



February 19, 2006 to February 25, 2006 (Week 08)

Canadian Summary:

During week 08, influenza activity overall in Canada is increasing with widespread activity being reported in Saskatchewan and parts of southern British Columbia. Localized activity was reported in British Columbia, Alberta, Ontario, Quebec and Nova Scotia whereas the rest of the country reported sporadic or no activity (see map). So far this season, influenza activity in Canada is lower compared to the last two seasons.

Over the one week period, the Public Health Agency of Canada received 3193 reports of laboratory tests for influenza of which 383 (12%) were positive for influenza virus. Fifty-nine percent of the positive influenza detections were from the west (Saskatchewan, Alberta & British Columbia) and 26% were from Ontario. In the current season to date, a mix of influenza A (56%) and influenza B (44%) viruses have been detected in Canada (see table on next page) whereas influenza A virus detections predominated in the previous two seasons. The ILI consultation rate was calculated as 22 per 1000 patient visits in week 08, which is below the expected range for this week (see ILI graph). During week 08, 38 new outbreaks were reported: 15 were in LTCF's; 20 were in schools; 1 was in a hospital; and 2 were in other settings. To date this season, 57 LTCF outbreaks have been reported.

Antigenic Characterization:

Since the start of the 2005-2006 influenza season, the National Microbiology Laboratory (NML) has antigenically characterized 394 influenza viruses: 202 A/California/07/2004(H3N2)-like viruses; 7 A/New Caledonia/20/1999(H1N1)-like viruses; 136 B/Hong Kong/330/2001-like and 44 B/Malaysia/2506/2004-like viruses both belonging to the B/Victoria/2/1987 lineage; and 5 B/Shanghai/361/2002-like viruses belonging to the B/Yamagata/16/1988 lineage. The B/Malaysia/2506/2004-like strain is the WHO-recommended influenza B component for the Northern Hemisphere 2006-2007 influenza vaccine.

* The 2005-2006 season Canadian vaccine contains an A/New Caledonia/20/1999(H1N1)-like, an A/California/7/2004(H3N2)-like, and a B/Shanghai/361/2002-like virus strain.

Vaccine Match:

To date, 100% of the influenza A strains characterized by the NML have matched those included in the 2005-2006 Canadian vaccine. However, only 3% of the influenza B characterizations have matched the current vaccine strain. The remaining 97% of the influenza B strains characterized have been B/Hong Kong/330/2001-like and B/Malaysia/2506/2004-like viruses, which belong to a separate lineage of viruses not covered by this year's vaccine.

Influenza-associated Pediatric Hospitalizations:

During week 08, 15 new laboratory-confirmed influenza-associated hospitalizations were reported through the IMPACT (Immunization Monitoring Program ACTive) network. Since the start of this influenza season, 84 cases have been reported to IMPACT from 10 of the 12 pediatric hospitals. Since the start of the season, 1 influenza-associated pediatric death has been reported to IMPACT.

International:

CDC: During week 07, overall influenza activity increased in the United States with the majority of widespread and regional activity being reported in the eastern and central states. The proportion of patient visits to sentinel providers for ILI (2.8%) was above baseline levels and the proportion of deaths due to pneumonia and influenza (7.3%) was below baseline levels. Since 1 October 2005, the CDC has antigenically characterized 253 influenza viruses: 208 A(H3N2) viruses (168 were A/California/07/2004-like viruses and 40 showed reduced titers with antisera produced against A/California/07/2004-like viruses); 14 A(H1) viruses (12 were similar antigenically to the hemagglutinin protein of the A/New Caledonia/20/1999-like viruses and 2 showed reduced titers with antisera against A/New Caledonia/20/1999-like viruses); and 31 influenza B viruses (19 were B/Yamagata/16/1988-lineage viruses and 12 were B/Victoria/2/1987-lineage viruses). Of the 40 low-reacting A(H3N2) viruses, 14 were tested with antisera produced against A/Wisconsin/67/2005 and 10 were A/Wisconsin/67/2005-like and is the A/H3N2 component selected for the 2006/2007 Northern Hemisphere influenza vaccine. <<http://www.cdc.gov/flu/weekly/>>

EISS: Clinical influenza activity in Europe has been moderate so far this season. In week 08, Lithuania reported a high intensity of clinical influenza activity associated with influenza B virus. Whilst clinical influenza activity is now declining in a number of countries (e.g. France), some countries have seen very little influenza activity so far this season (e.g. Hungary, Poland and Slovenia). Since the start of the season, more influenza B viruses (68%) have been reported than influenza A viruses (32%) for Europe as a whole.

<http://www.eiss.org/cgi-files/bulletin_v2.cgi>

Human Avian Influenza:

Since 26 February 2006, the WHO reported 3 new human cases with the H5N1 avian influenza virus: 1 case was from Indonesia and resulted in death; and 2 cases were from China, both of whom are in critical condition.

<http://www.who.int/csr/disease/avian_influenza/en/index.html>



Antiviral Resistance

The Public Health Agency of Canada recommends that health care providers in Canada not prescribe amantadine to treat and prevent influenza during the current flu season following testing showing viruses currently in circulation in Canada and the US are resistant to the drug. For further information, please visit: www.phac-aspc.gc.ca/media/advisories_avis/2006/statment060115.html.

**Total number of influenza tests performed and number of positive tests
by province/territory of testing laboratory, Canada, 2005-2006**

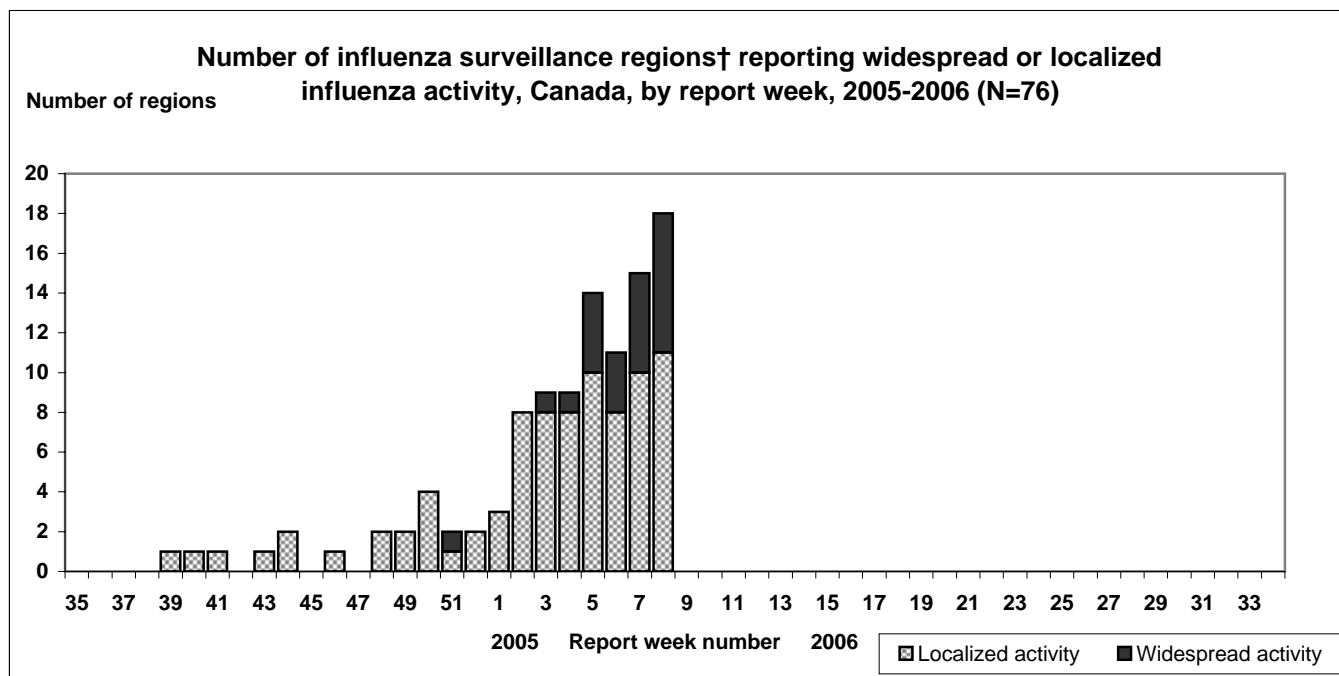
Province of reporting laboratories	Report Period: February 19, 2006 to February 25, 2006				Season to Date: August 28, 2005 - February 25, 2006			
	Total # of influenza tests	# of positive tests			Total # of influenza tests	# of positive tests		
		Influenza A	Influenza B	Total		Influenza A	Influenza B	Total
NL	83	1	13	14	427	3	14	17
PE	8	0	0	0	88	2	0	2
NS	49	0	2	2	550	1	5	6
NB	44	1	1	2	634	1	2	3
QC	542	24	0	24	8777	89	6	95
ON	955	51	50	101	13319	195	88	283
MB	78	14	1	15	1383	26	12	38
SK	320	40	45	85	3353	135	138	273
AB	887	53	34	87	10756	274	472	746
BC	227	29	24	53	3495	347	177	524
Canada	3193	213	170	383	42782	1073	914	1987

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.

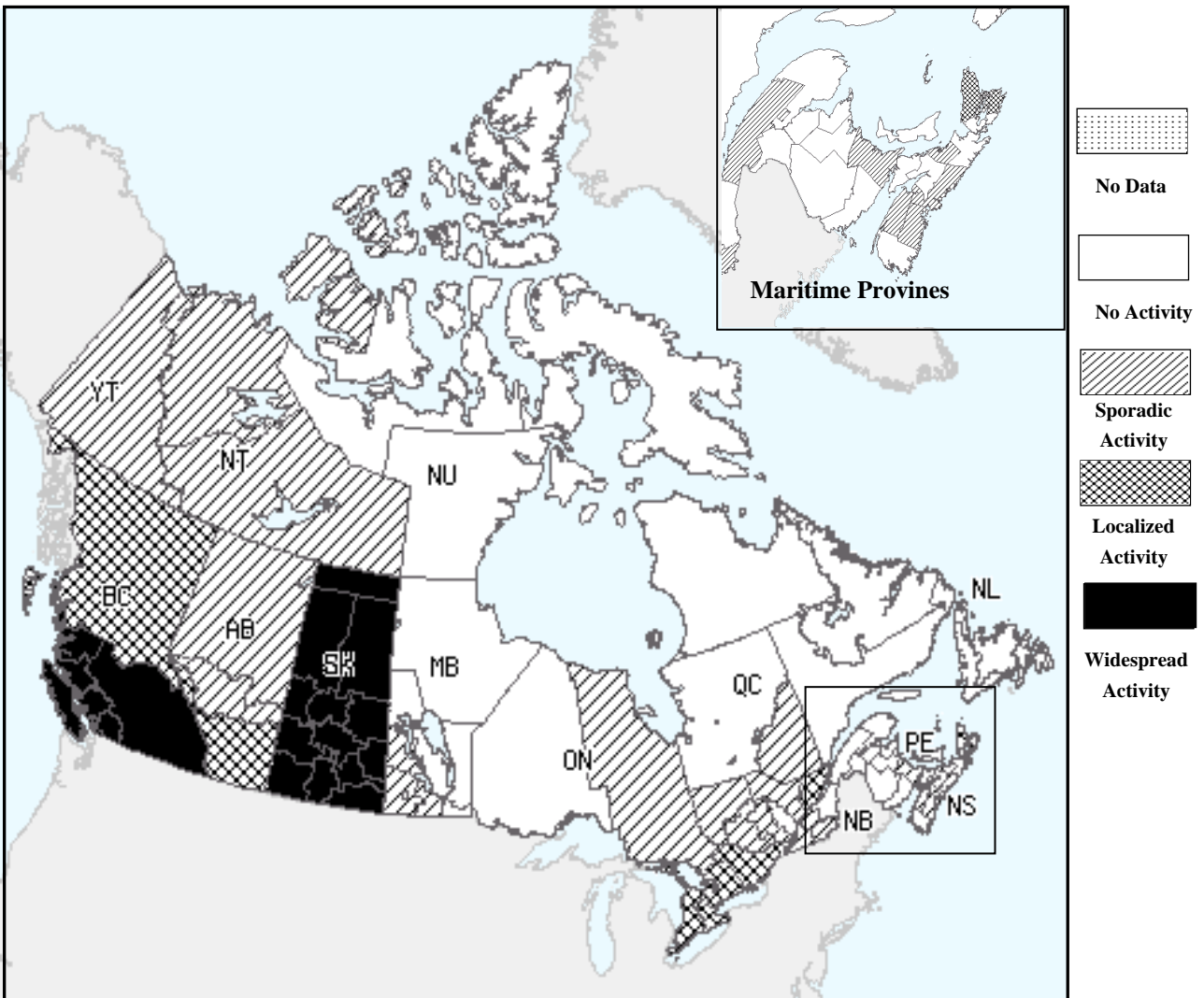
Abbreviations: Newfoundland/Labrador (NL), Prince Edward Island (PE), New Brunswick (NB), Nova Scotia (NS), Quebec (QC), Ontario (ON), Manitoba (MB), Saskatchewan (SK), Alberta (AB), British Columbia (BC), Yukon (YT), Northwest Territories (NT), Nunavut (NU)

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.html>>

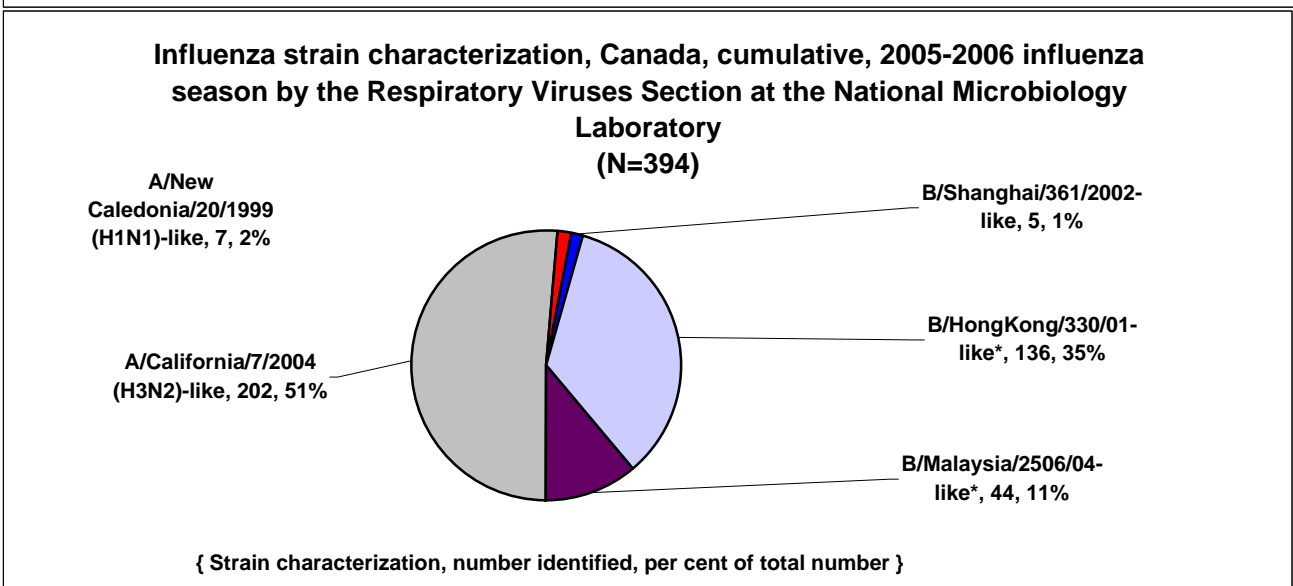
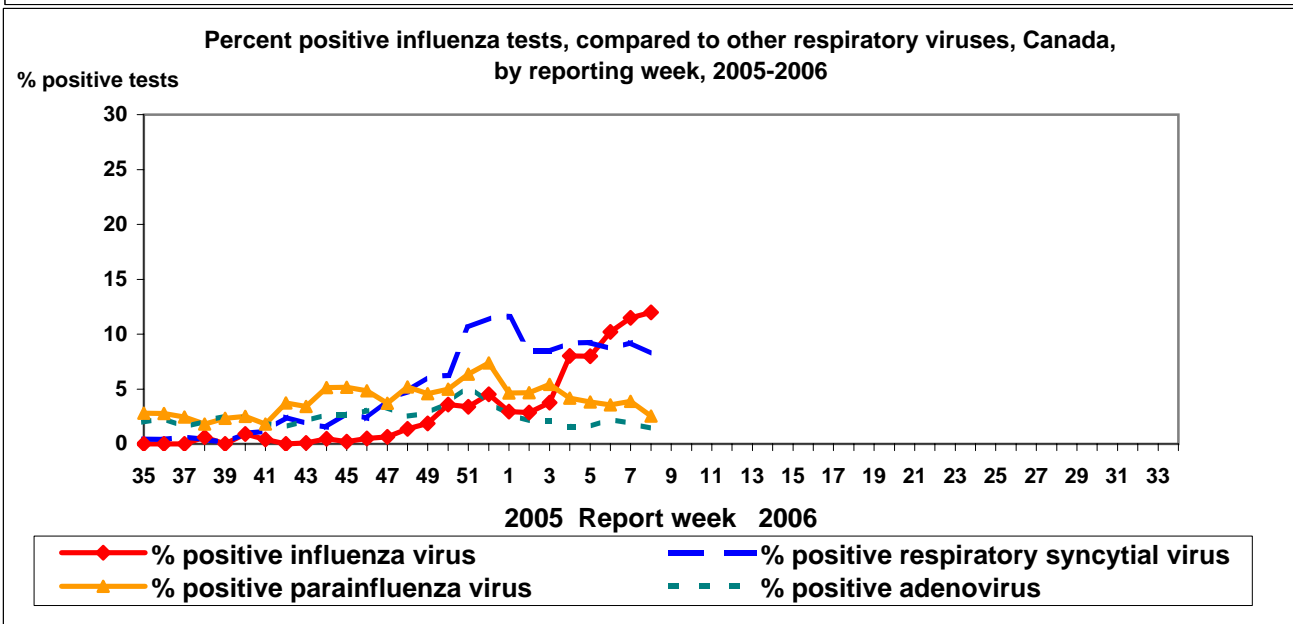
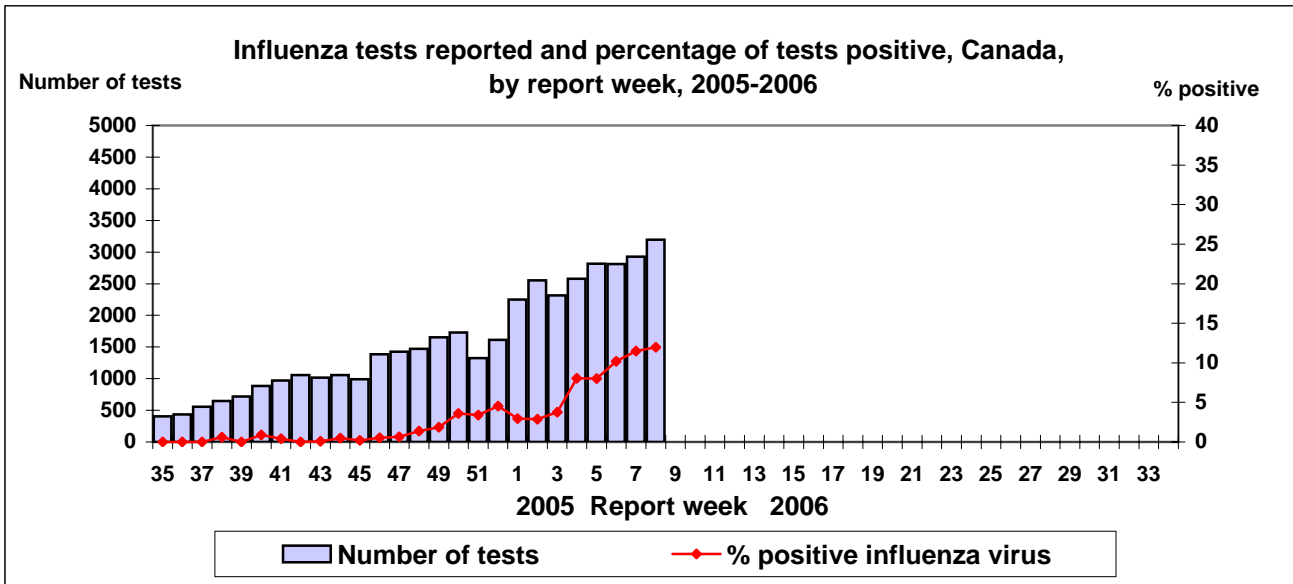


† sub-regions within the province or territory as defined by the provincial/territorial epidemiologist. Graph may change as late returns come in.

**Influenza Activity Level by Provincial and Territorial Influenza Surveillance Regions,
Canada; February 19, 2006 to February 25, 2006 (Week 08)**

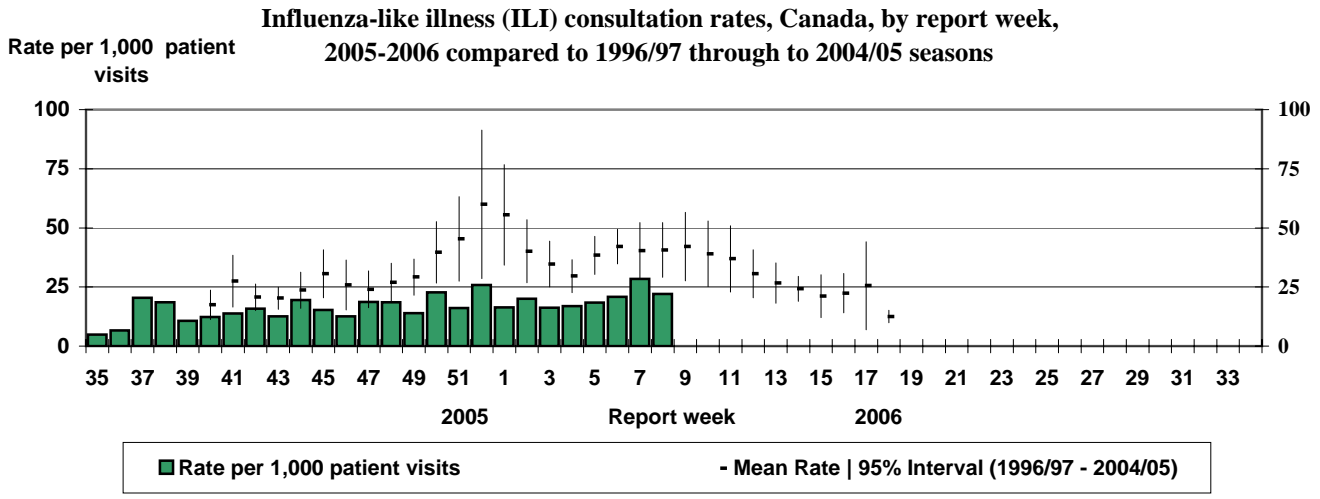


Note: Influenza activity levels, as represented on this map, are assigned and reported by Provincial and Territorial Ministries of Health, **based on laboratory confirmations, sentinel ILI rates (see graphs and tables) and outbreaks**. Please refer to detailed definitions on the last page. For areas 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>>

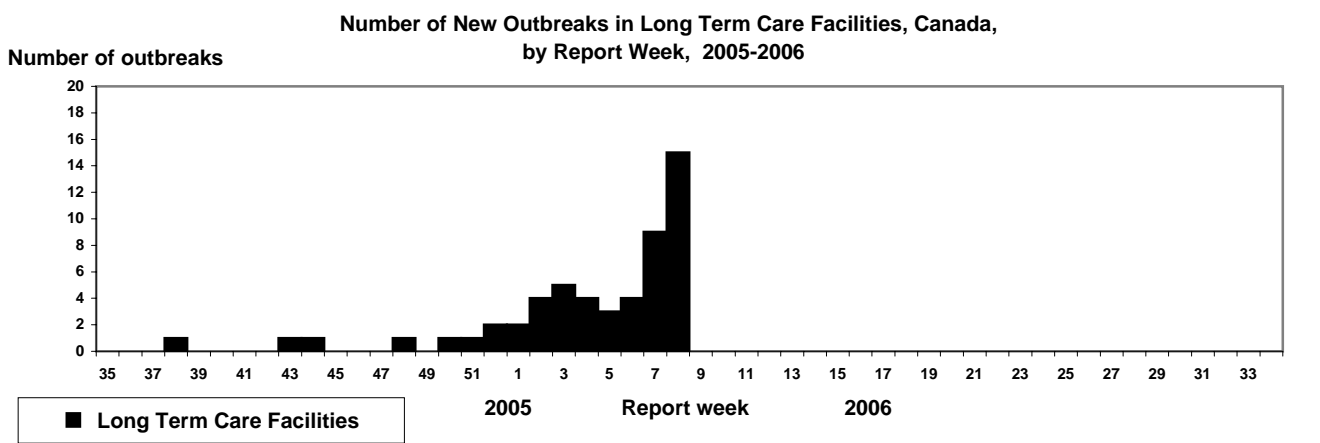


NACI recommends that the trivalent vaccine for the 2005-2006 season in Canada contain A/New Caledonia/20/99 (H1N1)-like, A/California/7/2004 (H3N2)-like, and B/Shanghai/361/2002-like virus antigens.

*The B/Shanghai/361/2002-like virus belongs to the B/Yamagata/16/88 lineage; the B/Hong Kong/330/01-like and B/Malaysia/2506/2004-like viruses belong to the B/Victoria/02/87 lineage and are not covered by this year's vaccine.



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



FluWatch reports include data and information from four 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; 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 2005-2006 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 2005-2006 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 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 physicians, nurse practitioners and their staff 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