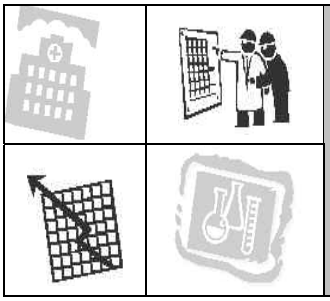

Ontario Influenza Bulletin

Ministry of Health and Long-Term Care

Public Health Branch

Volume 6, Issue 15
February 21, 2003

Week #7: Week Ending February 15, 2003

Influenza Activity in Ontario

There was influenza activity reported in the province for the week ending February 8, 2003. Twelve of the Ontario Public Health laboratories reported 14 influenza A and 2 influenza B cases during this surveillance period. The following upper respiratory isolates were also reported: 121 respiratory syncytial virus (RSV), 1 parainfluenza type 2 (PIV2), 2 parainfluenza type 3 (PIV3), 2 parainfluenza type 4 (PIV4), 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 February 16, 2002	Week Ending February 15, 2003
	Season to Date**	Season to Date***
***Laboratory Surveillance (isolates)Total**	**313**	**694**
Influenza A	160	691
Influenza B	153	3
Institutional Outbreaks	**31**	**12**
Other respiratory Viruses		
RSV	1289	1003
PIV1	102	101
PIV2	92	17
PIV3	9	268
PIV4	13	3
Other PIVs	2	1
Adenoviruses	72	96

*Centre for Infectious Disease Prevention and Control, Health Canada
** October 20, 2001- February 16, 2002
***Season to Date August 25, 2002 – February 15, 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
Durham	32	1
Eastern Ontario	5	0
Elgin St. Thomas	2	0
Grey Bruce	13	0
Haldimand-Norfolk	5	0
Haliburton-Kawartha	7	0
Halton	24	0
Hamilton-Wentworth	59	0
Huron	7	0
Kingston, Frontenac, Lennox and Addington	5	0
Leeds	1	0
Middlesex-London	1	0
Muskoka-Parry Sound	4	0
Niagara	4	0
North Bay	6	0
Ottawa-Carlton	20	0
Oxford	16	0
Peel	77	0
Perth District	19	0
Peterborough	3	0
Renfrew	2	0
Simcoe	16	0
Sudbury	6	0
Wellington-Dufferin-Guelph	40	0
Windsor-Essex	1	0
Toronto	136	1
York Region	42	0
Waterloo	23	0
Total	**591**	**2**

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	11.8	0	None Reported to Date
Elgin St. Thomas	Long-Term Care Facility	1	Influenza A	8.0	4.3	1 death
Hastings & Prince Edward	Nursing Home	1	Influenza A	16.0	0	2 hospitalizations 3 cases pneumonia
Middlesex-London	Nursing Home	1	Influenza A Panama	34.5	0	None
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
Timiskaming	Nursing Home	1	Influenza A	8.5	0	None
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 27 per 1,000 patients seen.

Laboratory Confirmations and Influenza Activity in the Rest of Canada
Localized activity in areas of British Columbia, Alberta, Ontario and Quebec. Elsewhere in Canada, influenza activity is limited with nine provinces and territories reporting sporadic or no activity (see map). During the week ending February 8 (week 06), sentinel physicians reported 27 cases of influenza-like illness (ILI) per 1000 patient visits, which is below the expected rate for this time of year. Health Canada received 1,800 reports of laboratory tests for influenza, including 137 (7.6%) influenza A detections and 32 (1.8%) influenza B detections. The National Microbiology Laboratory has antigenically characterised 160 influenza viruses to date; all viruses identified are closely related to the current vaccine strains. Parainfluenza and adenovirus detections are within expected levels for this time of year (1.7% and 1.2% of tests positive, respectively). RSV detections are slightly above the mean percentage of tests positive for the previous nine years (25.0% of tests positive). To date this season, there have been 11 reported outbreaks of laboratory-confirmed influenza in long term care facilities (LTCF); all have been in Ontario. During week 6, outbreaks of ILI were reported in schools in Alberta (6) and New Brunswick (2).

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

Influenza Activity in the United States
During week 05, influenza activity was reported as widespread in Alabama, Colorado, Missouri, Tennessee, Texas and Virginia; regional in 18 states; sporadic in 24 states and none in two states. ILI accounted for 2.5% of patient visits to sentinel physicians (above the national baseline of 1.9%). Sentinel cities reported 7.2% of deaths attributed to pneumonia and influenza (below the epidemic threshold of 8.2% for this week). The CDC received 1,157 reports of influenza tests, including 166 (14.3%) positive for influenza: 20 A (unsubtyped), 22 A(H1), seven A(H3N2), and 117 influenza B. Since September 29, a total of 36,753 specimens have been tested for influenza; 1,714 (4.7%) were positive (543 influenza A and 1171 influenza B). Of the 119 viruses antigenically characterized to date, all are are closely related to the current vaccine strains.

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

Influenza Activity in the World
On 12 February 2003, WHO posted an update on an outbreak of influenza which began in Kinshasa, Democratic Republic of Congo in early January. Preliminary testing indicates the associated virus is similar to the influenza A (H3N2) virus strain included in the current vaccine. WHO is currently investigating an outbreak of acute respiratory syndrome in China, however, to date virus isolation for influenza has been negative. Elsewhere during week 06, country reports to WHO indicate influenza activity is increasing in some countries with outbreaks reported in Finland and the Russian Federation. For Europe, EISS reported regional activity for six networks and sporadic or no activity for 13 networks. All viruses characterized to date are closely related to the 2002-2003 vaccine strains.

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 issue 14), 11 more influenza isolates in Ontario were characterized at the Health Canada Winnipeg Laboratory (Table 4). All eleven were identified as influenza A (H1N2) virus, and the hemagglutinin proteins of the influenza A (H1N2) virus.

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	12
	A/PANAMA/2007/99-like	2
	A(H1N2)	8
	B/Hong Kong/330/01-like	2
British Columbia	A/NewCaledonia/20/99-like	1
	A(H1N2)	2
	A/PANAMA/2007/99-like	2
	B/Hong Kong/330/01-like	6
New Brunswick	A(H1N2)	4
	B/Hong Kong/330/01-like	2
Newfoundland	A(H1N2)	1
Nova Scotia	A(H1N2)	5
	B/Hong Kong/330/01-like	2
Ontario	**A/PANAMA/2007/99-like**	**3**
	A(H1N2)	**120**
	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)	14
Saskatchewan	A(H1N2)	5
	A/PANAMA/2007/99-like	1
Total		**200**

*Influenza and Respiratory Viruses Section
National Microbiology Laboratory (NML), PPHB
Canadian Sciences Centre for Human and Animal Health

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 February 15, 2003