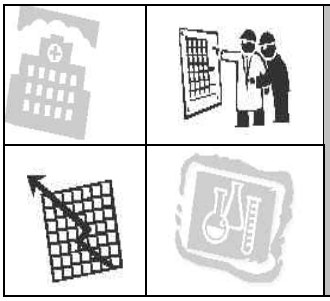

Ontario Influenza Bulletin

Ministry of Health and Long-Term Care

Public Health Branch

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Week #9: Week Ending March 1, 2003

Influenza Activity in Ontario

There was influenza activity reported in the province for the week ending March 1, 2003. Thirteen of the Ontario Public Health laboratories reported 7 influenza A and 1 influenza B cases during this surveillance period. The following upper respiratory isolates were also reported: 127 respiratory syncytial virus (RSV), 1 parainfluenza type 1 (PIV1), 5 parainfluenza type 3 (PIV3), and 11 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 2, 2002	Week Ending March 1, 2003
	Season to Date**	Season to Date***
***Laboratory Surveillance (isolates)Total**	**665**	**724**
Influenza A	435	719
Influenza B	310	5
Institutional Outbreaks	**77**	**17**
Other respiratory Viruses		
RSV	1512	1370
PIV1	107	109
PIV2	95	17
PIV3	14	279
PIV4	14	3
Other PIVs	2	1
Adenoviruses	90	116

*Centre for Infectious Disease Prevention and Control, Health Canada
** October 20, 2001- March 2, 2002
***Season to Date August 25, 2002 – March 1, 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	7	0
Elgin St. Thomas	2	0
Grey Bruce	13	0
Haldimand-Norfolk	5	0
Haliburton-Kawartha	15	0
Halton	24	0
Hamilton-Wentworth	60	0
Hastings, Prince Edward	4	0
Huron	7	0
Kingston, Frontenac, Lennox and Addington	5	0
Leeds	2	0
Middlesex-London	1	0
Muskoka-Parry Sound	5	0
Niagara	4	0
North Bay	6	0
Ottawa-Carlton	20	0
Oxford	16	0
Peel	103	2
Perth District	20	0
Peterborough	4	0
Renfrew	2	0
Simcoe	16	0
Sudbury	6	0
Wellington-Dufferin-Guelph	43	0
Windsor-Essex	1	0
Toronto	139	1
York Region	44	0
Waterloo	23	0
Total	**642**	**4**

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
Eastern Ontario	Retirement Home	1	Influenza A	6.5	66.7	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
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	23.3	2.9	None Reported to Date
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
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
Widespread activity including numerous outbreaks of ILI in British Columbia schools. Localized activity in parts of Manitoba, Ontario, Quebec and New Brunswick. During the week ending February 22 (week 08), 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 1,979 reports of laboratory tests for influenza, including 109 (5.5%) influenza A detections and 79 (4.0%) influenza B detections. The National Microbiology Laboratory has antigenically characterised 200 influenza viruses to date; all viruses identified to date are closely related to the current vaccine strains. RSV detections are slightly above the mean percentage of tests positive for the previous nine years (22.8% of tests positive). To date this season, there have been 17 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 07, influenza activity was reported as widespread in 11 states; regional in 23 states and sporadic in 13 states. ILI accounted for 3.0% of patient visits to sentinel physicians (above the national baseline of 1.9%). Sentinel cities reported 7.3% of deaths attributed to pneumonia and influenza (below the epidemic threshold of 8.3% for this week). The CDC received 2,527 reports of influenza tests, including 451 (17.8%) positive for influenza: 155 A (unsubtyped), 44 A(H1), eight A(H3N2), and 244 influenza B. Since September 29, a total of 48,384 specimens have been tested for influenza; 3,830 (7.9%) were positive (1,442 influenza A and 2,388 influenza B). Of the 179 viruses antigenically characterized to date, all influenza A isolates and all but one influenza B isolate closely resemble the current vaccine strains. One influenza B isolate belonging to the B/Yamagata lineage was found to be similar to B/Shizuoka/15/01.

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

Influenza Activity in the World
On 27 February 2003, WHO provided an update on avian influenza A(H5N1) in Hong Kong, which remains limited to two confirmed cases, including one death, in a family recently returned to Hong Kong following a visit to relatives in Fujian Province, mainland China. WHO is continuing work closely with health authorities in Beijing and Hong Kong. To date, there is no evidence of human-to-

human spread and therefore, the risk of transmission to Canada remains remote at this time. Chinese Health authorities report that an outbreak in Guandong province, attributed to *Chlamydia pneumoniae*, has ended. Their investigation found no evidence of a link to the H5N1 cases in Hong Kong. Elsewhere, EISS and country reports to WHO indicate influenza activity is increasing in East and Central Europe and widespread influenza activity is occurring in most regions throughout Russia, affecting mostly children. Last week WHO recommended that vaccines to be used in the 2003/2004 season (northern hemisphere winter) contain an A/New Caledonia/20/99(H1N1)-like virus and a B/Hong Kong/330/2001-like virus. The recommendation for the A(H3N2) component is awaiting further data from recent H3N2 outbreaks and will be published by WHO on 14 March, 2003.

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 16), 3 more influenza isolates in Ontario were characterized at the Health Canada Winnipeg Laboratory (Table 4). They were identified as influenza A (H1N2) virus, and the hemagglutinin proteins of the influenza A (H1N2) viruses.

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**

*Influenza and Respiratory Viruses Section
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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 1, 2003