Ontario Influenza Bulletin

Ministry of Health and Long-Term Care

Public Health Branch

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Week #49: Week Ending December 6, 2003

Influenza Activity in Ontario

Influenza activity continued to increase in parts of the province during the week ending December 06, 2003 (week 49). Widespread influenza activity was reported in the Toronto City, Central East and Central West regions in the province, three health units reported "localized" activity and 15 reported "sporadic" activity. During this surveillance week, health units reported 124 new confirmed influenza cases (all influenza A) through the Reportable Diseases Information System (RDIS). Ontario laboratories reported 296 influenza A isolations to the Center for Infectious Disease Prevention and Control (CIDPC) of Health Canada. This represents an increase of 45% when compared to week 48. The following upper respiratory isolates and detections were also reported by the Ontario laboratories: 77 respiratory syncytial virus (RSV), 102 parainfluenza type 1 (PIV1), 58 parainfluenza type 2 (PIV2), 32 parainfluenza type 3 (PIV3), 4 parainfluenza type 4 (PIV4), 2 other PIVs, and 28 adenoviruses. Twenty respiratory infection outbreaks were reported during this surveillance period and seven of them were due to influenza.

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, December 7, 2002 (week 49)	Week Ending December 6, 2003 (week 49)
	Season to Date**	Season to Date***
***Laboratory Surveillance (Flu isolates)Total**	**27**	**296**
Influenza A	27	296
Influenza B	0	0
Other respiratory Viruses		
RSV	137	77
PIV1	45	102
PIV2	7	58
PIV3	149	32
PIV4	2	4
Other PIVs	0	2
Adenoviruses	44	28
No. of ILI Visits to Sentinel Physicians (ILI Rate/1000 patients seen for all reasons)	**19**	**46**
Institutional ILI Outbreaks	**3**	**20**

*Center for Infectious Disease Prevention and Control (CIDPC), Health Canada

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

** August, 2002 – December 7, 2002

***Season to Date; August 24, 2003 - December 6, 2003

Note: 16 public health and hospital laboratories in the Province report to the CIDPC

Table 2. Season to Date Influenza Cases in Ontario Reported Through the Reportable Disease Information System (RDIS), 2003-2004 (September 1, 2003 to December 6, 2003)

Health Unit	Number of Lab-Confirmed Influenza Cases		
	Influenza A		Influenza B
	Week 48	Week 49	
DurhamRegion	6	13	
Grey-Bruce	1	2	
Haliburton-Kawartha	14	21	0
Halton	1	4	
Haldimand-Norfolk	0	1	1
Hamilton-Wentworth	41	75	0
Kingston-Frontenac	0	19	
Middlesex-London	0	4	
Niagara	1	1	
Ottawa-Carleton	0	1	
Peel	12	19	
Peterborough	41	56	
Porcupine	0	8	
Simcoe	2	4	
Toronto	13	28	0
Waterloo	1	1	
York Region	2	2	0
Total	135	259	**1**

*****124 cases of influenza A were reported during week 49

Table 3. Season-to-date Institutional Influenza Outbreaks by Health Unit in Ontario, 2003-2004 (October 27, 2003 – December 6)

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
	LTCF	1	Flu A	9.4	0	None Reported
Chatham-Kent	NH	1	Flu A	11.0	0	None reported
Durham	Other	1	Flu A	2.5	0.6	None reported
Grey-Bruce	NH	1	Flu A	17.9	2.8	None reported
HKPR	NH/RH	1	Flu A	6.8	0.6	1 hospitalized
Hamilton City	HFA	1	Flu A	1.8	0	1 hospitalized
	LTCF	1	Flu A	13.4	0	2 pneumonia, 1 hospitalized
	NH	1	Flu A	9.5	1.1	None reported
	CCH	1	Flu A	3.7	0.4	None reported
Peel	LTCF	1	Flu A	14.7	1.0	None reported
	ACH	1	Flu A	3.8	5.3	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
	LTCF	1	Flu A	0.8	0.0	None Reported
	RH	1	Flu A	34.0	22.7	1 Hospitalized
Sudbury	NH	1	Flu A	3.1	0.4	1 death
Wellington-Dufferin	NH	1	Flu A	6.8	0	1 death, 1 pneomonia, 2 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
NH = nursing home, RH= retirement home, combined facility consists of 2 or more types of institutions e.g. a NH section and a retirement home (RH) section; CCH = chronic care hospital, ACH= Acute Care Hospital, LTCF = long term care facility

Federal FluWatch Sentinel Physician Surveillance Activity in Ontario

The overall rate of influenza-like illness (ILI) reported through the Federal FluWatch system were 46 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 49 November 30-December 6, 2003)

Influenza activity continues to decrease in Alberta and Saskatchewan while increasing in other parts of Canada. Widespread activity was reported in Ontario with 8 outbreaks in LTCFs and localized activity in western Nova Scotia with 18 outbreaks in schools. During the week ending December 6 (week 49), sentinel physicians reported 38 cases of influenza-like illness (ILI) per 1,000 patient visits, which is within the baseline rate for this time of year.

Laboratory Confirmations

Health Canada received 2,894 reports of laboratory tests for influenza, including 490 (17%) 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 49 (November 29 – December 6, 2003). One thousand four hundred nine (36.8%) of 3,834 specimens collected from throughout the United States and 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 5.1%, which is above the national baseline of 2.5%. The proportion of deaths attributed to pneumonia and influenza was 7.0%, which is below the epidemic threshold for the week. Twenty-four state health departments reported widespread influenza activity, 15 states and New York City reported regional activity, 6 states reported local influenza activity, and 5 states and Guam reported sporadic 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 reported increased influenza activity particularly in the Russian Federation, Finland, Norway, Spain and Switzerland. Most countries were reporting circulation of A/Fujian/411/2002(H3N2)-like virus on influenza during week 48.

The EISS reported increasing influenza activity in a number of countries in Europe especially in Belgium, France, and Norway. Although widespread activity continues in the United Kingdom, Portugal and Spain, it is slowing in these countries where activity associated with A/Fujian/411/2002(H3N2)-like virus was reported first.

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

From October 1, 2003 to December 8, 2003, the National Microbiology Laboratory has antigenetically characterized all the 52 influenza A virus isolates that public health and hospital laboratories in Ontario submitted, as A/Fujian/411/02(H3N2)-like. The NML reported that of all the influenza A virus isolates submitted across Canada during this period, 86% were A/Fujian/411/2002(H3N2)-like.

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

Influenza Vaccine Components and Protection for the 2003/04 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.

Influenza Activity Level by Health Unit
Week Ending December 6, 2003