

		Ontario Influenza Bulletin	Ministry of Health and Long-Term Care Public Health Branch <i>Volume 7, Issue 3, 2003</i>
			

Week #46: Week Ending November 15, 2003

Influenza Activity in Ontario

There was increased influenza activity reported in the province for the week ending November 15, 2003 (week 46): four health units reported "sporadic activity" while three health units reported "localized" activity. Three of confirmed influenza cases were reported through the Reportable Diseases Information System (RDIS) and 14 influenza A isolations were reported by the Ontario laboratories to the Center for Infectious Disease Prevention and Control (CIDPC), Health Canada. The following upper respiratory isolates and detections were also reported by the Ontario laboratories: 8 respiratory syncytial virus (RSV), 4 parainfluenza type 1 (PIV1), 5 parainfluenza type 2 (PIV2), 5 parainfluenza type 3 (PIV3), and 1 adenovirus (Table 1). Nine respiratory infection outbreaks were reported during this surveillance period.

Table 1. Comparison of Influenza Activity in Ontario for the 2002-03 and 2003-04 Influenza Surveillance Seasons

Indicator	2002-03 Season	2003-04 Season
	Week Ending, November 16, 2002 (week 46)	Week Ending November 15, 2003 (week 46)
	Season to Date**	Season to Date***
*Laboratory Surveillance (Flu isolates)Total	3	21
Influenza A	3	21
Influenza B	0	0
Other respiratory Viruses		
RSV	64	21
PIV1	23	47
PIV2	6	35
PIV3	103	18
PIV4	2	2
Other PIVs	0	1
Adenoviruses	32	15
No. of ILI Visits to Sentinel Physicians (ILI Rate/1000 patients seen for all reasons)	26	25
Institutional Outbreaks	2	9

*Center for Infectious Disease Prevention and Control, Health Canada

Consistent with Health Canada year round surveillance periods (only for Laboratory Surveillance Data)

** August, 2002 – November 16, 2002

***Season to Date; August 24, 2003 - November 15, 2003

Table 2. Season to Date Influenza Cases in Ontario Reported Through the Reportable Disease Information System (RDIS), 2003-2004 (September 1, 2003 to November 15, 2003)

Health Unit	Number of Lab-Confirmed Influenza Cases	
	Influenza A	Influenza B
Hamilton-Wentworth	7	0
Toronto	0	1
York Region	1	0
Total	*8	1

*3 cases of influenza A were reported during week 46

**Table 3. Season-to-date Institutional Influenza Outbreaks by Health Unit in Ontario, 2003-2004
(October 27, 2003 – November 15)**

Health Unit	Type of Institution	# of Outbreaks	Organism Identified	RAR (%)	SAR (%)	Complications
Toronto	CCH	1	Flu A	6.8	1.8	1 patient death
	*NH/CCH	1	Flu A	4.2	1%	None reported
Hamilton City	CCH	1	Flu A	3.7	0.4	None reported
Peterborough	RH	1	Flu A	12.2	2.2	1 hospitalized, 1 death
HKPR	NH/RH	1	Flu A	6.8	0.6	1 hospitalized

RAR: Resident Attack Rate (# of residents ill/total number of residents)*100

SAR: Staff Attack Rate (# of staff ill/total number of staff)*100

* Outbreak reported in the nursing home (NH) and retirement home (RH) of a combined facility consisting of a NH section and a retirement home (RH) section; CCH = chronic care hospital

Federal FluWatch Sentinel Physician Surveillance Activity in Ontario

The overall rate of influenza-like illness (ILI) reported through the Federal FluWatch system were 25.1 ILI patients seen per 1,000 patients that were seen by the sentinel physicians for all reasons, including ILI. However, the ILI rate among age 0-4 was 166.7 per 1000 patients seen by the sentinel physicians for all reasons.

Canada:

Influenza Activity in the Rest of Canada (Week 46 November 9 to November 15, 2003)

Widespread influenza activity was reported in all regions in Alberta and Saskatchewan. Localized influenza activity was reported in British Columbia, Nova Scotia, Ontario, Manitoba, and the Yukon. During the week ending November 1 (week 44), sentinel physicians reported 31 cases of influenza-like illness (ILI) per 1000 patient visits, which is within baseline rates for week 44. During week 44, influenza outbreaks were reported in three schools in the Northwest Territories and two schools in Alberta, and four LTC facilities (Alberta, Saskatchewan and Northwest Territories).

Laboratory Confirmations

During the one-week period, November 9 to November 15, Health Canada received 1811 total number of influenza tests of which 1350 tests were positive (1348 influenza A, 2 influenza B) for influenza. Most of the positive influenza tests were from Saskatchewan with a total of 615 (45.6%) and Alberta 653 (48.4%) during the one-week period. British Columbia and Quebec each had one influenza B isolate.

Source: http://www.hc-sc.gc.ca/pphb-dgspsp/fluwatch/03-04/w44_03/index.html#top

Influenza Activity in the United States:

Influenza activity in the United States continued to increase during week 46 (November 9 - 15, 2003). Six hundred seventy-one (30.7%) of 2,185 specimens tested by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories were positive for influenza. The proportion of patient visits to sentinel providers for influenza-like illness (ILI) overall was 3.3%, which is above the national baseline of 2.5%. The proportion of deaths attributed to pneumonia and influenza was 6.1%, which is below the epidemic threshold for the week. Two state health departments reported widespread influenza activity, 6 states reported regional activity, 11 states reported local influenza activity, 20 states, reported sporadic influenza activity, and 10 states and the District of Columbia reported no influenza activity.

Source: Centers for Disease Control and Prevention (CDC): <<http://www.cdc.gov/ncidod/diseases/flu/weekly.htm>>

International Influenza Activity:

WHO: The WHO recently advised about the early start of influenza activity in the northern hemisphere. The agency indicates that after three relatively mild influenza seasons, the northern hemisphere may be facing a more severe influenza in the coming months. Vaccinations are strongly urged to reduce the consequences of influenza in high risk groups (elderly; those with chronic underlying disease). Influenza vaccines can not prevent every infection but are often more effective in reducing hospitalization and death from the disease.

Since the beginning of October, outbreaks of influenza in a number of countries in Europe and North America have been due largely to A(H3N2) viruses. Influenza activity has continued to increase during November in Canada, seven European countries and the U.S.A. In Europe most H3N2 viruses that have been characterized antigenically so far this season were A/Fujian/411/2002-like; in the UK, 2/3 of isolates characterized so far were A/Fujian/411/2002-like and one third were A/Panama/2007/99-like. In Canada, more than a half of the A(H3N2) isolates characterized so far are A/Fujian/411/2002-like, while the rest were A/Panama/2007/99-like. In the US, more than ¾ of the A(H3N2) isolates were A/Fujian/411/2002-like; the rest are A/Panama/2007/99-like. In UK in the last eight weeks, five deaths in children, two in England and three in Scotland, have been confirmed as due to A/Fujian/411/2002-like virus.

An A/Fujian/411/2002-like virus has been recommended as the H3N2 component of the influenza vaccine now being manufactured for the 2004 influenza season in the southern hemisphere.

Sources: WHO Weekly Epidemiological Record at <http://www.who.int/wer/en/> and <http://www.who.int/influenza>

European Influenza Surveillance Scheme (EISS)

During week 44, local activity was reported in Scotland and sporadic but increasing activity reported in England, Ireland and Spain. An A/Fujian/411/2002-like virus was the predominant virus circulating in France, Portugal and Spain.

Note: Globally, approximately 60% of strains are well inhibited by A/Panama antisera.

Sources: WHO: <http://rhone.b3e.jussieu.fr/flunet/www/index.html>

EISS: <http://www.eiss.org>

Vaccine and Strain Characterization

AS of November 15, A/Fujian/411/2002-like strain had been sub-typed by the National Microbiology Laboratory (NML) in Winnipeg, from five isolates that have been submitted by two of the Public Health Laboratories in Ontario. More isolates will soon be submitted to the NML from Ontario laboratories for sub-typing.

Source: National Microbiology Laboratory (NML), Population and Public Health Branch (PPHB)

Influenza Vaccine Components and Protection for the 2003/04 Season

The National Advisory Committee on Immunization (NACI) updated the antigenic components of the influenza vaccine for the 2003-2004 season. NACI recommended that the trivalent vaccine for the 2003-04 season in Canada contain an A/Panama/2007/99 (H3N2)-like, an A/New Caledonia/20/99 (H1N1)-like, and either B/Hong Kong/330/2001-like virus or B/Shangdong/7/97-like antigens. **Source:** <http://www.hc-sc.gc.ca/pphb-dgspsp/publicat/ccdr-rmtc/03vol29/index.html#acs>

Note: WHO advises that A/Fujian/411/2002-like strains are drift variants of the A/Panama/2007/99 vaccine virus. Therefore antibodies produced against the A/Panama/2007/99-like strain do cross-react with A/Fujian/411/2002-like strains, but at a lower level than to the vaccine strain itself.

Visit the Ministry of Health and Long-Term Care website weekly for the current issue, or back issues, of the Ontario Influenza Bulletin: http://www.health.gov.on.ca/english/providers/program/pubhealth/flu/flu_03/flubul_mn.html

