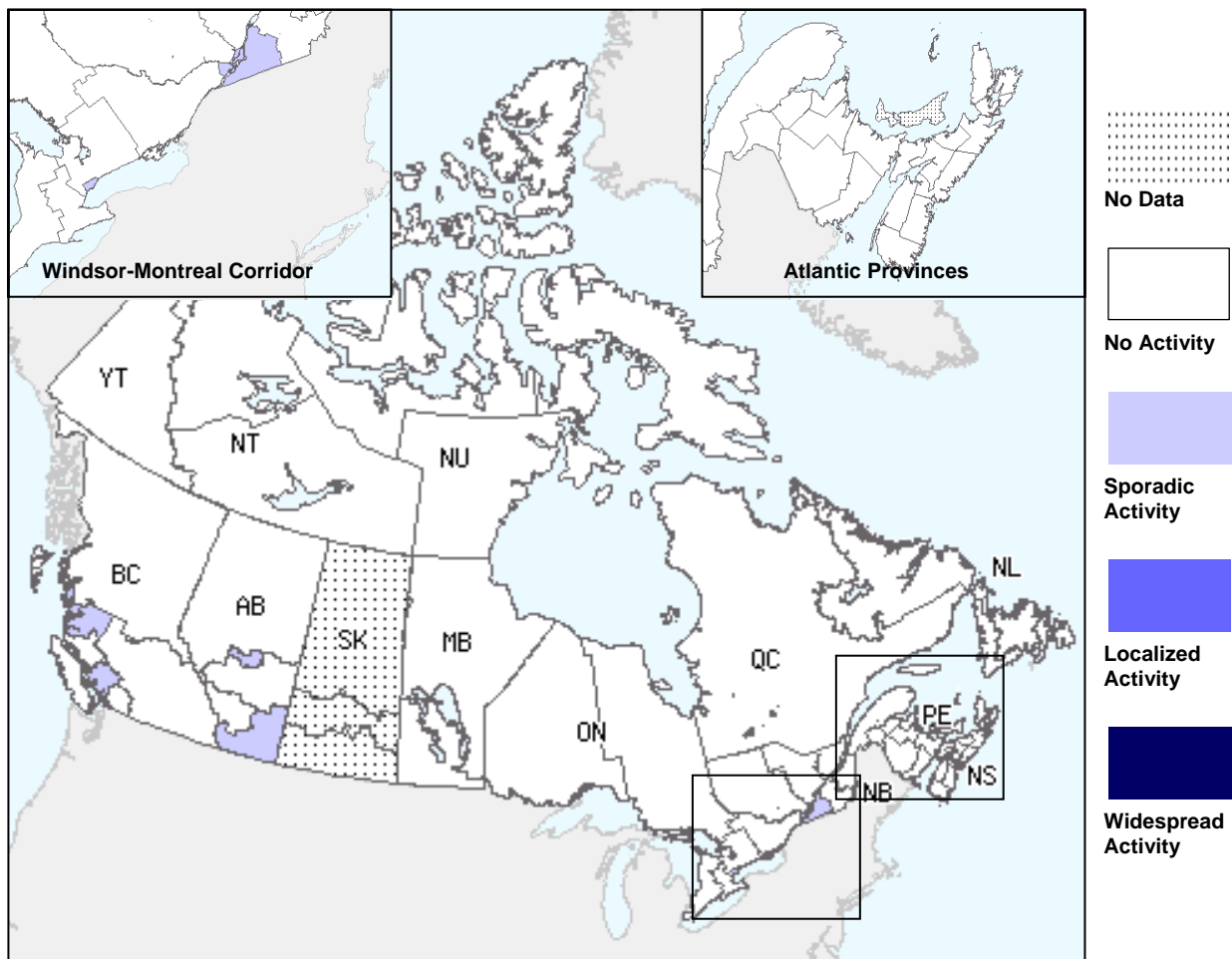
### August 29 to September 11, 2010 (Weeks 35 & 36)

- Overall influenza activity in Canada remained very low with most of the influenza surveillance regions having reported no activity. No influenza outbreaks have been reported since March 2010 and ILI consultation rates are still within the expected levels for this time of the year.
- Only three specimens (out of 1,839) were tested positive for influenza in weeks 35-36: two specimens were reported as influenza A/H3N2 (AB) and one was reported as influenza B (QC).
- In the Southern Hemisphere, Australia and Chile, which had relatively low level of influenza transmission so far, are now experiencing late increases. While New Zealand reported intense activity in some localized areas, the flu season appears to have peaked. As well, in South Africa, the influenza activity has been decreasing for a few weeks. With the exception of South Africa and Chile, the pandemic influenza A/H1N1 strain predominated with some A/H3N2 and B viruses. The previous seasonal A/H1N1 viruses have been inexistent. In all countries so far, influenza activity levels have been lower than the 2009 season during their first pandemic waves (Reference: ECDC).

#### Overall Influenza Summary – Weeks 35 & 36 (August 29 to September 11, 2010)

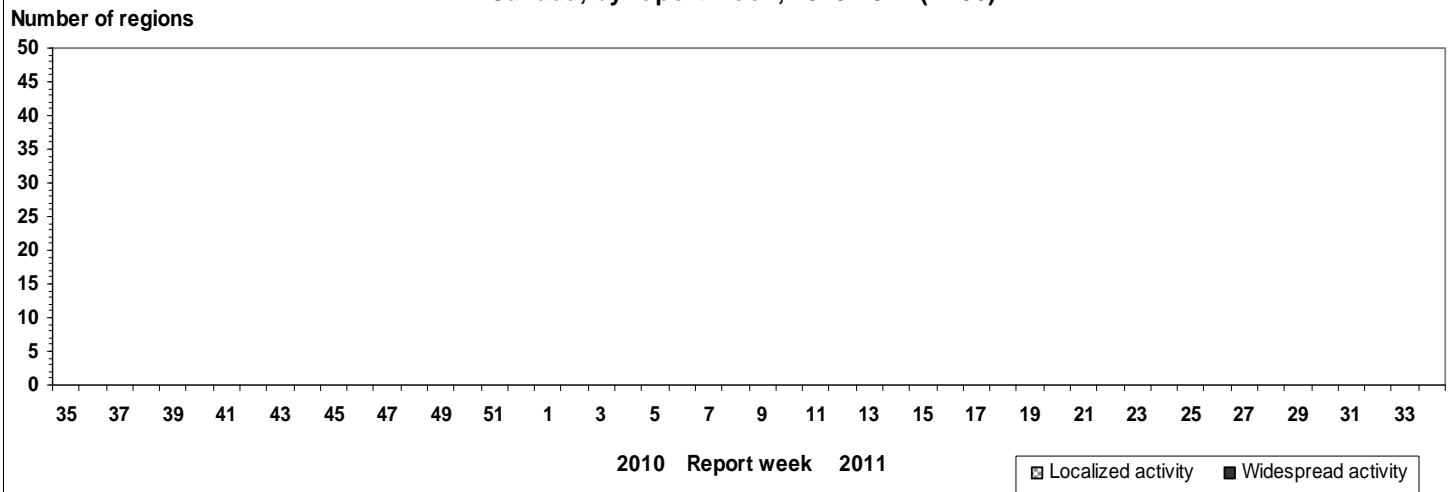
Overall influenza activity has remained very low since the beginning of 2010. During both weeks 35 and 36, six regions reported sporadic activity (1 in BC, 2 in AB, 1 in ON and 2 in QC) and 46 regions reported no activity. Four regions (1 in PEI and all 3 in SK) have stopped reporting for the summer and have not resumed yet. No influenza outbreaks were reported in weeks 35-36.

Map of overall Influenza activity level by province and territory, Canada, Week 36



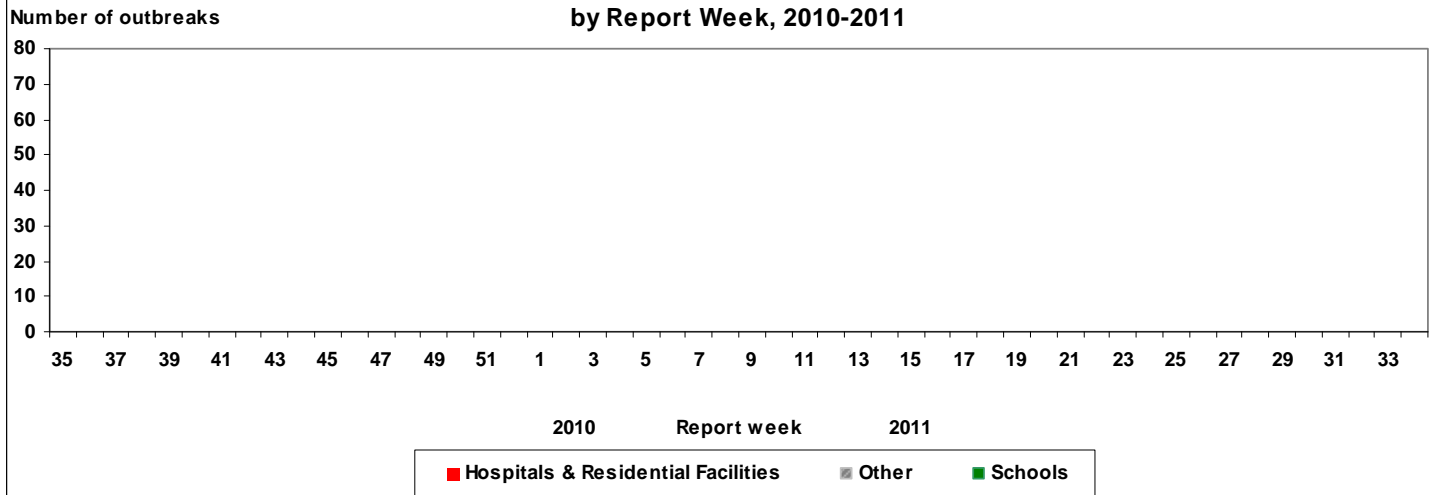
Note: Influenza activity levels, as represented on this map, are assigned and reported by Provincial and Territorial Ministries of Health, based on laboratory confirmations, sentinel ILI rates (see graphs and tables) and reported outbreaks. Please refer to detailed definitions on the last page. For areas where no data is reported, late reports from these provinces and territories will appear on the FluWatch website.

**Number of influenza surveillance regions† reporting widespread or localized influenza activity, Canada, by report week, 2010-2011 (N=56)**



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

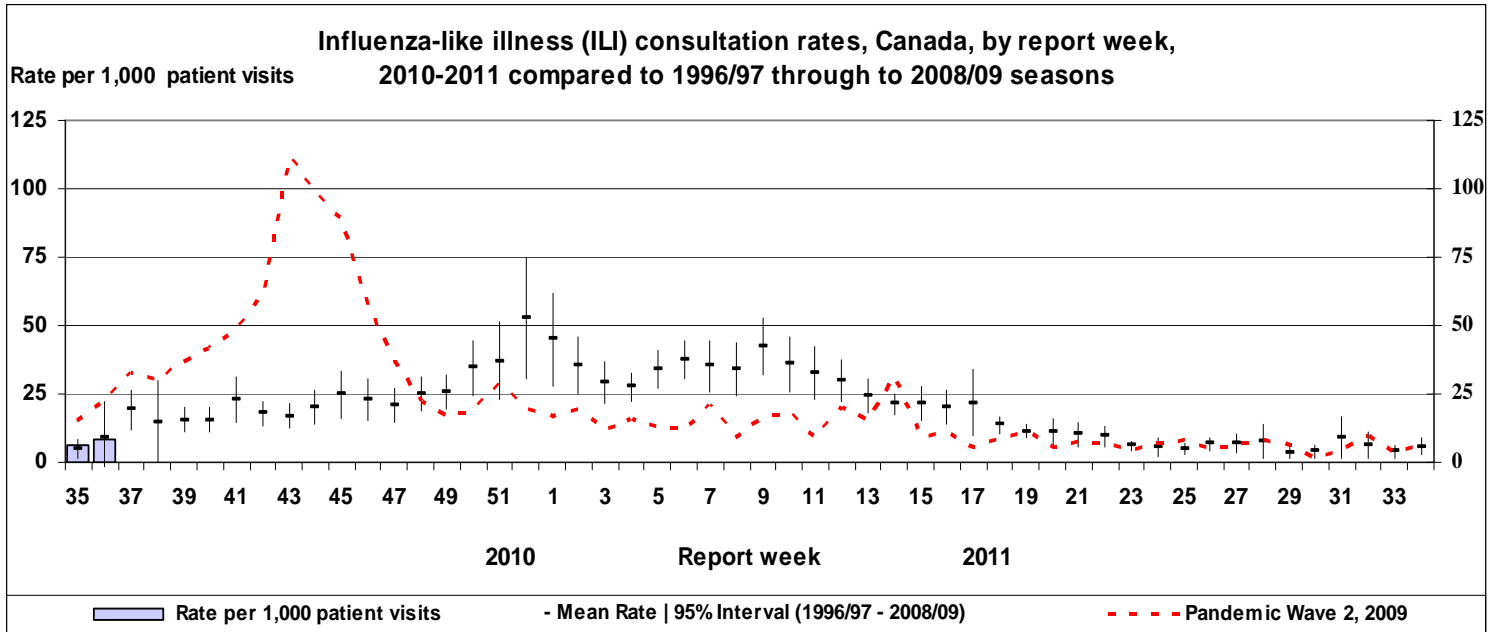
**Overall Number of Influenza Outbreaks, Canada, by Report Week, 2010-2011**



Note that this was the first year that all the provinces and territories were reporting on influenza outbreaks in schools (greater than 10% absenteeism on any day most likely due to ILI) which has increased considerably the total number of outbreaks reported compared to previous years.

### ILI consultation rate

During weeks 35 and 36, the national ILI consultation rates (6.2 and 8.5 per 1,000 consultations, respectively) remained similar to the previous weeks and were within expected levels for this time of year (see ILI graph). Those between 5 and 19 years of age had the high consultation rates for week 35 (13.5 per 1,000) while those 20 to 64 years of age were the most affected during week 36 with a rate of 9.6 per 1,000 patient visits. Note that over the summer months, weekly ILI consultation rates are unstable due to significant drops in sentinel response rates compared to the regular influenza season (i.e. 67% response rate in week 5 and 37% and 40% in weeks 35 and 36, respectively).



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.

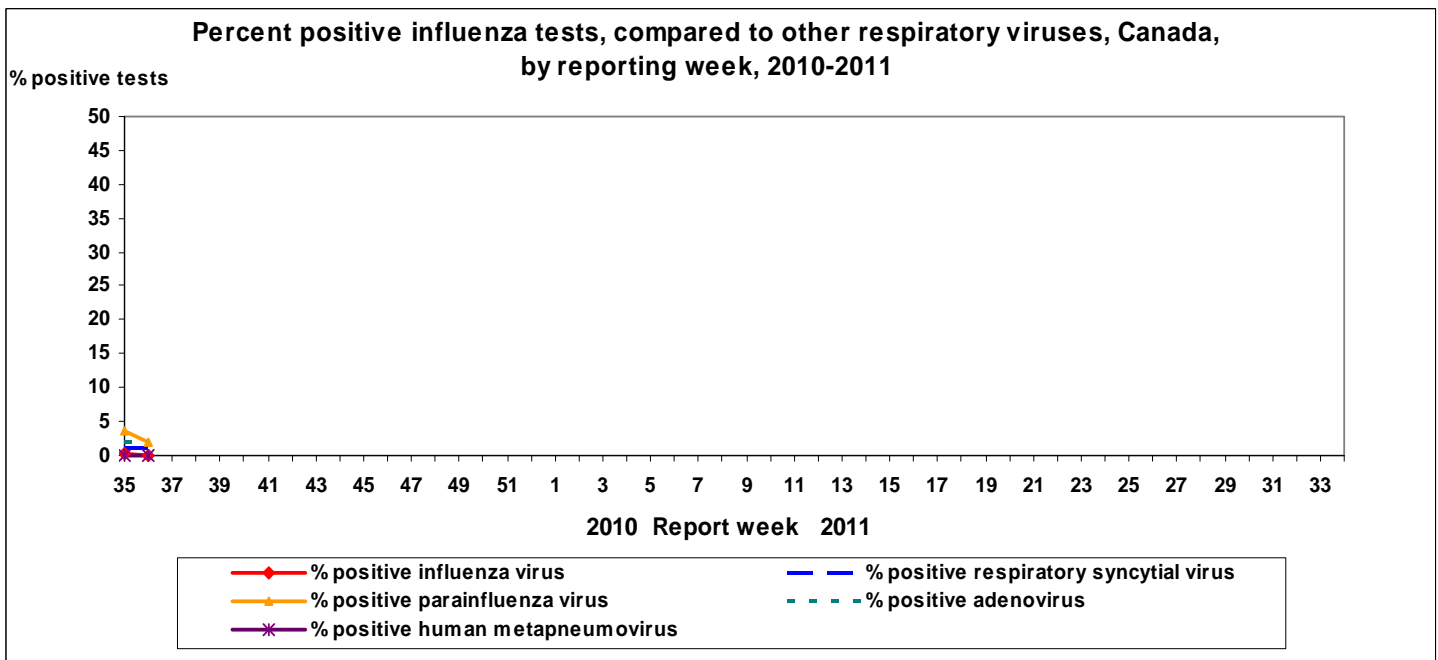
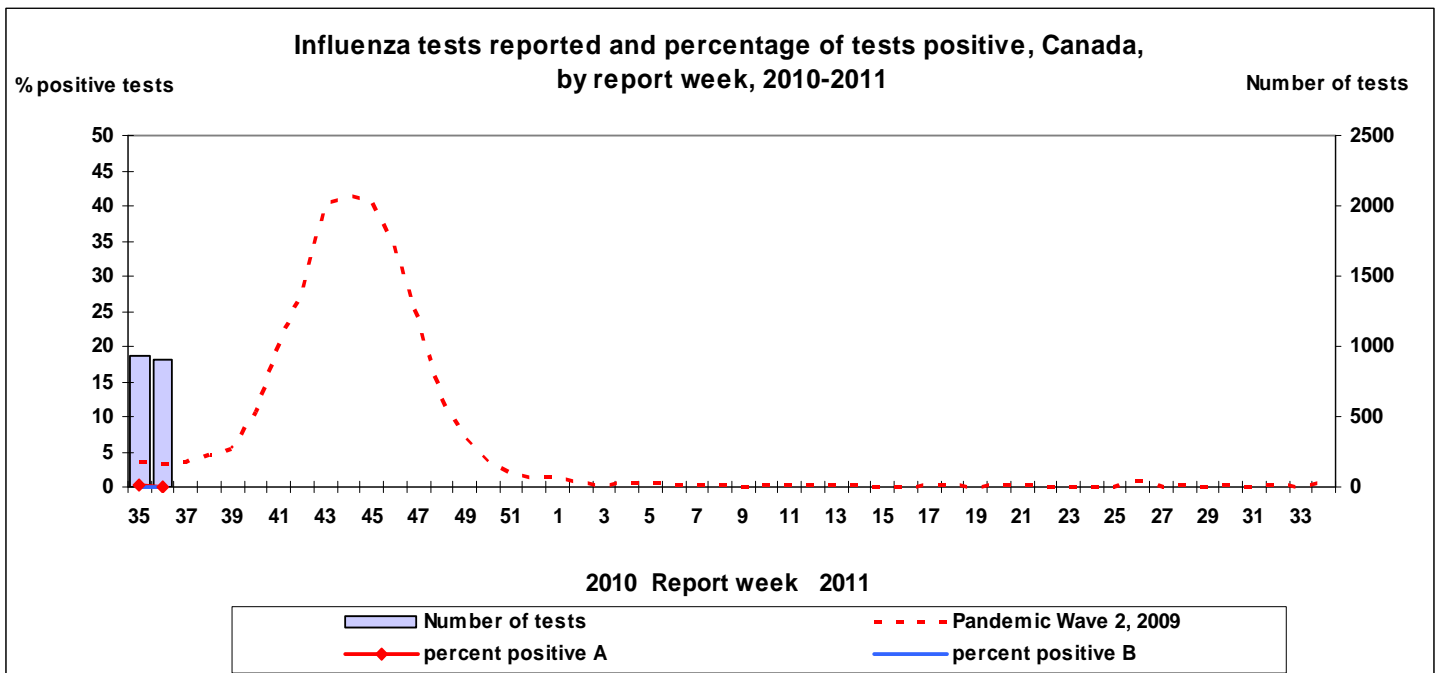
### Laboratory Surveillance Summary

The proportion of tests that were positive for influenza during week 35 was 0.21% (2/932) and during week 36 was 0.11% (1/907), with a combined proportion of 0.16% (3/1,839) for the two-week period (see Tests table). The proportion of positive influenza specimens reported during weeks 35-36 is similar to what is usually observed at this time of the year. Of the three positive specimens, two specimens were reported as influenza A/H3N2 and one was reported as influenza B. AB and QC were the only provinces to report positive influenza specimens during those reporting weeks. During weeks 35 and 36, low levels of parainfluenza detections (3.75% and 1.92%), adenovirus detections (1.85% and 1.90%) and respiratory syncytial virus (RSV) (1.05% and 1.09%) continue to be reported.

### Bi-Weekly & Cumulative numbers of positive influenza specimens by Provincial Laboratories, Canada, 2009-2010

Reporting provinces	Bi-Weekly (August 29 to September 11, 2010)						Cumulative (August 29, 2010 to September 11, 2010)					
	Influenza A					B	Influenza A					B
	A Total	A(H1)	A(H3)	Pand H1N1	A (NS)*	Total	A Total	A(H1)	A(H3)	Pand H1N1	A (NS)*	Total
BC	0	0	0	0	0	0	0	0	0	0	0	0
AB	2	0	2	0	0	0	2	0	2	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0	0
QC	0	0	0	0	0	1	0	0	0	0	0	1
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>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>

\*Not subtyped. 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.



**Canadian situation**

**Paediatric Influenza Hospitalizations and Deaths**

In weeks 35-36, no laboratory-confirmed influenza-associated paediatric (18 years of age and under) hospitalizations were reported through the Immunization Monitoring Program Active (IMPACT) network.

**Adult Influenza Hospitalizations and Deaths**

During weeks 35 and 36, no new laboratory-confirmed influenza-associated adult (16 years of age and older) hospitalizations were reported through the Canadian Nosocomial Infection Surveillance Program (CNISP) from 17 reporting sites in week 35 and 7 in week 36.

**Sale of antivirals (AV)**

During weeks 35 and 36, little change in antiviral prescription sales were observed among provinces and territories. Daily and weekly antiviral data at the Health Region level demonstrated low antiviral prescription rates among all Health Regions for the report weeks. All the antivirals sold from participating retail pharmacy chains and stores during the past two weeks were Tamiflu except one Relenza. Respiratory-related over the counter transactions demonstrated increased among all provinces and territories.

## **Antigenic Characterization and Antiviral Resistance**

No report received this reporting week.

## **International influenza update**

### **Global information**

**WHO:** Worldwide, influenza activity is currently most intense in the temperate areas of the Southern Hemisphere and southern Asia. In the Southern Hemisphere, Australia and Chile, which had relatively low level of influenza transmission so far, are now experiencing late increases. While New Zealand reported intense activity in some localized areas, the flu season appears to have peaked. As well, in South Africa, the influenza activity has been decreasing for a few weeks. With the exception of South Africa and Chile, the pandemic influenza A(H1N1) strain predominated with some A(H3N2) and B viruses. The previous seasonal A(H1N1) viruses have been inexistant. In all countries so far, influenza activity levels have been lower than the 2009 season during their first pandemic waves  
<[http://www.who.int/csr/disease/influenza/2010\\_09\\_10\\_GIP\\_surveillance/en/index.html](http://www.who.int/csr/disease/influenza/2010_09_10_GIP_surveillance/en/index.html),  
[http://ecdc.europa.eu/en/activities/sciadvicelists/ECDC%20Reviews/ECDC\\_DispForm.aspx?List=512ff74f%2D77d4%2D4ad8%2Db6d6%2Dbf0f23083f30&ID=942&RootFolder=%2Fen%2Factivities%2Fsciadvicelists%2FECDC%20Reviews](http://ecdc.europa.eu/en/activities/sciadvicelists/ECDC%20Reviews/ECDC_DispForm.aspx?List=512ff74f%2D77d4%2D4ad8%2Db6d6%2Dbf0f23083f30&ID=942&RootFolder=%2Fen%2Factivities%2Fsciadvicelists%2FECDC%20Reviews)>

### **Geographic update**

#### **Southern hemisphere**

**Australia:** Australia has reported increasing influenza activity throughout August and September, though recently, the numbers of patients seen in emergency departments for influenza-like illness seem to have levelled off in parts of the country. Overall, influenza activity is well below the activity observed in the winter of 2009. Levels of influenza and influenza-like illness (ILI) in the community have continued to increase through all surveillance systems this reporting period and highlight a late start to the influenza season compared to previous years. The most commonly identified influenza virus in Australia is pandemic H1N1 2009, though influenza type B is also being detected.  
<[http://www.who.int/csr/disease/influenza/2010\\_09\\_10\\_GIP\\_surveillance/en/index.html](http://www.who.int/csr/disease/influenza/2010_09_10_GIP_surveillance/en/index.html),  
<http://www.healthemergency.gov.au/internet/healthemergency/publishing.nsf/Content/ozflucurrent.htm>>

**New Zealand:** In New Zealand, influenza activity has decreased in the last week of August, although activity is still well above baseline levels and with significant regional differences. The majority of influenza detections have been characterized as pandemic H1N1 2009. Levels of influenza transmission in 2010 are below 2009 levels nationally but have exceeded 2009 in some localized areas of the country. <  
[http://www.who.int/csr/disease/influenza/2010\\_09\\_10\\_GIP\\_surveillance/en/index.html](http://www.who.int/csr/disease/influenza/2010_09_10_GIP_surveillance/en/index.html),  
[http://www.surv.esr.cri.nz/PDF\\_surveillance/Virology/FluWeekRpt/2010/FluWeekRpt201036.pdf](http://www.surv.esr.cri.nz/PDF_surveillance/Virology/FluWeekRpt/2010/FluWeekRpt201036.pdf)>

**Chile:** Chile reported on a sharp increase in respiratory disease activity in the last two weeks. The level of activity in Chile in September is very unusual for this time of the year, as the country usually experiences a peak of respiratory disease in June and July. The pandemic H1N1 2009 virus has been the most commonly detected influenza virus so far this season but in the recent weeks there has been a shift towards influenza virus type B and influenza A/H3N2, with a decreasing proportion of pandemic H1N1 2009. Respiratory syncytial virus transmission has also been widespread and intense, primarily affecting young children.  
<[http://www.who.int/csr/disease/influenza/2010\\_09\\_10\\_GIP\\_surveillance/en/index.html](http://www.who.int/csr/disease/influenza/2010_09_10_GIP_surveillance/en/index.html)>

#### **Northern hemisphere**

**India:** India is still experiencing a country-wide outbreak of H1N1 (2009) with active transmission and a substantial number of fatal cases in several states across the country.  
<[http://www.who.int/csr/disease/influenza/2010\\_09\\_10\\_GIP\\_surveillance/en/index.html](http://www.who.int/csr/disease/influenza/2010_09_10_GIP_surveillance/en/index.html)>

**United States:** No further influenza surveillance reports will be published by the CDC for the 2009-2010 influenza season (last report was in week 20). The next report will be for week 40 (week ending October 9, 2010) during the 2010-2011 influenza season. <<http://www.cdc.gov/flu/weekly/index.htm>>

**Europe:** During weeks 34 and 35, low influenza activity was notified by all 16 reporting countries; sporadic activity was only reported by Cyprus and the UK (Wales). An increasing trend was observed by Estonia, Hungary and Poland. During those two weeks, one influenza B virus was detected from sentinel specimens (the Netherlands) and three 2009 pandemic H1N1 2009 viruses were isolated from non-sentinel specimens in Spain and in Poland.  
<[http://ecdc.europa.eu/en/publications/Publications/100910\\_SUR\\_Biweekly\\_Influenza\\_Surveillance\\_Overview.pdf](http://ecdc.europa.eu/en/publications/Publications/100910_SUR_Biweekly_Influenza_Surveillance_Overview.pdf)>

**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 2010-2011 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 2010-2011 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 2010-2011 season**

Influenza Activity levels are defined as:

1 = No activity: i.e. 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 ILI/influenza outbreaks** detected within the influenza surveillance region†

3 = Localized: evidence of increased ILI\* and lab confirmed influenza detection(s) together **with outbreaks** in schools, hospitals, residential institutions and/or other types of facilities occurring in **less than 50% of the influenza surveillance region(s)†**

4 = evidence of increased ILI\* and lab confirmed influenza detection(s) **together with 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(s)†**

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

† 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) 998-8862.