



September 25 to October 8, 2011 (Weeks 39 and 40)

Overall Influenza Summary

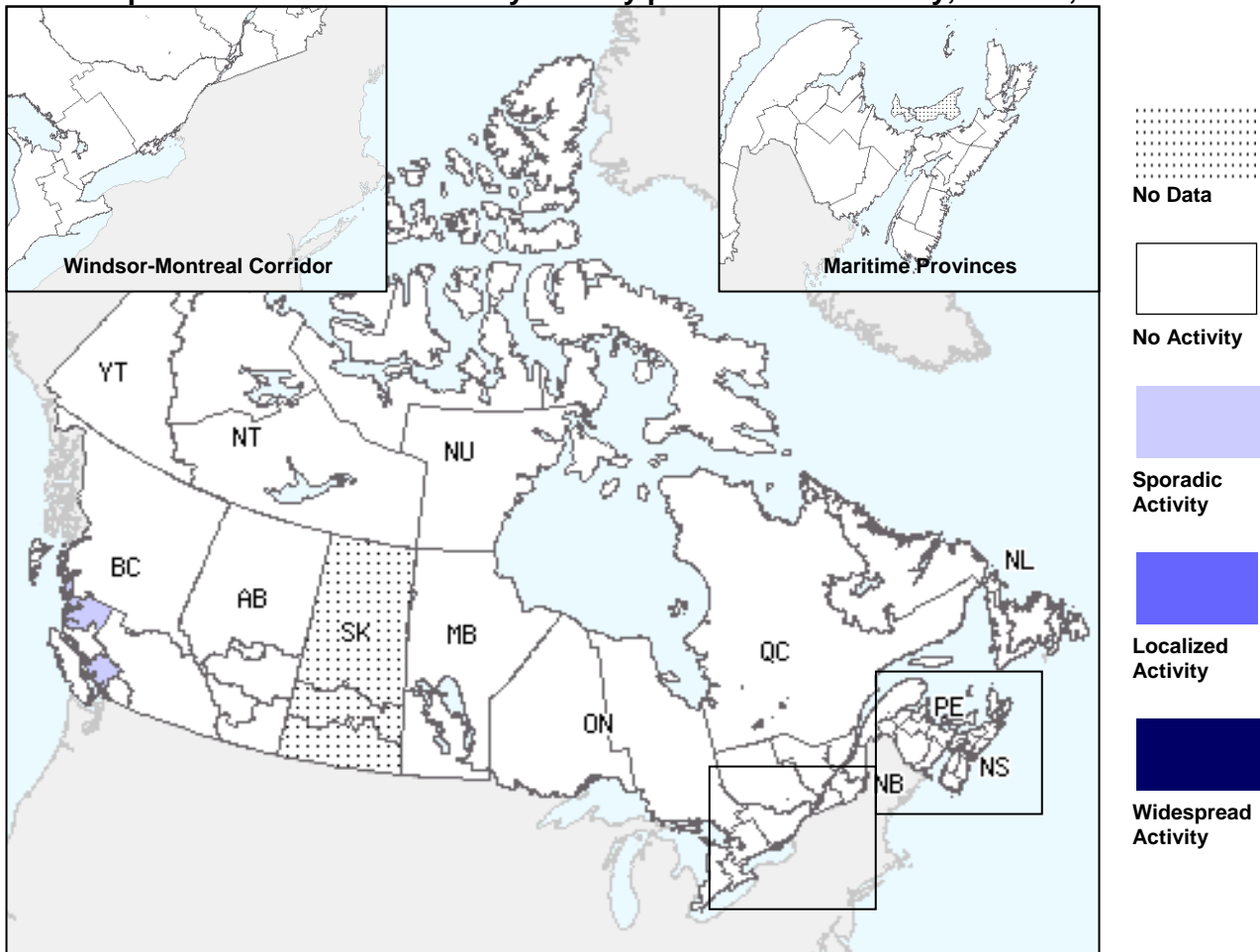
- Influenza activity continues at low inter-seasonal levels. In weeks 39 and 40, only 6 laboratory detections of influenza were reported; three regions (one each) in Quebec, Ontario and British Columbia reported sporadic influenza activity.
- The ILI consultation rate was above the expected range for week 39.
- There has been an increase in detections of rhinovirus and parainfluenza in weeks 39 and 40.

Note: Weekly FluWatch reports will resume on 21 October 2011 (week 41)

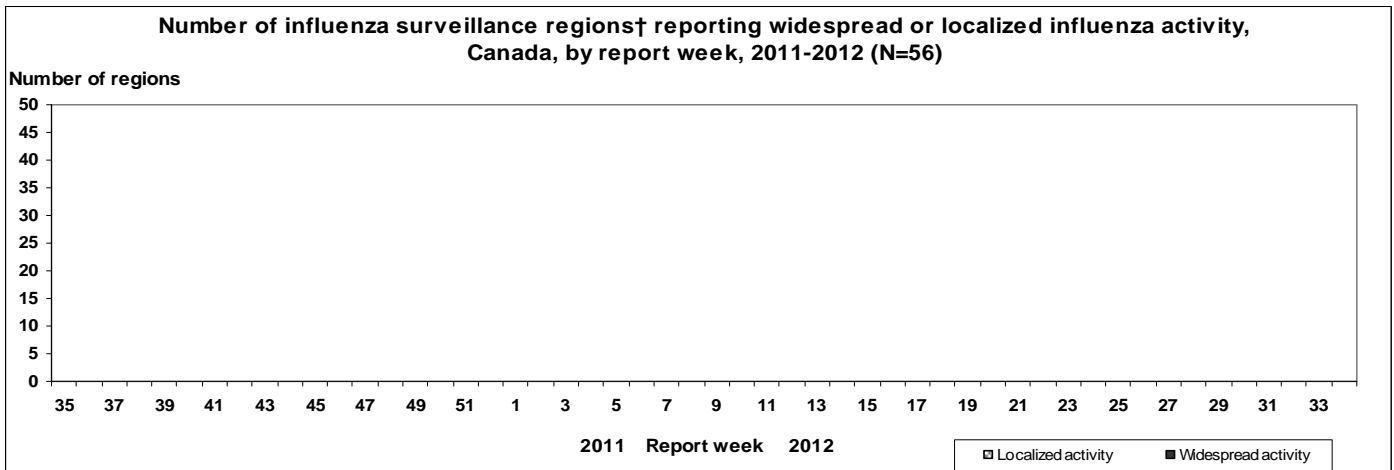
Influenza Activity and Outbreaks

In week 39, one region in Quebec and one in Ontario reported sporadic influenza activity. In week 40, one region in BC reported sporadic activity. Saskatchewan has not yet started reporting for the 2011-2012 season (see Activity level Map). No new outbreaks of influenza or ILI were reported in weeks 39 or 40.

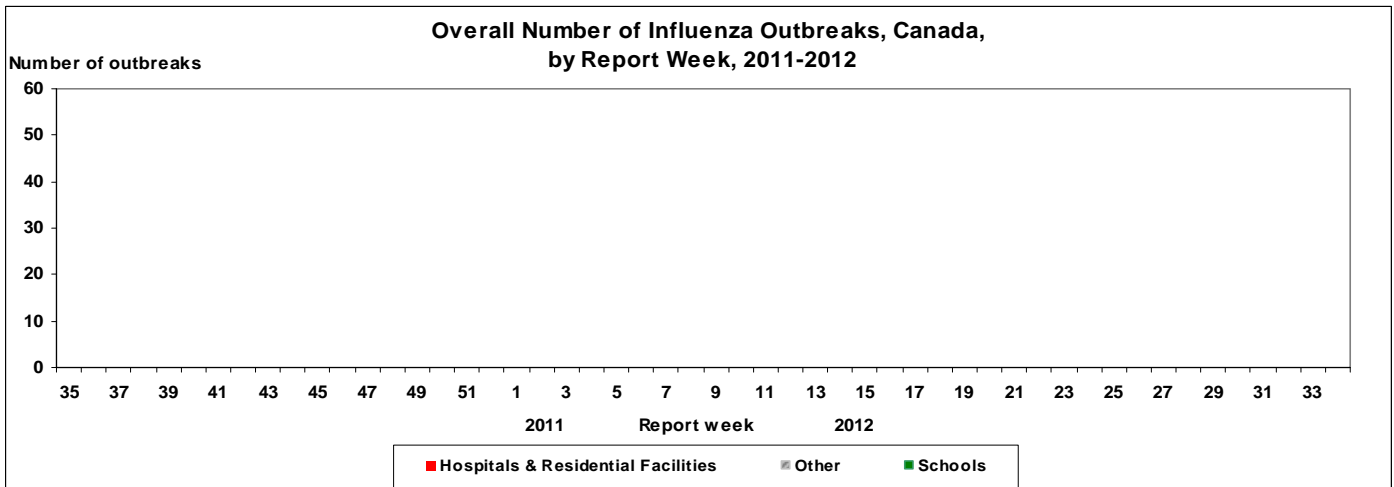
Map of overall Influenza activity level by province and territory, Canada, Week 40



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.

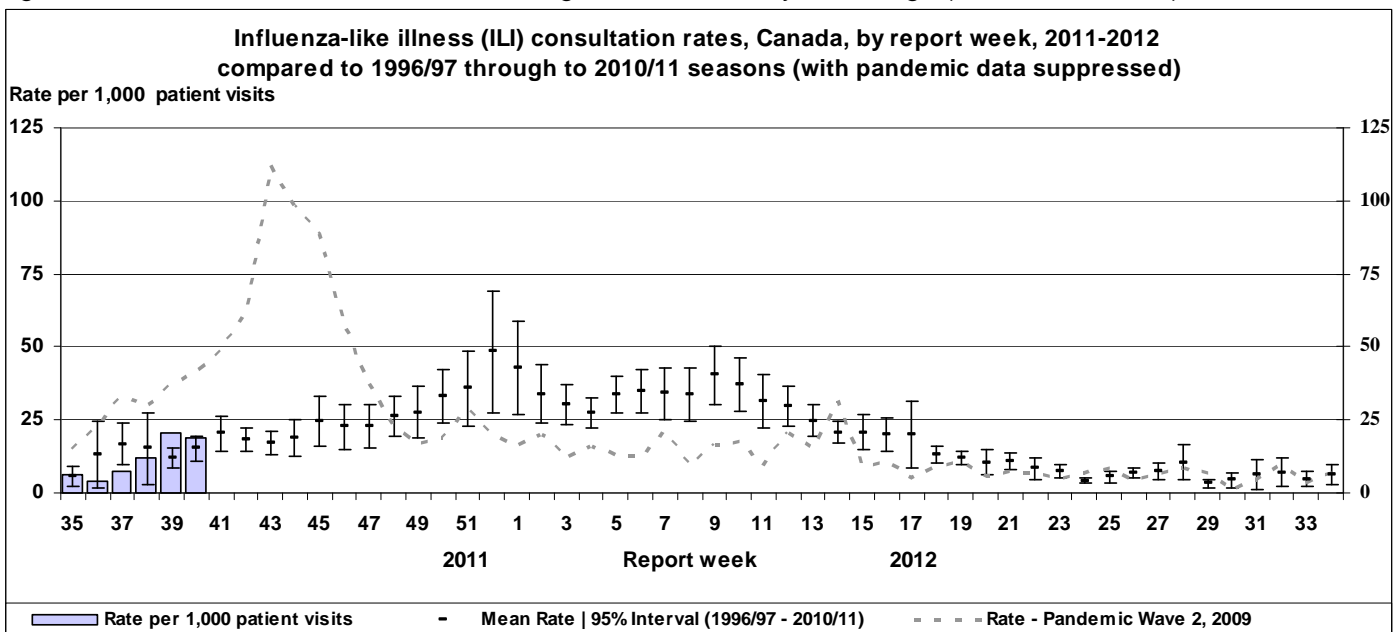


† sub-regions within the province or territory as defined by the provincial/territorial epidemiologist. Graph may change as late returns come in.



ILI consultation rate

The national ILI consultation rate was 20.4 and 18.6 consultations per 1,000 patient visits in weeks 39 and 40 respectively, which is above or within the expected levels for this time of year (see ILI graph). In week 39, the highest consultation rate was observed among children under 5 years of age (37.4 / 1,000 visits). In week 40, the highest consultation rate was observed among children 5 to 19 years of age (40.5 / 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

Only 6 detections of influenza were reported across Canada in weeks 39 and 40, four A/H3N2 (BC(3) and ON(1)), one unsubtype influenza A (AB), and one influenza B (QC). The proportion of tests positive for influenza was 0.1% in week 39 and 0.3% in week 40 (see Influenza tests graph). Very few reports of detailed case-based laboratory reporting have been received for the 2011-12 season (the table of cases by age will be updated when ≥10 cases are received). During weeks 39 and 40, detections of parainfluenza increased to 5.6% of tests positive. Other respiratory viruses continued to circulate at low levels: 0.7% of tests for respiratory syncytial virus (RSV) were positive, 1.0% for adenovirus, 1.3% for human metapneumovirus (hMPV), and 0.2% for coronavirus (see Respiratory Viruses graph). Detections of rhinovirus increased to 32.4% of tests positive in week 39 and 25.1% in week 40, which is above the recent peak levels observed in early July. For more details of weekly respiratory virus detections in Canada, see <http://www.phac-aspc.gc.ca/bid-bmi/dsd-dsm/rvdi-divr/index-eng.php>.

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

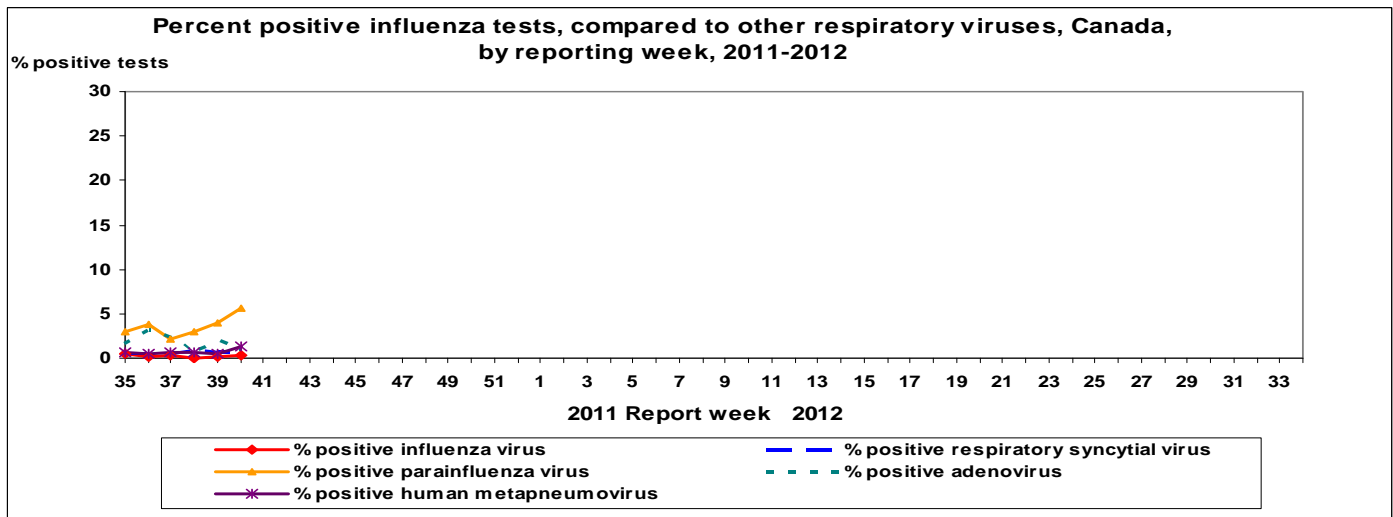
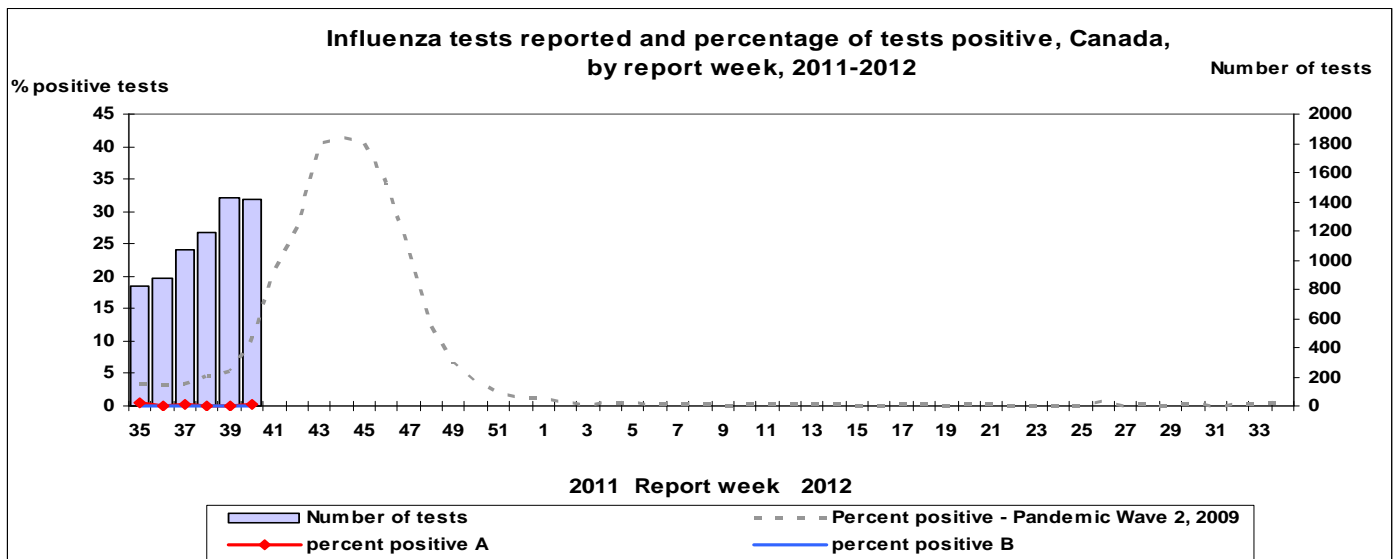
Reporting provinces	September 25 to October 8, 2011						Cumulative (August 28, 2011 to October 8, 2011)					
	Influenza A					B	Influenza A					B
	A Total	A(H1)	A(H3)	Pand H1N1	A (UnS)*	Total	A Total	A(H1)	A(H3)	Pand H1N1	A (UnS)*	Total
BC	3	0	3	0	0	0	4	0	4	0	0	1
AB	1	0	0	0	1	0	2	0	0	1	1	1
SK	0	0	0	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	1	0	1	0	0	0
QC	0	0	0	0	0	1	4	0	0	0	4	2
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
Canada	5	0	4	0	1	1	11	0	5	1	5	4

*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	September 11 to September 24, 2011					Cumulative (August 28, 2011 to September 24, 2011)				
	Influenza A				B	Influenza A				B
	A Total	Pandemic H1N1	A/H3N2	A unsubtype	Total	A Total	Pandemic H1N1	A/H3N2	A unsubtype	Total
<5	0	0	0	0	0	0	0	0	0	0
5-19	0	0	0	0	0	0	0	0	0	0
20-44	0	0	0	0	0	0	0	0	0	0
45-64	0	0	0	0	0	0	0	0	0	0
65+	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0

*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.



Antigenic Characterization

Between September 1 and October 13, 2011, the National Microbiology Laboratory (NML) has antigenically characterized 2 influenza viruses that were received: one A/H3N2, and one B virus. The A/H3N2 virus was antigenically related to A/Perth/16/2009, which is the influenza A/H3N2 component recommended for the 2011-12 Northern Hemisphere influenza vaccine. Influenza B viruses can be divided into two antigenically distinct lineages represented by B/Yamagata/16/88 and B/Victoria/2/87 viruses. The recommended influenza B component for the 2011-12 Northern Hemisphere influenza vaccine is B/Brisbane/60/2008 (Victoria lineage). The influenza B virus characterized was antigenically related to the reference virus B/Wisconsin/01/2010-like, which belongs to the Yamagata lineage.

Antiviral Resistance

Since the beginning of the 2011-12 season, NML has tested two influenza viruses (one A/H3N2 and one B virus) for resistance to oseltamivir (by phenotypic assay and/or sequencing) and for resistance to zanamivir (by phenotypic assay) and it was found that both viruses were susceptible to oseltamivir and zanamivir.

Severe Illness Surveillance

In weeks 39 and 40, no paediatric (>16 years of age) hospitalizations with laboratory-confirmed influenza were reported through the Immunization Monitoring Program Active (IMPACT) network.

International influenza update

Northern Hemisphere

All countries in the temperate regions of the northern hemisphere reported little or no influenza activity.

http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/index.html

Tropical Zone

Central and South America continued to report low levels of influenza circulation, and RSV continued to be the predominant respiratory virus detected. In week 38, Cuba continued to report co-circulation of A/H3N2 and RSV. Honduras, and El Salvador reported a predominance of A/H3N2, the former having peaked in mid-August but the latter continuing to increase.

Most countries in tropical areas of South America reported low or no influenza transmission. However, Bolivia reported an increase in detections of pH1N1 2009 in recent weeks following an earlier (May-June) wave of A/H3N2.

http://new.paho.org/hq/index.php?option=com_content&task=view&id=3352&Itemid=2469&to=2246,

http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/index.html

In sub-Saharan Africa, influenza activity continues mainly in the West where Cameroon reported continued mixed transmission of influenza B and pH1N1 2009. In tropical Asia, Thailand and Singapore continued to report moderate transmission, predominantly of A/H3N2. In India and Bangladesh, circulation of A/H3N2 has been largely replaced by influenza B in recent weeks. Viet Nam and Cambodia continued to report sustained transmission of predominantly pH1N1 2009, and Lao People's Democratic Republic reported increased transmission of A/H3N2 in recent weeks.

http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/index.html

Southern Hemisphere

South America: In the Southern Cone, respiratory virus detections peaked in late-July to mid-August in Argentina and Chile, respectively, and influenza activity is declining to baseline levels. The predominantly circulating influenza viruses have been pH1N1 2009 and A/H3N2, with different proportions across the region and season.

http://new.paho.org/hq/index.php?option=com_content&task=view&id=3352&Itemid=2469&to=2246,

http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/index.html

Australia: Influenza notifications have been consistent through week 39, although regional notifications continue to decline in states that experienced high transmission around the peak in early August. The majority of states reported predominantly pH1N1 2009 and co-circulation of influenza B, except Tasmania and New South Wales that have reported mainly influenza B and Western Australia that reported pH1N1 2009 and A/H3N2. From 1 May to 22 September, there were 155 influenza hospitalizations (including 20 ICU admissions) of which 53% of the hospitalizations and 60% of the ICU admissions were associated with pH1N1 2009. The mean age of the hospitalized patients was 49 years.

http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/index.html

New Zealand: In week 40 (3 to 9 Oct 2011), the average consultation rate for ILI was 29.0 cases per 100,000, which is less than the previous week and below the baseline rate. Among the 1175 detections of influenza to date (week 1 to 40), influenza B predominates (49%) followed by A/H3N2 (31%).

http://www.surv.esr.cri.nz/PDF_surveillance/Virology/FluWeekRpt/2011/FluWeekRpt201140.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 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.