



Week #47: Week Ending November 22, 2003

Influenza Activity in Ontario

There was a significant increase in influenza activity in the province during the week ending November 22, 2003 (week 47). Widespread influenza activity was reported by one health unit, Peterborough, and 10 other health units in the province reported "sporadic" activity. Thirty-seven new confirmed influenza A cases were reported through the Reportable Diseases Information System (RDIS) and 43 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: 11 respiratory syncytial virus (RSV), 17 parainfluenza type 1 (PIV1), 6 parainfluenza type 2 (PIV2), and 3 parainfluenza type 3 (PIV3). Eight 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 23, 2002 (week 47)	Week Ending November 22, 2003 (week 47)
	Season to Date**	Season to Date***
*Laboratory Surveillance (Flu isolates)Total	8	64
Influenza A	8	64
Influenza B	0	0
Other respiratory Viruses		
RSV	80	32
PIV1	29	64
PIV2	7	41
PIV3	114	21
PIV4	2	2
Other PIVs	0	1
Adenoviruses	33	17
No. of ILI Visits to Sentinel Physicians (ILI Rate/1000 patients seen for all reasons)	12	31
Institutional Outbreaks	2	8

*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 23, 2002

***Season to Date; August 24, 2003 - November 22, 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 22, 2003)

Health Unit	Number of Lab-Confirmed Influenza Cases	
	Influenza A	Influenza B
DurhamRegion	1	
Haliburton-Kawartha	5	0
Halton	1	
Hamilton-Wentworth	17	0
Peel	2	
Peterborough	8	
Toronto	9	1
York Region	2	0
Total	45	1

*37 cases of influenza A were reported during week 47

Table 3. Season-to-date Institutional Influenza Outbreaks by Health Unit in Ontario, 2003-2004 (October 27, 2003 – November 22)

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
	LTCF	1	Flu A	1.2	0.7	None Reported
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 30.6 ILI patients seen per 1,000 patients that were seen by the sentinel physicians for all reasons, including ILI.

Canada:

Influenza Activity in the Rest of Canada (Week 47 November 15-22, 2003)

Widespread influenza activity was reported in all regions of Saskatchewan and one region in Ontario. Localized activity was reported in the North West Territories, Nunavut, Alberta, Manitoba and Nova Scotia. Sporadic activity was reported in Nova Scotia, Manitoba, Alberta, Nunavut, Quebec and the Yukon in week 47. During the week ending November 22 (week 47), sentinel physicians reported 21 cases of influenza-like illness (ILI) per 1000 patient visits, which is within baseline rates for week 47.

During week 47, influenza outbreaks were reported in schools in Nova Scotia and Alberta; 8 LTC facilities in Alberta, Saskatchewan, and Ontario, in Manitoba and British Columbia and 1 hospital in British Columbia. Ontario is reporting 3 influenza related deaths, 2 in seniors and 1 in a 11-year-old child with co-morbidities. No strain characterization for these cases is currently available. Alberta reported that over 130 children have been diagnosed with influenza at an Edmonton paediatric hospital to date this season; almost 90% of these children were under 5 years of age. Few cases have required admission to an intensive care unit and no deaths have been reported. The number of new cases is waning; all but 2 children have been discharged.

Laboratory Confirmations

During the one week period, November 16 to November 22, Health Canada received 2486 reports of laboratory tests for influenza, including 432 (17.38%) influenza A detections and 0 (0%) influenza B detections.

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, New York City, Guam, and Puerto Rico 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 indicated 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. 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.

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 18, 2003, the National Microbiology Laboratory has antigenetically characterized 69 influenza viruses to date; 43 A/Fujian/411/02(H3N2)-like, 25 A/Panama/2007/99(H3N2)-like and 1 A/New Caledonia/20/99(H1N1)-like. Eleven isolates from Ontario were characterized as A/Fujian/411/02(H3N2)-like.

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
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**Influenza Activity Level by Health Unit
Week Ending November 22, 2003**

