

		Ontario Influenza Bulletin	Ministry of Health and Long-Term Care Public Health Branch <i>Volume 5, Issue 17 February 22, 2002</i>
			

Week #7: Week Ending February 16, 2002

Influenza Activity in Ontario

There were 62 cases of influenza A, and 68 cases of influenza B reported in the province for the week ending February 16, 2002. The reported upper respiratory isolates included: 148 respiratory syncytial virus (RSV), 1 parainfluenza type 1 (PIV1), 2 parainfluenza type 2 (PIV2), and 3 adenovirus (Table 1).

Sixteen more influenza A outbreaks were reported in the province, and were detected by either rapid testing or viral culture. The following eight health units reported these outbreaks: Hamilton-Wentworth, Leeds-Grenville-Lanark, Niagara, North Bay, Ottawa, Peel, Toronto, and Wellington-Dufferin-Guelph. The total number of institutional outbreaks to-date in Ontario is 31 (Tables 1, 2, and 3).

Table 1. Comparison of Influenza Activity for the 2000-01 and 2001-02 Influenza Surveillance Seasons

Indicator	2000-01 Season	2001-02 Season
	Week Ending February 17, 2001	Week Ending February 16, 2002
	Season-to-date	Season-to-date
*Laboratory Surveillance (isolates) Total	255	313
Influenza A	165	160
Influenza B	90	153
Institutional Outbreaks	2	31
Other Respiratory Viruses		
RSV	1414	1289
PIV1	20	102
PIV2	6	92
PIV3	150	9
PIV4	17	13
Other PIVs	0	2
Adenoviruses	54	72

*Centre for Infectious Disease Prevention and Control, Health Canada; Reportable Disease Information System

Table 2. Season-to-date Influenza Cases by Health Unit as Reported Through RDIS, 2001-02*

Health Unit	Number of Lab-Confirmed Influenza Cases**	
	Type A	Type B
Brant County	1	0
Bruce-Grey	1	0
Durham	8	8
Eastern Ontario	16	1
Halton	1	5
Hamilton-Wentworth	19	6
Kingston	10	2
Lambton	1	0
Leeds, Grenville, Lanark	8	0
Middlesex-London	1	0
Niagara	2	5
North Bay & District	2	0
Ottawa	66	4
Peel	7	8
Peterborough	2	0
Porcupine	2	0
Simcoe	3	1
Toronto	20	24
Waterloo	1	3
Wellington, Dufferin, Guelph	2	1
York	1	7
Total	174	75

*Reportable Disease Information System; **Public Health Units

Table 3. Season-to-date Institutional Influenza Outbreaks by Health Unit in Ontario, 2001-02*

Health Unit	Type of Institution & Number of Outbreaks			Organism Identified
	LTCH/Retirement Home	Hospital	Day-Care	
Brant County	1			Influenza A
Eastern Ontario	1	2		Influenza A
Hamilton	3			Influenza A
Leeds, Grenville, Lanark	2			Influenza A
Niagara		1		Influenza A
North Bay & District	1	1		Influenza A
Ottawa	4	1		Influenza A
Peel	3			Influenza A
Toronto	5	3	1	Influenza A
Wellington, Dufferin, Guelph	2			Influenza A
Total	22	8	1	

*Public Health Units

Vaccine and Strain Characterization

(Up to February 18, 2002) In Ontario, of the influenza samples sent for sub-typing to the National Microbiology Laboratory at Health Canada, 22 were A/Panama/2007/99(H3N2)-like isolates, 34 were B/Hong Kong/22/01-like isolates, and 1 was B/Sichuan/379/99-like (Table 4).

The A/Panama/2007/99(H3N2)-like strain and B/Sichuan/379/99-like strain, is included in this year's vaccine, and the B/Hong Kong/22/01-like strain belongs to the B/Victoria/504/2000 lineage, which is not included in this year's vaccine. The B/Hong Kong/22/01-like virus is a new antigenic variant of the B/Victoria/504/2000-like virus, which was an epidemic strain during the 1988 - 1989 flu season. This year's influenza vaccine B component provides protection mainly against B/Yamagata/16/88-like viruses, but as several studies have shown, this strain also provides some protection against the B/Victoria/504/2000-like viruses. The type A strains identified in Canada (and in Ontario) are included in the current season's vaccine.

Table 4. Season-to-date Strain Identification and Characterization In Canada, 2001-02*

Province/Territory	Strain Characterization	# of Strains Identified-to-date
Newfoundland		
Prince Edward Island		
Nova Scotia	A/Panama/2007/99(H3N2)-like	2
	B/Hong Kong/22/01-like	1
New Brunswick	A/Panama/2007/99(H3N2)-like	5
Quebec	A/Panama/2007/99(H3N2)-like	30
	B/Sichuan/379/99-like	1
Ontario	A/Panama/2007/99(H3N2)-like	22
	B/Sichuan/379/99-like	1
	B/Hong Kong/22/01-like	34
Manitoba	A/Panama/2007/99(H3N2)-like	3
Saskatchewan	A/Panama/2007/99(H3N2)-like	4
Alberta	A/Panama/2007/99(H3N2)-like	11
	A/New Caledonia/20/99 (H1N1)-like	1
	A/New Caledonia/20/99 (H1N2)-like	1
	B/Hong Kong/22/01-like	1
British Columbia	A/Panama/2007/99(H3N2)-like	11
	B/Sichuan/379/99-like	1
Yukon	A/Panama/2007/99(H3N2)-like	2
NorthWest Territories		
Nunavut		
	Total	
	A/Panama/2007/99(H3N2)-like	90
	A/New Caledonia/20/99 (H1N1)-like	1
	A/New Caledonia/20/99 (H1N2)-like	1
	B/Sichuan/379/99-like	3
	B/Hong Kong/22/01-like	36

*Respiratory Viruses Section, National Microbiology Laboratory (NML), PPHB, Health Canada

Federal FluWatch Sentinel Physician Surveillance Activity in Ontario

The rate of influenza-like illness (ILI) reported through the Federal FluWatch system was 32 per 1,000 patients seen.

Laboratory Confirmations and Influenza Activity in the Rest of Canada

Influenza activity is at the level of localised in regions of Alberta, Quebec, Ontario and BC. Sentinel physicians reported 62 cases of influenza-like illness (ILI) per 1000 patient visits, which is an expected rate for this time of year. Health Canada received 2541 reports of laboratory tests for influenza: 472 (19%) were positive for influenza A and 44 (2%) were positive for influenza B (see table). The National Microbiology Laboratory antigenically characterised 109 influenza isolates to date this season: 82 were A(H3N2); 2 were A (H1); 3 were B/Sichuan/379/99-like, and 22 were B/Hong Kong/22/01-like. Of the two A(H1) isolates identified antigenically, one was subsequently characterized by genetic analysis to be a new influenza A (H1N2) strain, recently reported by other countries. This A(H1N2) virus was collected from a 24 year old patient from Alberta in December, 2001. The A(H3N2), A(H1) and B/Sichuan/379/99-like viruses are similar to the current vaccine strains. The B/Hong Kong/22/01-like viruses belong to the B/Victoria/02/87 lineage of influenza B viruses that last circulated in Canada in the 1988-1989 season. The majority of B/Hong Kong/22/01-like viruses have been isolated from children under 15 years of age. The current vaccine is expected to provide limited cross-protection against this influenza B strain.

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

Influenza Activity in the United States

During week 6 (February 2 - 9, 2002), 363 (17.5%) of 2,071 respiratory specimens tested by World Health Organization (WHO) and National Respiratory Virus Surveillance System (NREVSS) laboratories were positive for influenza. The overall proportion of patient visits to sentinel physicians for influenza-like illness (ILI) was 3.0%, which is above the national baseline of 1.9%. The proportion of deaths attributed to pneumonia and influenza was 7.4%, which is below the epidemic threshold of 8.3% for week 6. Eleven state and territorial health departments reported widespread influenza activity, 27 reported regional activity, 10 reported sporadic activity, and one reported no activity.

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

Influenza Activity in the World

During week 6, influenza activity continued to increase in Europe, except in the Czech Republic, Denmark, Greece and Ireland where activity remained low. Influenza activity due to the A(H1N1) strain in Japan has declined, while activity has remained low in Australia and New Caledonia. Outbreaks were due to influenza A(H3N2) and B viruses. During the last three weeks of the month, Paraguay reported local outbreaks of influenza A and B. During the first week two weeks of February, activity has also increased in Austria, Croatia, Finland, Iceland, Italy, Norway and Sweden. Influenza A(H1N1) has been isolated mainly from sporadic cases except in Japan which caused the outbreak in late December. From November to January, influenza A(H1N2) viruses were isolated from outbreaks or sporadic cases in Egypt, Israel, England and the USA. The new H1N2 strain appears to have arisen by re-assortment of the two human viruses (H1N1 and H3N2). The virus strain was previously detected in China in the 1988 – 1989 influenza season and has emerged as a result of a re-assortment.

Source: WHO, Communicable Disease Surveillance and Response: <<http://www.who.int/emc/diseases/flu/country.html>>

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 Level by Health Unit Week Ending February 16, 2002

