Ontario Influenza Bulletin

Ministry of Health and Long-Term Care

Public Health Branch

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Week #10: Week Ending March 8, 2003

Influenza Activity in Ontario

There was influenza activity reported in the province for the week ending March 8, 2003. Thirteen of the Ontario Public Health laboratories reported 13 influenza A and 5 influenza B cases during this surveillance period. The following upper respiratory isolates were also reported: 101 respiratory syncytial virus (RSV), 4 parainfluenza type 1 (PIV1), 11 parainfluenza type 3 (PIV3), and 3 adenovirus (Table 1).

Table 1. Comparison of Influenza Activity in Ontario for the 2001-02 and 2002-03 Influenza Surveillance Seasons

Indicator	2001-02 Season	2002-03 Season
	Week Ending March 9, 2002	Week Ending March 8, 2003
	Season to Date**	Season to Date***
***Laboratory Surveillance (isolates)Total**	**1023**	**744**
Influenza A	566	734
Influenza B	457	10
Institutional Outbreaks	**95**	**21**
Other respiratory Viruses		
RSV	1599	1520
PIV1	109	113
PIV2	97	17
PIV3	14	290
PIV4	14	3
Other PIVs	2	1
Adenoviruses	97	121

*Centre for Infectious Disease Prevention and Control, Health Canada
** October 20, 2001- March 9, 2002
***Season to Date August 25, 2002 – March 8, 2003; consistency with Health Canada year round surveillance

Table 2. Season to Date Influenza Cases in Ontario Reported Through the Reportable Disease Information System (RDIS), 2002-2003

Health Unit	Number of Lab-Confirmed Influenza Cases	
	Type A	**Type B**
Algoma	6	0
Brant	5	0
Chatham-Kent	2	0
Durham	32	1
Eastern Ontario	8	0
Elgin St. Thomas	2	0
Grey Bruce	13	0
Haldimand-Norfolk	5	0
Haliburton-Kawartha	15	0
Halton	24	0
Hamilton-Wentworth	61	0
Hastings, Prince Edward	4	0
Huron	7	0
Kingston, Frontenac, Lennox and Addington	17	1
Leeds	2	0
Middlesex-London	9	0
Muskoka-Parry Sound	6	0
Niagara	4	0
North Bay	6	0
Ottawa-Carlton	20	0
Oxford	16	0
Peel	103	2
Perth District	20	0
Peterborough	3	0
Renfrew	2	0
Simcoe	16	0
Sudbury	6	0
Wellington-Dufferin-Guelph	44	0
Windsor-Essex	1	0
Toronto	142	1
York Region	44	0
Waterloo	23	0
Total	**670**	**5**

Note: 2 additional cases of influenza A were reported by Peel Regional prior to August 25, 2002.

Table 3. Season-to-date Institutional Influenza Outbreaks by Health Unit in Ontario, 2002-2003 (August 25, 2002 – Present)

Health Unit	Type of Institution	# of Outbreaks	Organism Identified	RAR (%)	SAR (%)	Complications
Chatham Kent	Facility Operating Under Developmental Services Act	1	Influenza A	17.6	0	None
	Nursing Home	1	Influenza A	25.0	8.6	None Reported to Date
Eastern Ontario	Retirement Home	1	Influenza A	6.5	66.7	None Reported to Date
Elgin St. Thomas	Home for the Aged	1	Influenza A	16.3	3.0	1 case pneumonia 1 death
Grey-Bruce	Retirement Home	1	Influenza A	16.0	0	None Reported to Date
Hastings & Prince Edward	Nursing Home	1	Influenza A	16.0	0	2 hospitalizations 3 cases pneumonia
Lambton	Nursing Home	1	Influenza A	25.5	6.7	5 cases pneumonia 4 hospitalizations 3 deaths
Middlesex-London	Nursing Home	1	Influenza A Panama	34.5	0	None
	Retirement Home	1	Influenza A	22.7	2.9	None
	Combined Nursing Home and Retirement Home	1	Influenza A	8.6	2.0	2 hospitalizations
Oxford County	Nursing Home	2	Influenza A	4.8	2.0	None
			Influenza A	25.2	0	3 deaths 2 hospitalizations 1 case pneumonia
Peel Regional *	Long-Term Care Facility	1	Influenza A Panama	20.9	8.3	1 death
Perth District	Long-Term Care Facility	1	Influenza A	40.4	11.3	None
Toronto	Nursing Home	2	Influenza A	12.2	0.5	None
			Influenza A	38.5	2.8	2 deaths 1 pneumonia
	Charitable Home for Aged	1	Influenza A	6.1	0.3	None Reported to Date
	Hospital	1	Influenza A	N/A	N/A	None
Timiskaming	Nursing Home	1	Influenza A	8.5	0	None
Wellington-Dufferin-Guelph	Nursing Home	1	Influenza A	2.3	0	None Reported to Date
York	Long-Term Care Facility	1	Influenza A H1N2	21.2	4.9	1 case pneumonia 1 death

RAR: Resident Attack Rate (# of residents ill/total number of residents)
SAR: Staff Attack Rate (# of staff ill/total number of staff)
*The outbreak within Peel Regional began prior to week 35 but into week 41 and thus has been included in the 2002-2003 season.

Federal FluWatch Sentinel Physician Surveillance Activity in Ontario
The rate of influenza-like illness (ILI) reported through the Federal FluWatch system was 40 per 1,000 patients seen.

Laboratory Confirmations and Influenza Activity in the Rest of Canada
Influenza B activity, affecting mostly children, is increasing in the west with 17% to 27% of lab tests positive for influenza B in Saskatchewan, Alberta and British Columbia, respectively. Influenza A activity continues to decline across the country, however, localised activity continues in Quebec and parts of Ontario. During the week ending March 1 (week 09), sentinel physicians reported 40 cases of influenza-like illness (ILI) per 1000 patient visits, which is below the expected rate for this time of year. Health Canada received 2,144 reports of laboratory tests for influenza, including 80 (3.7%) influenza A detections and 176 (8.2%) influenza B detections. The National Microbiology Laboratory has antigenically characterised 238 influenza viruses to date; all viruses identified to date are closely related to the current vaccine strains. Other respiratory virus detections are within the expected range for this time of year. To date this season, there have been 20 reported outbreaks of laboratory-confirmed influenza in long term care facilities (LTCF).

Source: Health Canada, FluWatch: <http://www.hc-sc.gc.ca/pphb-dgspsp/fluwatch/index.html>

Influenza Activity in the United States
During week 08, influenza activity was reported as widespread in 13 states; regional in 20 states and sporadic in 16 states. ILI accounted for 2.8% of patient visits to sentinel physicians (above the national baseline of 1.9%). Sentinel cities reported 7.4% of deaths attributed to pneumonia and influenza (below the epidemic threshold of 8.3% for this week). The CDC received 2,119 reports of influenza tests, including 361 (17.0%) positive for influenza: 114 A (unsubtyped), 53 A(H1), 40 A(H3N2), and 154 influenza B. Since September 29, a total of 53,480 specimens have been tested for influenza; 4,875 (9.1%) were positive (2,020 influenza A and 2,855 influenza B). Of the 185 viruses antigenically characterized to date, 7/27 (26%) of influenza A (H3N2) isolates and 1/86 (1%) of influenza B isolates showed reduced titres to current vaccine strains.

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

Influenza Activity in the World

During week 9, EISS reported a predominance of influenza A in Europe, with widespread activity in Belgium, France, Germany, Italy, the Slovak Republic, Slovenia and Switzerland. However, influenza B activity continues to predominate in western Europe. Clinical morbidity rates were highest in Germany. More than 99% of viruses identified through the EISS network so far this season are closely related to the 2002-2003 vaccine strains. A small number of H3N2 viruses recently detected in Norway and England show reduced reactivity to A/Panama/2007/99(H3N2) antiserum. Country reports to WHO indicate that widespread activity reported in Russia during the past several weeks reached a peak in most areas of the country during the last week of February. The WHO recommendation for the A(H3N2) component of the 2003-2004 vaccine is awaiting further data from recent H3N2 outbreaks and will be published on 14 March, 2003, see <http://www.who.int/mediacentre/releases/2003/pr13/en/>. Enhanced surveillance in Hong Kong over the past several weeks has not shown any unusual increase in influenza activity nor detected any other H5 virus. WHO is continuing to work closely with health authorities in Beijing and Hong Kong.

Source: WHO, <http://oms2.b3e.jussieu.fr/flunet/news.html>
And EISS (Europe): <http://www.eiss.org/cgi-files/bulletin_v2.cgi>

Vaccine and Strain Characterization

Since the last flu bulletin (volume 6 issue17), no more influenza isolates were characterized at the Health Canada Winnipeg Laboratory.

Table 4. Season-to-date Strain Identification and Characterization in Canada, 2002-2003*

Province/Territory	Strain Characterization	# of Strains Identified-to-date
Alberta	A/NewCaledonia/20/99-like	15
	A/PANAMA/2007/99-like	2
	A(H1N2)	9
	B/Hong Kong/330/01-like	6
British Columbia	A/NewCaledonia/20/99-like	1
	A(H1N2)	8
	A/PANAMA/2007/99-like	2
	B/Hong Kong/330/01-like	11
New Brunswick	A(H1N2)	4
	A/PANAMA/2007/99-like	3
	B/Hong Kong/330/01-like	5
Newfoundland	A(H1N2)	2
Nova Scotia	A(H1N2)	5
	B/Hong Kong/330/01-like	2
Ontario	**A/PANAMA/2007/99-like**	**3**
	A(H1N2)	**123**
	B/Hong Kong/330/01-like	**2**
PEI	A(H1N2)	1
Quebec	A/NewCaledonia/20/99-like	2
	A/PANAMA/2007/99-like	3
	A(H1N2)	18
Saskatchewan	A(H1N2)	5
	A/PANAMA/2007/99-like	1
Total		**238**

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Influenza Vaccine Components and Protection for the 2002/03 Season

The National Advisory Committee on Immunization (NACI) recommended that the trivalent vaccine for the 2002-03 season contain an A/Panama/2007/99 (H3N2)-like virus, an A/New Caledonia/20/99 (H1N1)-like virus, and either B/Hong Kong/330/2001-like virus or B/Shangdong/7/97-like antigens.

Influenza A(H1N2) are the majority of influenza strains identified thus far in Ontario. For influenza A (H1N2) virus, the hemagglutinin proteins of the H1 proteins is similar antigenically to the current vaccine strain A/NewCaledonia/20/99 (H1N1) and the N2 proteins is similar antigenically to the current strain A/Panama/2007/99(H3N2). Therefore, current vaccine strains will provide good protection against the H1N2 strain.

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.gov.on.ca/MOH/english/program/pubhealth/flu_bul/flubul_mn.html

Influenza Activity by Health Unit
Week Ending March 8, 2003