

Ontario Influenza Bulletin

Early Spring Edition

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Weeks 9-11 (Feb. 27- Mar.19, 2005)

Introduction

The current issue of Ontario Influenza Bulletin summarizes influenza activity during weeks 9-11 which covers the time period of February 27 to March 19, 2005.

Influenza activity in Ontario continued to be reported as widespread throughout this time, whereas overall activity decreased across the country, compared to the previous issue that covered weeks 1 to 8.

During the current influenza season, (2004/05) higher levels of activity began to be reported several weeks later than in the previous season (2003/04).

The proportion of influenza type B (as opposed to influenza A detected) increased in Ontario in weeks 9 to 11, compared to 1 to 8 and reached 115 positive influenza B isolates in week 9, ending March 5, 2005.

Influenza Activity in Ontario

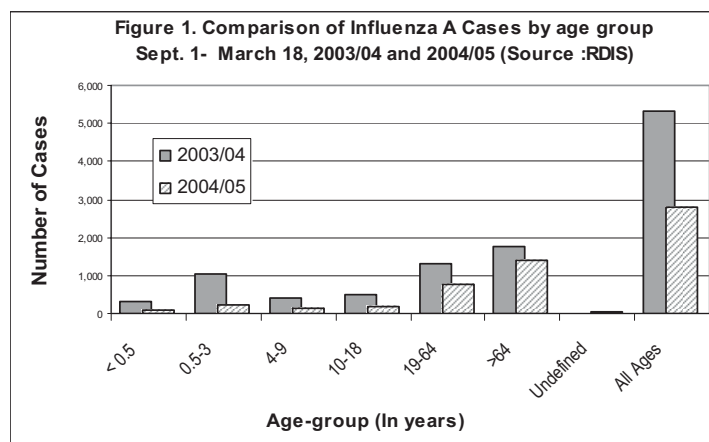
During the period of influenza surveillance between February 27 and March 19, 2005 (reporting weeks 9-11), a total of 1,171 laboratory-confirmed cases of influenza were reported (854 influenza A, 317 influenza B) by Ontario laboratories to the Centre for Infectious Disease Prevention and Control (CIDPC).

Throughout this period there were 575 cases of respiratory syncytial virus (RSV), 13 cases of para influenza viruses (PIV) and 45 cases of adenoviruses, all of which were laboratory-confirmed (Appendix 1).

Including late reports, a total of 3,295 influenza A, 590 influenza B, 2,043 RSV, 184 parainfluenza viruses and 259 adenoviruses were reported to the CIDPC between August 22, 2004 and March 19, 2005.

Reportable Disease Information System (RDIS)

Between February 27 and March 19, 2005, a total of 1,228 laboratory-confirmed sporadic cases of influenza A and 280 laboratory-confirmed sporadic cases of influenza B were reported to the Ministry of Health and Long-Term Care (MOHLTC) through RDIS by Ontario's health units. The total number of cases of influenza A and B reported between September 1, 2004 and March 18, 2005 were 2801 and 396, respectively (Appendix 2). This represents slightly more than half of the total number of cases for all age groups in same period of time in last season (Figure 1)



Institutional Respiratory Infection Outbreaks

From February 27 to March 19, 2005, 149 respiratory infection outbreaks were reported by Ontario's health units to the MOHLTC (Appendix 3). Of these, 53% (79/149) were outbreaks of influenza A. Additionally, 4.7% (7/149) of the outbreaks were due to other viruses such as enterovirus, rhinovirus, and respiratory syncytial virus. The majority (71.8%) of respiratory infection outbreaks occurred in Long-Term Care Homes (107/149). (Source: Appendix D's-

preliminary reports and E's-final reports)

Taken together, data from the CIDPC, RDIS, and Respiratory Infection Outbreak Database indicated comparatively lower activity in Ontario during the period from February 27 to March 19, 2005 than from January 2 to February 26, 2005.

Influenza Activity in Canada

A summary of influenza activity in Canada as reported in FluWatch is provided below.

Influenza activity in Canada decreased across the country except in Ontario and part of Alberta during weeks 9-11, covering February 27 to March 19, 2005 compared to the period of January 2 to February 26, 2005 in last issue (Table 1). The number of patients with influenza-like illness (ILI) seen by sentinel physicians in Canada from February 27, 2005 to March 19, 2005 ranged from 26/1,000 office visits (weeks 11, ending March 19, 2005) to 51/1,000 office visits (week 9, ending March 05, 2005). Additional information on influenza activity in Canada can be found at:

<http://www.phac-aspc.gc.ca/fluwatch/>

In Ontario, the number of patients with ILI seen by sentinel physicians ranged from 34/1,000 office visits (week 11, ending March 19, 2005) to 52/1,000 office visits (weeks 9 and 10, ending March 12 and 19, 2005) respectively.

Table 1: Influenza activity in Canada by Province, February 27 to March 19, 2005

Province	Week ending March 05, 2005	Week ending March 12, 2005	Week ending March 19, 2005
Ontario	4	4	4
Newfoundland	3	1	1
Prince Edward Isl.	1	1	1
Nova Scotia	3	1	1
New Brunswick	1	1	1
Quebec	3	3	3
Manitoba	3	2 - 1	1 - 3
Saskatchewan	3	2 - 1	2
Alberta	4 - 3 - 2	4 - 2	4 - 2
British Columbia	4 - 3 - 2	2	2

- 1- No activity
- 2- Sporadic activity
- 3- Localized activity
- 4- Widespread activity

Strain Characterization

A total of 775 influenza viruses were characterized by National Microbiology Lab (NML), between August 22, 2004 and March 19, 2005. Of the 688 cases identified as influenza A, 73% (503/688) were A/Fujian/411/02-like (H3N2); and 27% (185/688) were A/California/7/04-like viruses. During the same time frame 87 influenza B, (73 B/Shanghai/361/02-like viruses and 14 B/Hong Kong/330/01-like viruses) were also identified (Table 2).

NML characterized 268 influenza A viruses from February 17

to March 16, 2005. Of these, 185 (69%) were identified as A/California/7/2004 (H3N2)-like viruses.

Table 2. Influenza strain identified by the National Microbiology Lab. August 22, 2004 to March 19, 2005

Strain	No. (%)
A/Fujian/411/02-like virus	503 (65%)
A/California/7/04-like virus	185 (24%)
B/Shanghai/361/02-like virus	73 (9%)
B/Hong Kong/330/01-like virus	14 (2%)

Activity in the United States

Influenza activity peaked during February 2005 and continued to decline during weeks 9 to 11.

The CDC antigenically characterized 618 influenza viruses collected by U.S. laboratories between October 1, 2004 and March 19, 2005: 399 influenza A (H3N2) viruses, 6 influenza A (H1) viruses and 213 influenza B viruses. The hemagglutinin proteins of the influenza A(H1) viruses were similar antigenically to the hemagglutinin of the vaccine strain A/New Caledonia/20/99.

Antigenic Characterization:

From October 3, 2004 to March 19, 2005, WHO and NREVSS laboratories in the United States isolated 18,983 influenza viruses, 15,168 (80.0%) were influenza A viruses and 3,815 (20.0%) were influenza B viruses. Four thousand eight hundred ninety (32.2%) of influenza A viruses were subtyped; 4,876 (99.7%) were influenza A (H3N2) and 14 (0.3%) were influenza A (H1) subtype. The proportion of influenza B viruses as compared to influenza A continued to increase in the United State during weeks 9 to 11.

For more information on activity in the United States please visit:

<http://www.cdc.gov/flu/weekly/>

Activity in Europe

Influenza activity stabilized or decreased in Central Europe and increased in the North-East during week 9 and was seen in Eastern Europe and Scandinavia during weeks 10 and 11. Influenza activity reached its peak in most of central Europe during week 9 to 11.

Influenza A(H3) was the most dominant virus reported in Europe while influenza B viruses became the co-dominant virus in an increasing number of countries during weeks 9 -11.

Based on the sub-typing of all influenza viruses detected

from September 5, 2004 up to week 11, week ending March 20, 2005 (N=11,801; sentinel and non-sentinel data), 5,807 (49%) were A (not subtyped), 3,860 (33%) were A(H3) [1,354 of these were A(H3N2)], 636 (5%) were A(H1) [269 of these were A(H1N1)] and one as A(H1N2)]. 1,496 (13%) were identified as influenza B.

A total of 2,744 viruses (23% of all isolates) have been antigenically and/or genetically characterized: 1,138 A/Wellington/1/2004 (H3N2)-like viruses, 589 A/California/7/2004 (H3N2) like-viruses, 113 A/Fujian/411/2002 (H3N2) like-viruses, two A/Panama/2007/99 (H3N2) like-viruses, 525 A/New Caledonia/20/99 (H1N1)-like viruses, 206 B/Jiangsu/10/2003-like viruses and 171 B/Hong

Kong/330/2001-like viruses.

For more information on influenza activity in Europe please visit:

http://www.eiss.org/cgi-files/bulletin_v2.cgi

Activity at the International Level

Overall levels of influenza activity continued to increase and were reported as widespread, although some countries reported a decline during weeks 9-11.

For more information please visit the WHO's website:

<http://www.who.int/wer/2005/en/>

Appendix 1. Respiratory viruses isolated and reported to the CIDPC (2004/05 Season)

Organism Time interval	Influenza Viruses			Other Respiratory Viruses						
	A & B	A	B	RSV	PIV1	PIV2	PIV3	PIV4	Other PIVs	Adenoviruses
Total until Feb.26,2005 (Week 8)	1825	1630	195	1087	72	18	40	13	3	179
Week ending March 05, 2005 (week 9)	502 [2327]	387 [2017]	115 [310]	289 [1376]	3 [75]	1 [19]	4 [44]	1 [14]	0 [3]	19 [198]
Week ending March 12,2005 (week 10)	331 [2658]	239 [2256]	92 [402]	126 [1502]	8 [83]	0 [19]	2 [46]	1 [15]	0 [3]	13 [211]
Week ending March 19, 2005 (week 11)	338 [2996]	228 [2484]	110 [512]	160 [1662]	3 [86]	0 [19]	4 [50]	0 [15]	0 [3]	13 [224]
Number of late reports,from August 22,2004	[889]	[811]	[78]	[381]	[4]	[5]	[1]	[1]	[0]	[35]
Total number of isolates, August 22, 2004 to March 19, 2005*	[3885]	[3295]	[590]	[2043]	[90]	[24]	[51]	[16]	[3]	[259]

[] Accumulative numbers from August 22, 2004

* Late reports are included

Appendix 2. Weekly Lab-Confirmed Cases of Influenza by Health units, week 9-11 (Source: RDIS)

Health Unit	Week ending March 5, 2005 (week 9)				Week ending March 12, 2005 (week 10)				Week ending March 19, 2005 (week 11)			
	Influenza A		Influenza B		Influenza A		Influenza B		Influenza A		Influenza B	
Algoma	3	[30]				[30]			15	[45]		[2]
Brant		[24]				[24]			11	[35]	2	[2]
Chatham - Kent		[2]			1	[3]			9	[12]		
Durham		[16]			25	[41]	9	[9]	55	[96]	9	[18]
Eastern Ontario	2	[84]	2	[2]		[84]	7	[9]	1	[85]	9	[18]
Elgin - St. Thomas	2	[2]				[2]				[2]		
Grey-Bruce	3	[29]	2	[5]	5	[34]	2	[7]	4	[38]		[7]
Haldimand-Norfolk		[7]		[1]	8	[15]	4	[5]	6	[21]		[5]
Haliburton KPR	14	[66]	7	[14]	1	[67]	2	[16]	10	[77]	4	[20]
Halton	29	[116]	7	[12]	20	[136]	10	[22]	5	[141]	4	[26]
Hamilton-Wentworth		[8]		[1]		[8]		[1]		[8]		[1]
Hasting – P.E.	10	[32]	2	[9]	20	[52]		[9]		[52]		[9]
Huron	7	[15]			7	[22]			4	[26]		
Kingston & FLA	38	[47]	2	[3]	14	[61]	1	[4]	5	[66]		[4]
Lambton						[1]				[1]		
Leeds - Grenville		[1]				[1]				[1]		
Middlesex-London		[3]				[3]				[3]		
Muskoka-Parry Sound		[40]			24	[64]			9	[73]		
Niagara	10	[59]		[4]	17	[76]	2	[6]	20	[96]	2	[8]
Northwest	9	[9]				[9]				[9]		
North Bay	6	[51]	2	[2]	5	[56]		[2]	4	[60]		[2]
Ottawa-Carleton	12	[187]		[4]	4	[191]	1	[5]	6	[197]	4	[9]
Oxford	11	[27]		[1]		[27]		[1]	9	[36]		[1]
Peel	1	[80]		[4]	32	[112]	13	[17]	33	[145]	8	[25]
Perth	19	[33]	1	[2]	3	[36]	1	[3]		[36]		[3]
Peterborough	13	[49]	5	[16]	2	[51]		[16]	2	[53]	3	[19]
Porcupine	5	[35]			14	[49]			25	[74]	1	[1]
Renfrew		[10]			10	[20]	1	[1]	1	[21]		[1]
Simcoe	36	[94]	8	[15]	17	[111]	7	[22]		[111]		[22]
Sudbury	9	[25]	1	[6]		[25]	1	[7]	1	[26]		[7]
Timiskaming		[8]				[8]			26	[34]		
Thunder Bay	1	[5]				[5]			10	[15]	2	[2]
Toronto	85	[415]	21	[55]	57	[472]	29	[84]	63	[535]	33	[117]
Waterloo	57	[92]	7	[16]	24	[116]	2	[18]	30	[146]	1	[19]
Wel - Duf - Guelph	24	[58]	1	[5]	14	[72]	4	[9]	13	[85]	2	[11]
Windsor - Essex		[4]		[1]	6	[10]		[1]	7	[17]		[1]
York	22	[238]	1	[7]	60	[298]	3	[10]	25	[323]	26	[36]
Total	428	[2001]	69	[185]	390	[2392]	99	[284]	409	[2801]	112	[396]

[] Cumulative number from September 1,2004

Appendix 3. Respiratory infection outbreaks in Institutions from February 27 to March 19, 2005

Respiratory Infection Outbreaks in Institutions	Week ending March 05,2005 (week 9)	Week ending March 12,2005 (week 10)	Week ending March 19,2005 (week 11)
Total Respiratory Infection Outbreaks in Institutions	62 [719]	54 [773]	33 [806]
Influenza A	36	29	14
Influenza A & B	0	2	1
Influenza A & other organism/s	2	0	0
Influenza B	9	7	7
Influenza B & other organism/s	0	0	0
Other organisms	3	4	0
No organism isolated	6	5	5
Laboratory results pending	6	7	6
No specimen sent for laboratory testing	0	0	0
Ongoing Outbreaks	28	28	26
Influenza A	17	13	9
Influenza A & B	0	1	1
Influenza A & other organism/s	0	0	0
Influenza B	3	3	6
Influenza B & other organism/s	0	0	0
Other organisms	1	2	0
No organism isolated	1	3	4
Laboratory results pending	6	6	6
No specimen sent for laboratory testing	0	0	0
Types of Institutions			
LTCHs	43	40	24
Hospitals	3	5	0
Other*	16	9	9

[] The number represents the total number of Institutional Outbreaks from the beginning of this season, September 1, 2004 to date indicated.

* Retirement Homes . 10 beds, children's residences, facilities operated under the *Developmental Services Act* etc.