



Ontario Influenza Bulletin | 2010-2011

SURVEILLANCE SEASON – (September 1, 2010 to September 3, 2011)

This issue of the Ontario Influenza Bulletin is the final Bulletin for the 2010-2011 season. In addition to an overview of the 2010/2011 surveillance season, the Bulletin also covers weeks 34 and 35, which runs from August 21, 2011 to September 3, 2011. For data management purposes, week 35 which overlaps with the 2011-2012 season is included in the 2010-2011 season overview. However, the impact is negligible given that no influenza cases were reported during the overlap. Data extraction and analysis for this issue of the Bulletin occurred on September 7, 2011.

For the 2011-2012 season, an abbreviated version of the Bulletin will be published on alternate weeks until November 4, 2011. Influenza activity level maps will be available when the bulletin is not published at:

<http://www.oahpp.ca/resources/flubulletin.html>

Effective September 9, 2011, the new fax number for activity level submissions is **647-260-7757**.

Assessment of Influenza Activity in Ontario for Weeks 34 and 35

Measure	Assessment of measure compared to previous two-week period (Lower, Similar, Higher)	Reasoning behind assessment
Laboratory Confirmed Cases	Similar	No new influenza cases were reported through iPHIS* in weeks 34 and 35 compared to two new cases reported in weeks 32 and 33. The percent positivity of laboratory tests for influenza (A and B) in Ontario was 0.00% in weeks 34 and 35 compared to 0.57% in weeks 32 and 33. Among other circulating respiratory viruses, rhinovirus had the highest percent positivity in week 31 (12.65%).
Influenza Outbreaks	No change	No new institutional influenza outbreaks were reported for the current reporting weeks.
Influenza Activity Levels Reported by Health Units	Similar	For week 35, health units reported no activity or did not report (Figure 9).
ILI Consultation Rate reported by Sentinel Physicians	Higher	The overall ILI consultation rate increased from 6.86/1,000 patient visits in week 34 to 9.51/1,000 patient visits in week 35. The ILI consultation rate for week 35 is similar to the rate for week 35 from previous years.
Hospitalizations Among Lab Confirmed Cases of Influenza	No change	No new hospitalizations in influenza cases were reported from August 21 to September 3; no new hospitalizations were reported in the previous two week period (August 7 to August 20).
Deaths Among Lab Confirmed Cases of Influenza	No change	No deaths in influenza cases were reported from August 21 to September 3, which is the same as the number of deaths reported in the previous two week period (August 7 to August 20).
OVERALL ASSESSMENT	Influenza activity in Ontario is <i>similar</i> compared to the previous week.	Overall, the indicators show that influenza activity was similar in weeks 34 and 35 compared to weeks 32 and 33.

*The number of **reported** cases should be interpreted with caution because there is a lag between illness onset, hospital admission or death and when this information is reported to public health.

Overall, influenza activity in Ontario during weeks 34 and 35, 2011, was similar to the previous two weeks. Ontario health units reported no new confirmed cases of influenza for weeks 34 and 35 through the integrated Public Health Information System (iPHIS). No new institutional influenza outbreaks were reported during this period as well. A total of 1,040 institutional respiratory infection outbreaks were reported in the 2010/2011 season up to Week 35, of which 437 (42.0%) were due to influenza. For week 35, health units reported no influenza activity (30/36) or did not submit a report (6/36). The ILI consultation rate of 9.51/1,000 patient visits for week 35 was lower than the rate for week 35 in previous years.

For a definition of ILI activity levels and links to websites providing current influenza information from other sources, please refer to the attached Appendix-I. If you would like to provide feedback on the Bulletin, please contact Christine D'Souza (christine.dsouza@oahpp.ca, 647-260-7634) or Michael Whelan (michael.whelan@oahpp.ca, 647-260-7636).

Table 1: Summary of confirmed influenza cases and institutional influenza outbreaks by health region (Weeks 34 and 35, 2010-2011)

Confirmed influenza cases*†	HEALTH REGION							TOTAL
	North West	North East	Eastern	Central East	Toronto	South West	Central West	
Pandemic (H1N1) 2009	0	0	0	0	0	0	0	0
Influenza A (Not Subtyped/No Subtype)	0	0	0	0	0	0	0	0
Influenza A (Seasonal H1)	0	0	0	0	0	0	0	0
Influenza A (Seasonal H3)	0	0	0	0	0	0	0	0
Influenza A** (Other)	0	0	0	0	0	0	0	0
Influenza B	0	0	0	0	0	0	0	0
Influenza A and B	0	0	0	0	0	0	0	0
Total new cases	0	0	0	0	0	0	0	0
Institutional outbreaks of pandemic (H1N1) 2009 ‡	0	0	0	0	0	0	0	0
Institutional outbreaks of Influenza (Other Subtypes/Not Subtyped)‡	0	0	0	0	0	0	0	0

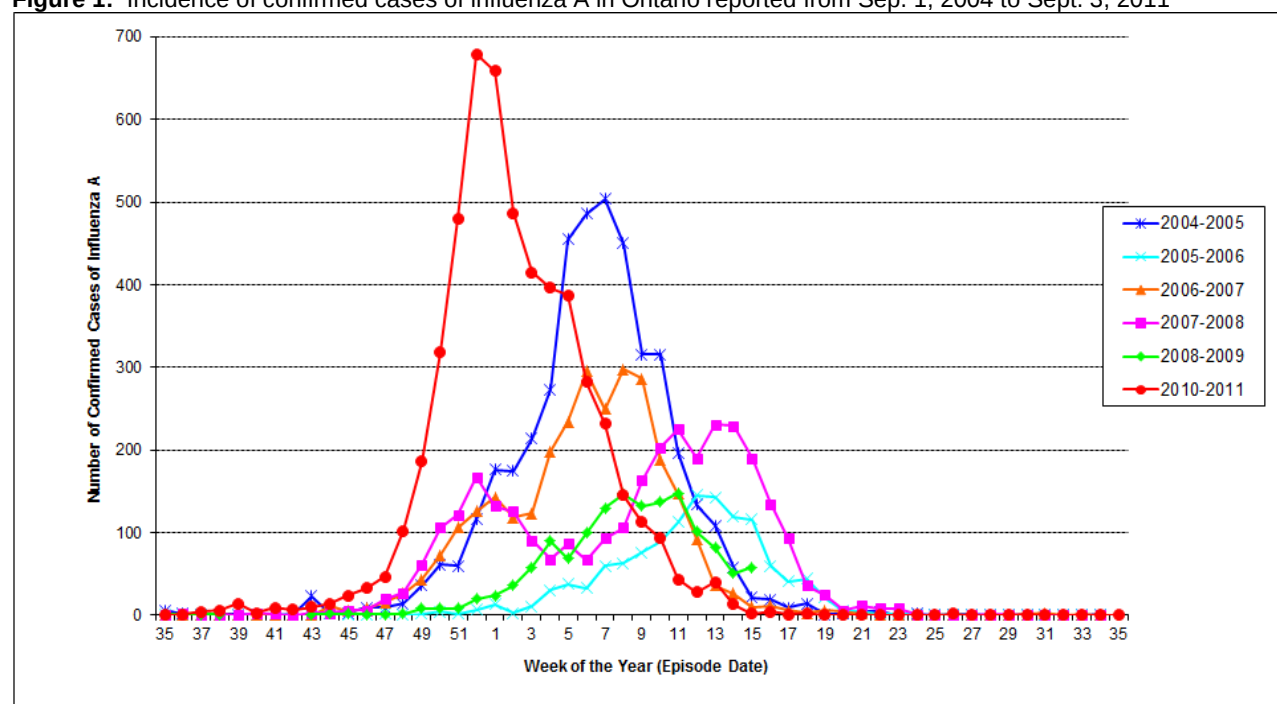
SOURCE: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2011/09/07].

* Includes reports of confirmed influenza through iPHIS, as well as cases in institutional outbreaks, with dates of onset for the first case in the surveillance period.

‡ Confirmed outbreaks in institutions with onset date of symptoms during the surveillance period.

** Includes indeterminate, untypeable and other subtypes.

Figure 1: Incidence of confirmed cases of influenza A in Ontario reported from Sep. 1, 2004 to Sept. 3, 2011[†]



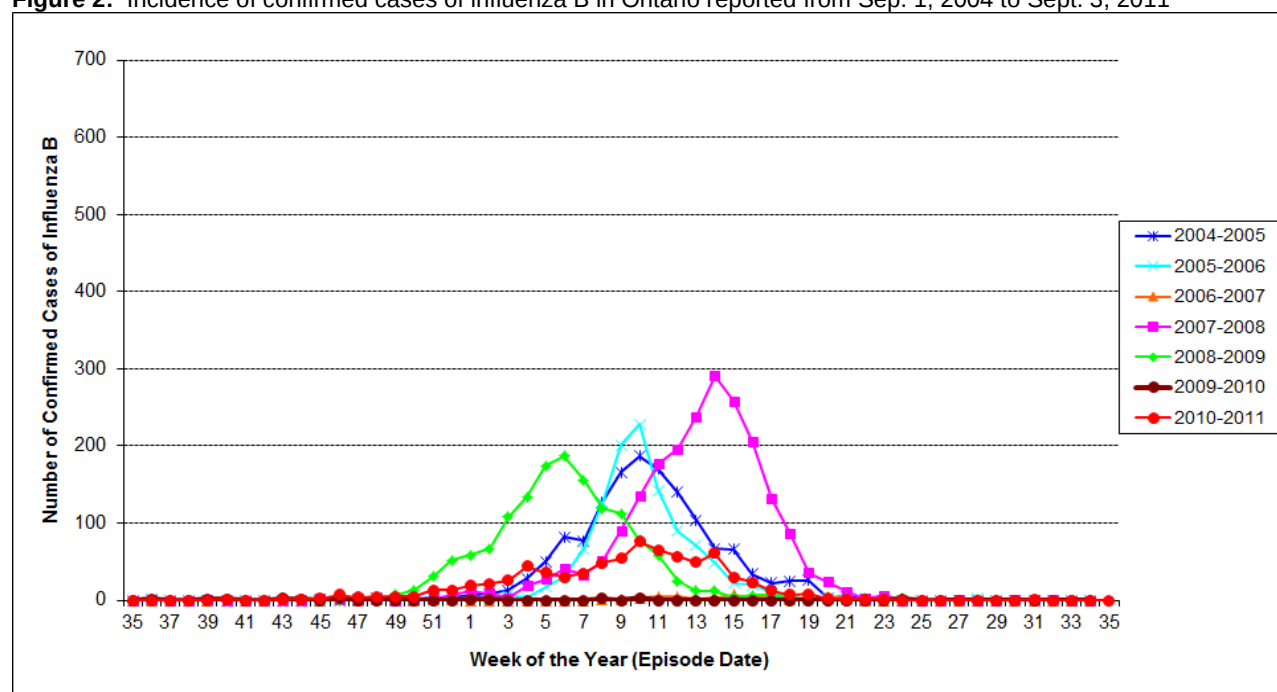
SOURCE: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2011/09/08].
[†] Episode Date for a case corresponds to the earliest date on record for the case according to the iPHIS hierarchy (Symptom Date > Clinical Diagnosis Date > Specimen Collection Date > Lab Test Date > Reported Date)

Note: Cases after week 14 in the 2008-09 season were excluded because seasonal influenza cases from this period may have been detected due to heightened surveillance for all influenza-like illness, therefore this period is not comparable to a regular flu season. Additionally, all cases from the 2009-10 influenza season were excluded from this graph due to its incomparability to a regular flu season as a result of the pH1N1 pandemic.

Note: Week 53 of the 2008-09 season has been removed for continuity in displaying trends.

Note: Interpret tail of 2010-2011 line with caution due to reporting lags.

Figure 2: Incidence of confirmed cases of influenza B in Ontario reported from Sep. 1, 2004 to Sept. 3, 2011[†]

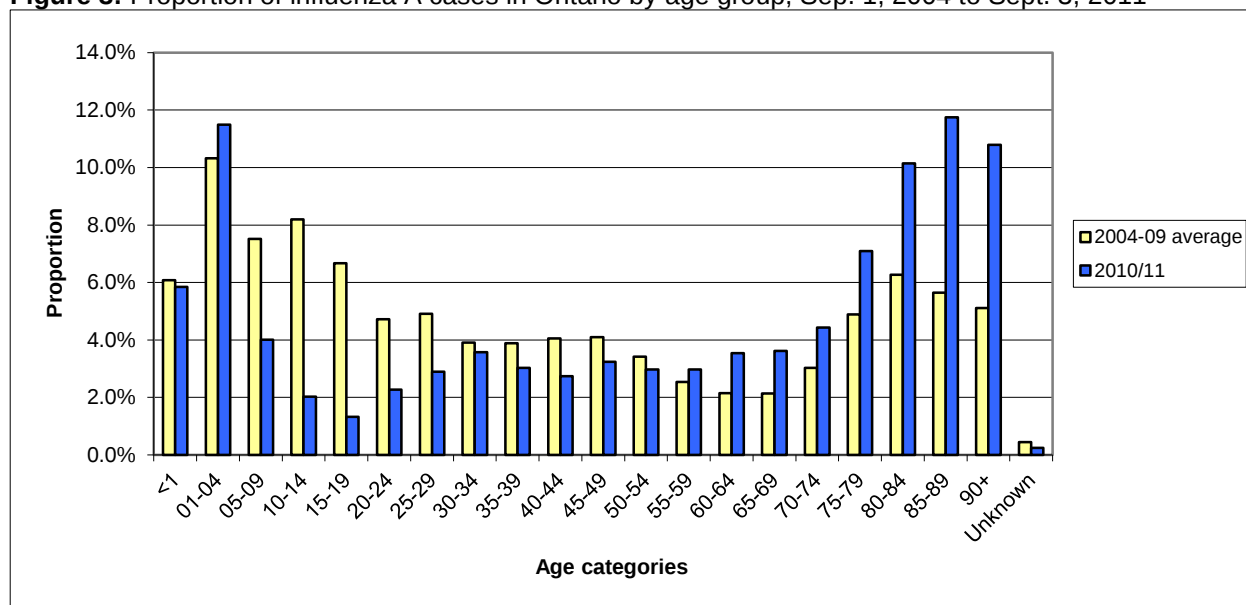


SOURCE: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2011/09/08].
[†] Episode Date for a case corresponds to the earliest date on record for the case according to the iPHIS hierarchy (Symptom Date > Clinical Diagnosis Date > Specimen Collection Date > Lab Test Date > Reported Date)

Note: Week 53 of the 2008-09 season has been removed for continuity in displaying trends.

Note: Interpret tail of 2010-2011 line with caution due to reporting lags.

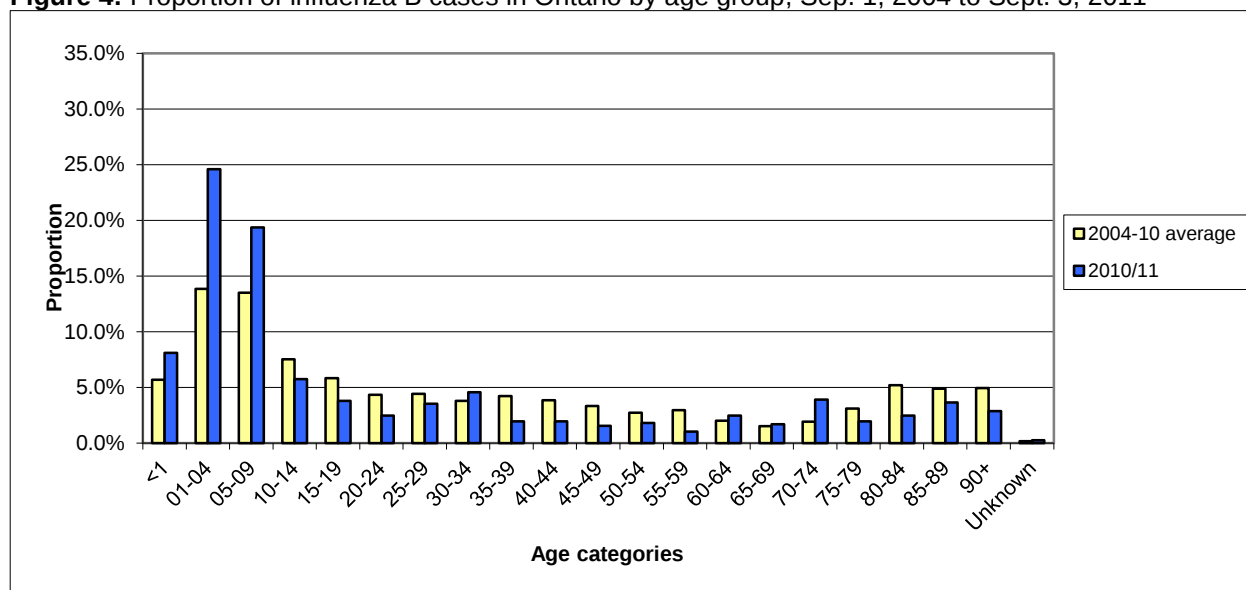
Figure 3: Proportion of influenza A cases in Ontario by age group, Sep. 1, 2004 to Sept. 3, 2011



Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2011/09/08].

Note: The 2009-10 influenza season has been excluded since the majority were pandemic H1N1 cases to allow for valid comparisons between seasonal influenza seasons.

Figure 4: Proportion of influenza B cases in Ontario by age group, Sep. 1, 2004 to Sept. 3, 2011



Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2011/09/08].

Table 2: Cumulative[†] confirmed cases of influenza by health unit and health region with a reported date between September 1, 2010 – September 3, 2011**

Region	Health Unit	Influenza A					Influenza A and B	Influenza B	TOTAL Cumulative
		pH1N1	No Subtype/ Not Subtyped	Other*	H1	H3			
North West	Northwestern	1	8	0	0	18	0	9	36
	Thunder Bay District	0	3	0	0	29	0	7	39
	TOTAL NORTH WEST	1	11	0	0	47	0	16	75
North East	Algoma	1	5	0	0	49	0	5	60
	North Bay Parry Sound District	2	32	0	0	35	0	3	72
	Porcupine	0	2	0	0	51	0	0	53
	Sudbury and District	0	12	0	0	39	0	13	64
	Timiskaming	0	1	0	0	1	0	1	3
	TOTAL NORTH EAST	3	52	0	0	175	0	22	252
Eastern	City of Ottawa	0	150	0	0	34	0	16	200
	Eastern Ontario	0	19	1	0	57	0	5	82
	Hastings and Prince Edward Counties	3	5	0	0	63	0	6	77
	Kingston, Frontenac, Lennox and Addington	2	14	0	0	46	0	8	70
	Leeds, Grenville And Lanark District	2	22	1	0	22	0	3	50
	Renfrew County And District	0	7	0	0	12	0	3	22
	TOTAL EASTERN	7	217	2	0	234	0	41	501
Central East	Durham Region	12	32	0	0	89	0	27	160
	Haliburton, Kawartha, Pine Ridge	5	16	0	0	65	0	9	95
	Peel Region	31	127	0	0	287	0	151	596
	Peterborough County-City	3	32	0	0	91	0	23	149
	Simcoe Muskoka District	22	64	0	0	159	0	17	262
	York Region	18	90	1	0	139	0	51	299
	TOTAL CENTRAL EAST	91	361	1	0	830	0	278	1,561
Toronto	Toronto	112	324	5	0	928	1	197	1,567
	TOTAL TORONTO	112	324	5	0	928	1	197	1,567
South West	Chatham-Kent	1	8	0	0	9	0	2	20
	Elgin-St. Thomas	2	14	0	0	17	0	4	37
	Grey Bruce	0	19	0	0	60	0	7	86
	Huron County	0	21	0	0	29	0	2	52
	Lambton County	3	12	0	0	31	0	8	54
	Middlesex-London	2	189	0	0	53	0	37	281
	Oxford County	0	16	0	0	30	0	2	48
	Perth District	1	8	0	0	62	0	6	77
	Windsor-Essex County	10	48	0	0	41	0	17	116
	TOTAL SOUTHWEST	19	335	0	0	332	0	85	771
Central West	Brant County	1	16	0	0	28	0	5	50
	City Of Hamilton	5	360	0	0	73	0	31	469
	Haldimand-Norfolk	1	17	0	0	16	0	2	36
	Halton Region	7	43	0	0	128	0	41	219
	Niagara Region	4	31	0	0	85	0	18	138
	Waterloo Region	11	143	0	0	99	0	21	274
	Wellington-Dufferin-Guelph	9	41	0	0	79	0	7	136
	TOTAL CENTRAL WEST	38	651	0	0	508	0	125	1,322
TOTAL	TOTAL ONTARIO	271	1,951	8	0	3,054	1	764	6,049

SOURCE: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2011/09/08].

[†]Cumulative case counts include late reports and records that are otherwise reconciled. Therefore, cumulative counts may not equal new cases plus previous cumulative value.*Includes indeterminate, untypeable and other subtypes

**The Table of confirmed cases of influenza by health unit and health region with a reported date during Week 35 has been removed from this edition as there are no new counts reported during this period.

Hospitalizations and deaths among laboratory confirmed influenza cases, Sep. 1, 2010 – Sep. 3, 2011

As of September 3, 2011, 2,343 hospitalizations and 202 deaths have been reported among lab confirmed influenza cases reported in Ontario for the 2010-2011 season. Most of the hospitalizations and deaths occurred in influenza A cases. The highest rates of hospitalization were observed in cases under the age of five and in cases 65 years of age and older. The highest death rate was observed among cases 65 years of age and older.

Table 3a. Incidence of hospitalizations among lab confirmed influenza cases in Ontario, Sep. 1, 2010 – Sep. 3, 2011

Age Group	Influenza A*							Influenza B		All Influenza	
	pH1N1	No Subtype/ Not Subtyped	Other*	H1	H3	Total	Rate/ 100,000	Total	Rate/ 100,000	Total	Rate/ 100,000
<1	10	71	0	0	73	154	112.88	33	24.19	187	137.07
1-4	12	122	0	0	106	240	43.53	82	14.87	322	58.40
5-14	10	48	0	0	37	95	6.29	70	4.63	165	10.92
15-24	8	24	0	0	7	39	2.20	9	0.51	48	2.70
25-44	21	38	1	0	81	141	3.78	16	0.43	157	4.20
45-64	51	93	1	0	125	270	7.35	25	0.68	295	8.04
65+	22	369	1	0	705	1,097	60.48	71	3.91	1,168	64.39
TOTAL	134	765	3	0	1,134	2,036	15.43	306	2.32	2,342	17.75

Source (incidence): Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (IPHS) database, extracted by Public Health Ontario [2011/09/08]

Source (population): Ontario population projections for 2010: Ontario Ministry of Health and Long-Term Care, Public Health Planning Database (PHPDB), extracted [2010/11/30]

* One hospitalization with unknown age was excluded

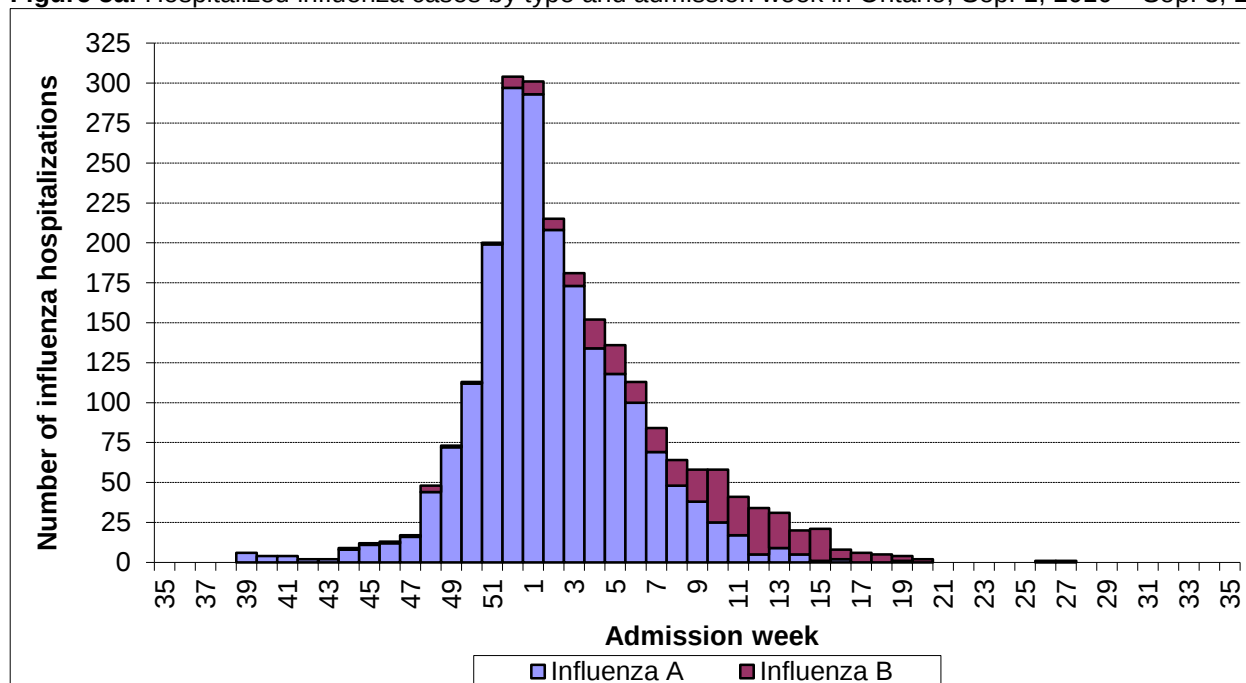
Table 3b. Incidence of deaths among lab confirmed influenza cases in Ontario, Sep. 1, 2010 – Sep. 3, 2011

Age Group	Influenza A*							Influenza B		All Influenza	
	pH1N1	No Subtype/ Not Subtyped	Other*	H1	H3	Total	Rate/ 100,000	Total	Rate/ 100,000	Total	Rate/ 100,000
<1	0	1	0	0	0	1	0.73	1	0.73	2	1.47
1-4	1	2	0	0	0	3	0.54	2	0.36	5	0.91
5-14	1	0	0	0	0	1	0.07	0	0.00	1	0.07
15-24	0	1	0	0	1	2	0.11	0	0.00	2	0.11
25-44	3	3	0	0	4	10	0.27	0	0.00	10	0.27
45-64	3	5	1	0	11	20	0.54	1	0.03	21	0.57
65+	3	45	0	0	105	153	8.43	8	0.44	161	8.88
TOTAL	11	57	1	0	121	190	1.44	12	0.09	202	1.53

Source (incidence): Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (IPHS) database, extracted by Public Health Ontario [2011/09/08]

Source (population): Ontario population projections for 2010: Ontario Ministry of Health and Long-Term Care, Public Health Planning Database (PHPDB), extracted [2010/09/08]

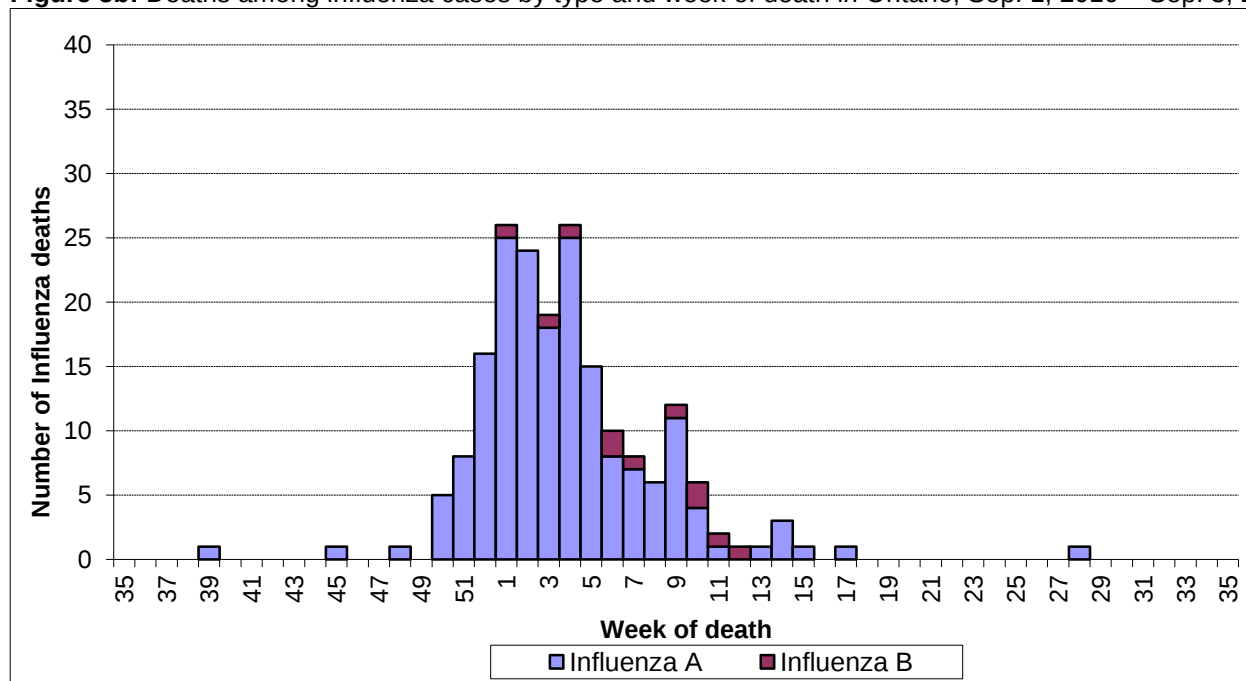
Figure 5a: Hospitalized influenza cases by type and admission week in Ontario, Sep. 1, 2010 – Sep. 3, 2011



Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario[2011/09/08]

Note: Interpret tail with caution due to reporting lags

Figure 5b: Deaths among influenza cases by type and week of death in Ontario, Sep. 1, 2010 – Sep. 3, 2011



Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario[2011/09/08]

Note: Interpret tail with caution due to reporting lags; 8 deaths with unknown death dates were excluded from this graph.

Influenza Subtype(s) *:

During week 35, a total of 730 results of isolate testing were received by the Public Health Agency of Canada of which two isolates tested positive for influenza A and one isolate tested positive for influenza B. The influenza A and B isolates were from Quebec (100.0%).

Antigenic Characterization (National) †:

Since September 1, 2010, the National Microbiology Laboratory (NML) has antigenically characterized 1,021 influenza isolates (284 H3N2, 151 H1N1 and 586 B viruses) that were received from Canadian laboratories.

Influenza A (H3N2):

281/284 influenza A (H3N2) viruses characterized were antigenically related to A/Perth/16/2009, which is the influenza A/H3N2 component recommended for the 2010-11 Northern Hemisphere influenza vaccine. Three viruses (1.0%) tested showed reduced titer with antiserum produced against A/Perth/16/2009.

Influenza A (H1N1):

149/151 Influenza A (H1N1) viruses characterized were antigenically related to A/California/7/2009, which is the recommended H1N1 component for the 2010-11 Northern Hemisphere influenza vaccine. Two viruses (1.3%) tested showed reduced titer with antiserum produced against A/California/7/2009.

Influenza B:

557/586 influenza B viruses tested belong to the Victoria lineage and were characterized as B/Brisbane/60/08-like, which is the recommended influenza B component for the 2010-11 Northern Hemisphere influenza vaccine. Four of the 557 viruses tested showed reduced titer with antiserum produced against B/Brisbane/60/08.

29 (4.9%) influenza B viruses were characterized as B/Wisconsin/01/2010-like, which belongs to the B/Yamagata/16/88 lineage. B/Wisconsin/01/2010-like viruses are antigenically and genetically different from the previous Yamagata lineage vaccine strain B/Florida/04/2006.

Antigenic Characterization (Provincial) †:

Since September 1, 2010, the National Microbiology Laboratory (NML) has antigenically characterized the following strains from Ontario: 96 influenza A /Perth/16/2009-like (H3N2), 71 influenza A/California/7/2009-like (H1N1), 288 influenza B/Brisbane/60/2008-like and 24 B/Wisconsin/01/2010-like.

Antiviral Resistance and Sensitivity (National) †:

a) Amantadine:

A total of 496/667 H3N2 and the 170 pandemic H1N1 isolates tested for resistance to amantadine were found to be resistant. One H3N2 was sensitive to amantadine

b) Oseltamivir:

One (1/154) H1N1 isolate tested for resistance to oseltamivir was found to be resistant with the H275Y mutation, one (1/259) H3N2 was resistant with E119V mutation and one influenza B isolate was resistant with the D198N mutation. The resistant cases were associated with oseltamivir prophylaxis/treatment. 153/154 H1N1, 579/580 B and 258/259 H3N2 isolates were sensitive.

c) Zanamivir:

A total of 255 H3N2, 151 H1N1 and 578 B isolates were tested for resistance to zanamivir and found to be sensitive. One influenza isolate was resistant with the D108N mutation.

Antiviral Resistance and Sensitivity (Provincial) †:

a) Amantadine:

Of the 194 H3N2 and 80 pandemic H1N1 isolates tested, 193 influenza A (H3N2) isolates and all of the pandemic H1N1 isolates were resistant to amantadine. One H3N2 isolate was sensitive to amantadine.

b) Oseltamivir:

All 78 H3N2 and 309 influenza B isolates tested were sensitive to oseltamivir. Of the 74 pandemic H1N1 isolates tested, 73 were sensitive to oseltamivir and one was resistant.

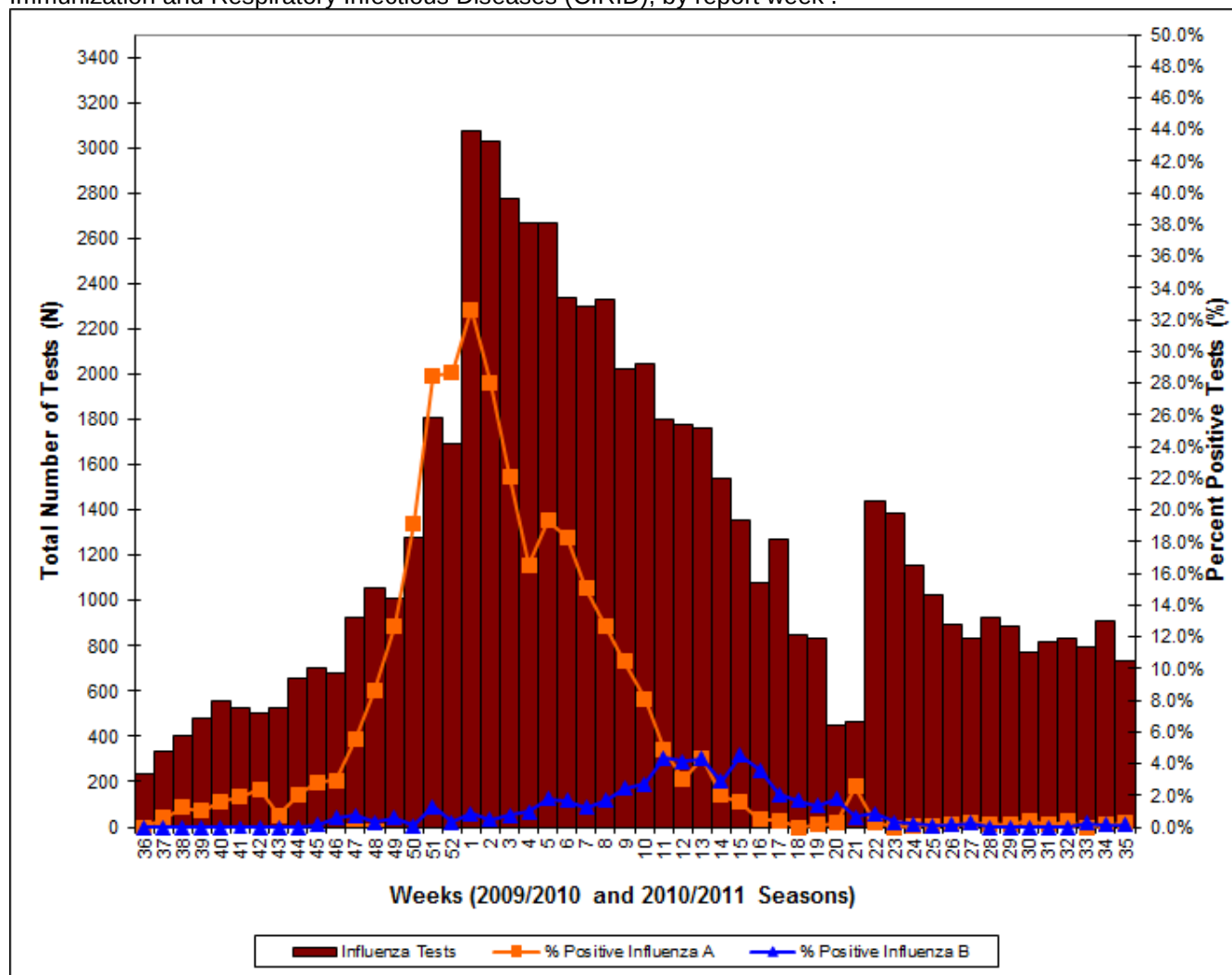
c) Zanamivir:

All 78 H3N2, 310 influenza B and 72 pandemic H1N1 isolates tested for resistance to zanamivir were sensitive.

†National Antigenic Characterization and Antiviral Resistance data are current as of September 2, 2011.

* These data have been obtained from the Respiratory Virus Detection tables of Public Health Agency of Canada and do not include data from late reports to PHAC: Week 35, 2011. Please note that the last version received from PHAC as of 12:30PM on September 8, 2011 was used.

Figure 6: Total number of influenza tests performed and percent of positive tests in Ontario reported to the Centre for Immunization and Respiratory Infectious Diseases (CIRID), by report week*.



Source: Public Health Agency of Canada. These data have been obtained from the Respiratory Virus Detection tables of Public Health Agency of Canada from 17 labs in Ontario and do not include data from late reports to PHAC for the current season: Week 35, 2011. Please note that the last version received from PHAC as of 12:30PM on September 8, 2011 was used.

* Total numbers reported include late reports from previous seasons; therefore totals may not be equal to the sum of the weekly numbers.

Note: Cumulative numbers for season to date are available through FluWatch: <http://www.phac-aspc.gc.ca/fluwatch/>

Table 4: Summary of other respiratory virus detections/isolations in Ontario in Week 35

Organism Name	Number of Positive Tests	Number of Tests	% Positive
Respiratory Syncytial Virus	1	203	0.49%
Parainfluenza (all types)	8	203	3.94%
Adenovirus	1	203	0.49%
Human Metapneumovirus	1	142	0.70%
Rhinovirus	12	147	8.16%
Coronavirus	0	82	0.00%

Source: These data have been obtained from the Respiratory Virus Detection tables of Public Health Agency of Canada from 17 labs in Ontario and do not include data from late reports to PHAC: Week 35, 2011. Please note that the last version received from PHAC as of 12:30PM on September 8, 2011 was used.

Table 5: Institutional respiratory infection outbreaks in Ontario: new outbreaks* in Weeks 34 and 35 and total outbreaks for the season**

Institutional Respiratory Infection Outbreaks		
New Outbreaks*	N	% (of outbreaks)
Influenza A (All subtypes)	0	0.0
Influenza B	0	0.0
Influenza A and B	0	0.0
Parainfluenza (All types)	0	0.0
RSV	0	0.0
Combined Outbreaks [†]	0	0.0
Other organisms [‡]	0	0.0
Enterovirus/rhinovirus	2	66.6
No organism identified	1	33.3
TOTAL	3	100.0
Total Respiratory Infection Outbreaks of the Season to date**	N	% (of outbreaks)
Influenza A (All subtypes)	428	41.2
Influenza B	9	0.9
Influenza A and B	0	0.0
Parainfluenza (All types)	57	5.5
RSV	56	5.4
Combined Outbreaks [†]	49	4.7
Other organisms [‡]	80	7.7
Enterovirus/rhinovirus	192	18.5
No organism identified	169	16.3
TOTAL	1040	100.0
Types of Institutions – All Outbreaks **	N	% (of outbreaks)
Long-Term Care Homes	619	59.5
Hospitals	61	5.9
Retirement Homes	114	11.0
Other	6	0.6
Unknown	240	23.1
TOTAL	1040	100.0

Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2011/09/07]

* New outbreaks are those in which the date of onset of illness in the first case occurred and was recorded through iPHIS in the current surveillance period; i.e. August 21, 2011 – September 3, 2011

** Season to date includes all outbreaks in which the date of onset of illness in the first case occurred up to Week 35.

[†] Combined outbreaks include outbreaks in which more than one non-influenza organism has been identified (e.g. RSV, parainfluenza, rhinovirus, etc.)

[‡] Other organisms include outbreaks involving other aetiological agents, such as human metapneumovirus, adenovirus and coronavirus.

Table 6: Outbreak related complications in institutional respiratory infection outbreaks in Ontario during the surveillance season*†

Outbreak Related Cases – All Outbreaks	N	% (of total cases)
Residents	12,496	73.4
Patients	577	3.4
Staff	3,951	23.2
Total Cases	17,024	100.0
Deaths		% (of cases per role)
Residents	357	2.9
Patients	16	2.8
Staff	0	0.0
Pneumonia (Chest x-ray confirmed)		% (of cases per role)
Residents	392	3.1
Patients	24	4.2
Staff	15	0.4
Hospitalizations		% (of cases per role)
Residents	750	6.0
Staff	3	0.1
Outbreak Related Cases – All Influenza Outbreaks	N	% (of total cases)
Residents	5,529	72.1
Patients	274	3.6
Staff	1,861	24.3
Total Cases	7,664	100.0
Deaths		% (of cases per role)
Residents	214	3.9
Patients	9	3.3
Staff	0	0.0
Pneumonia (Chest x-ray confirmed)		% (of cases per role)
Residents	207	3.7
Patients	16	5.8
Staff	11	0.6
Hospitalizations		% (of cases per role)
Residents	465	8.4
Staff	1	0.1

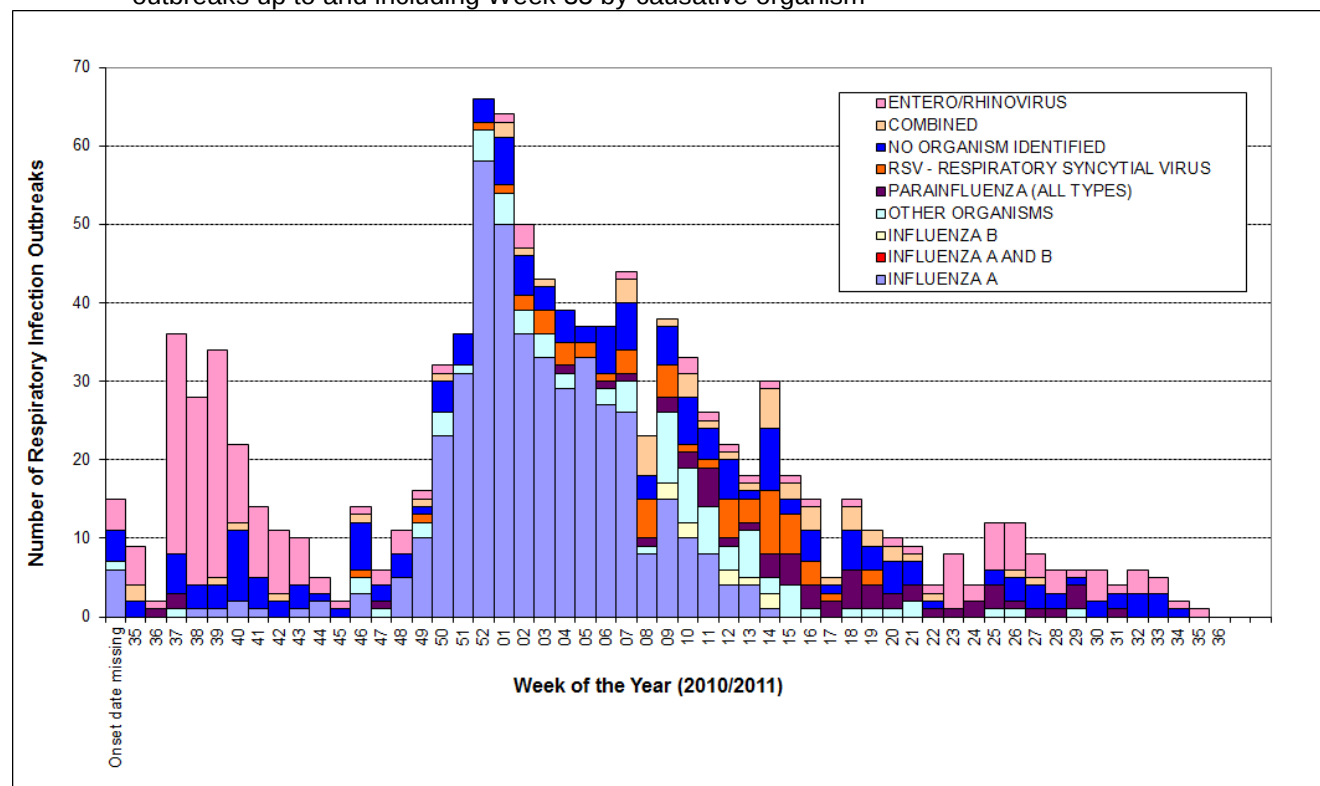
Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2011/09/07]

* Season to date includes all outbreaks in which the date of onset of illness in the first case occurred from September 1, 2010 – September 3, 2011

† Outbreak related case counts are based on aggregate case counts submitted for each outbreak and include laboratory and epidemiologically linked cases.

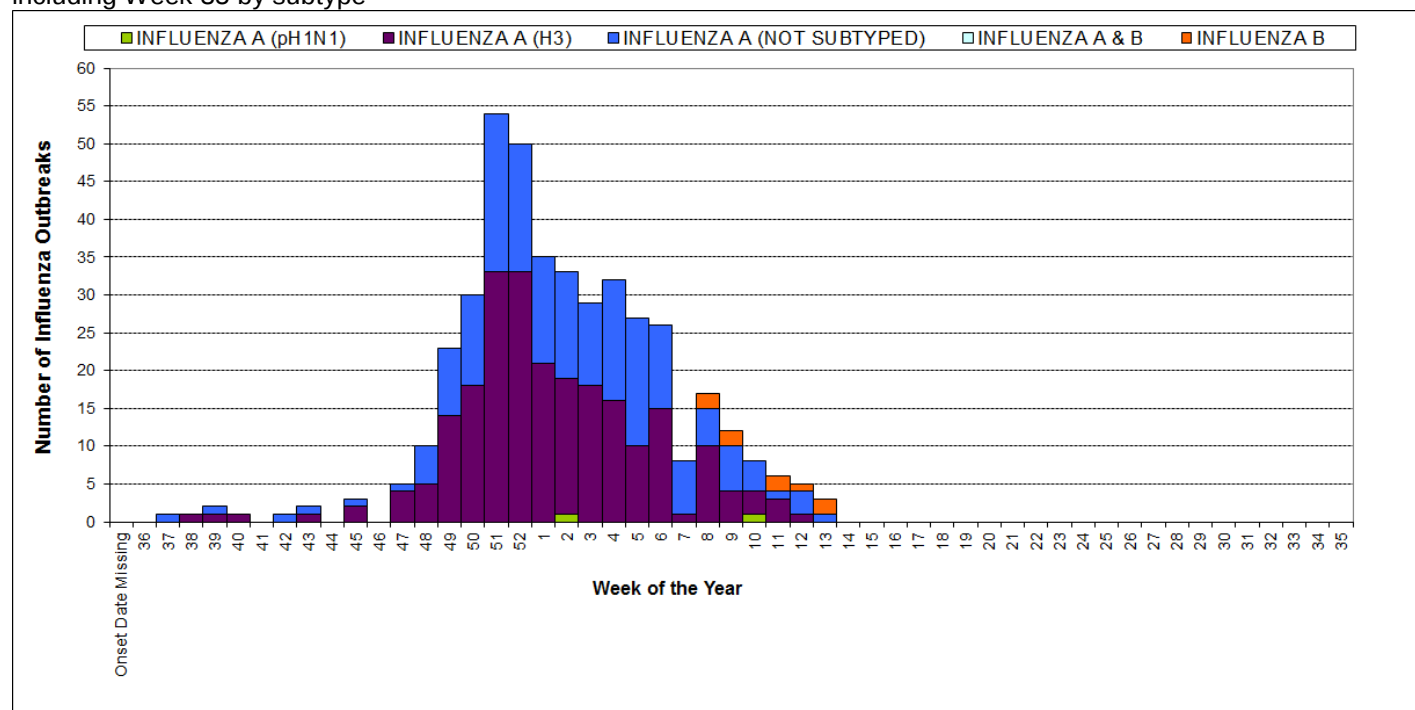
* Season to date includes all outbreaks in which the date of onset of illness in the first case occurred up to and including Week 35

Figure 7: Institutional respiratory infection outbreaks in Ontario by onset of illness in the first case: Total outbreaks up to and including Week 35 by causative organism



Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2011/09/07]

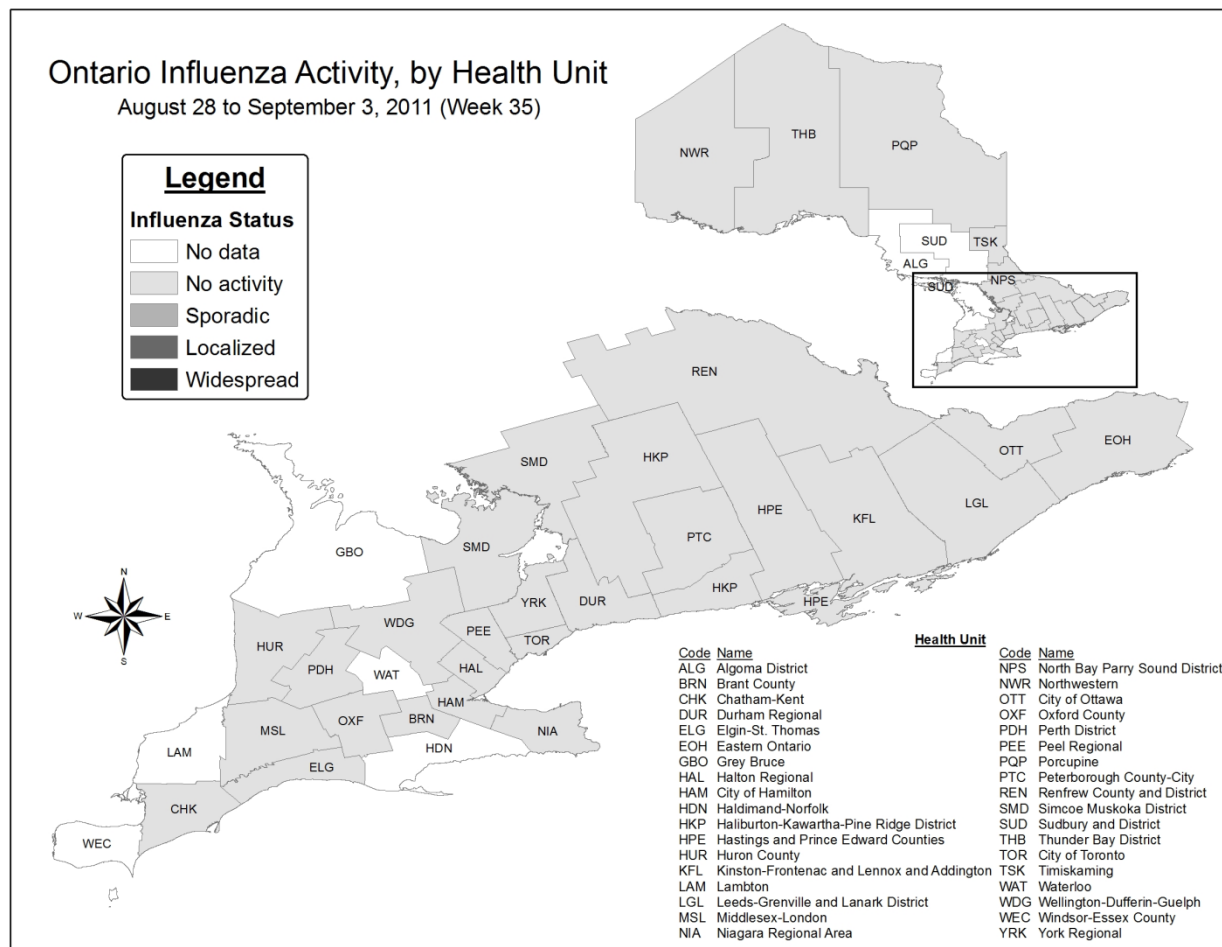
Figure 8: Institutional influenza outbreaks in Ontario by onset of illness in the first case: Total outbreaks up to and including Week 35 by subtype*



Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2011/09/07]

*School outbreaks are not included in this chart.

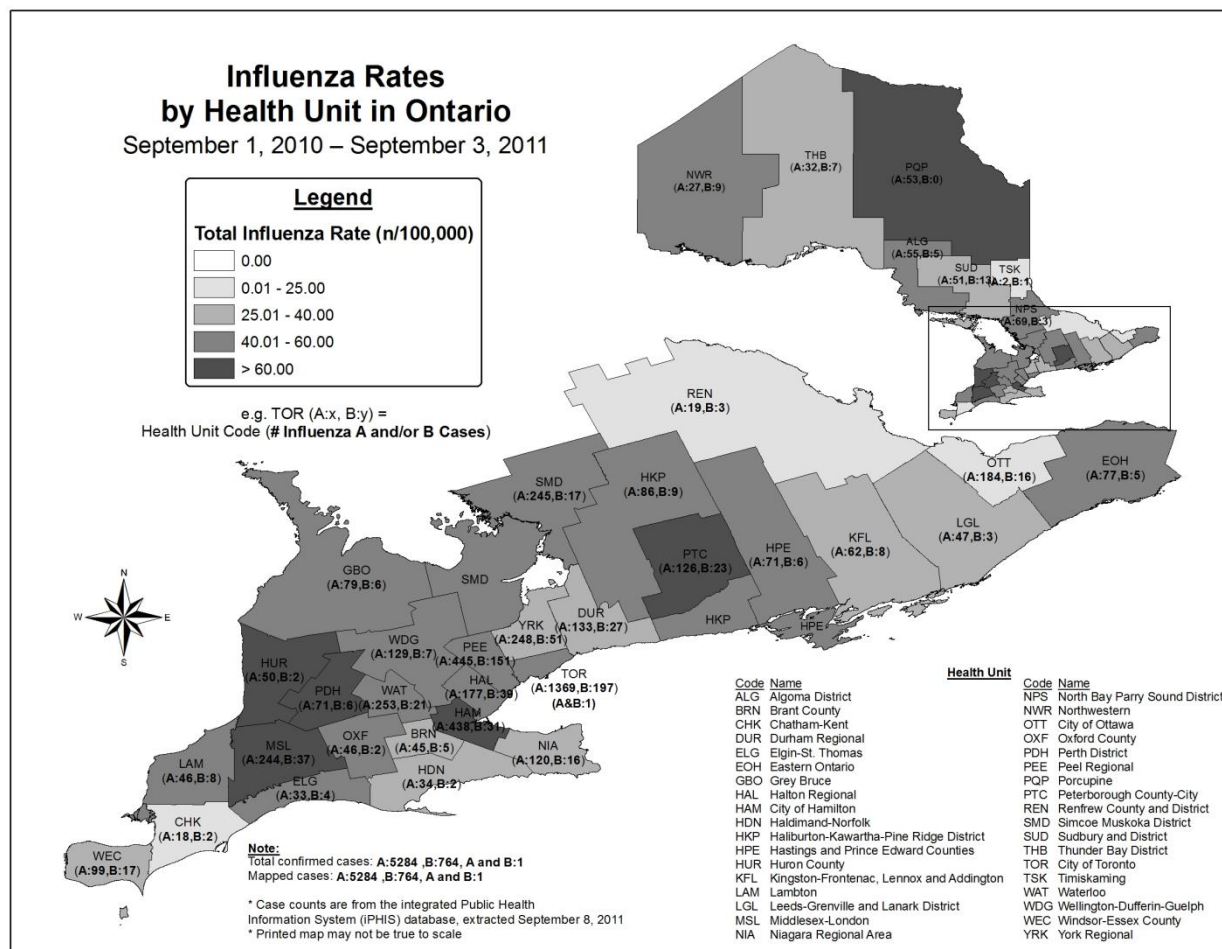
Figure 9: Influenza activity* levels in Ontario by health unit for Week 35, 2011



Source: MOHLTC [Provincial Influenza Activity Report (Appendix C) Database]

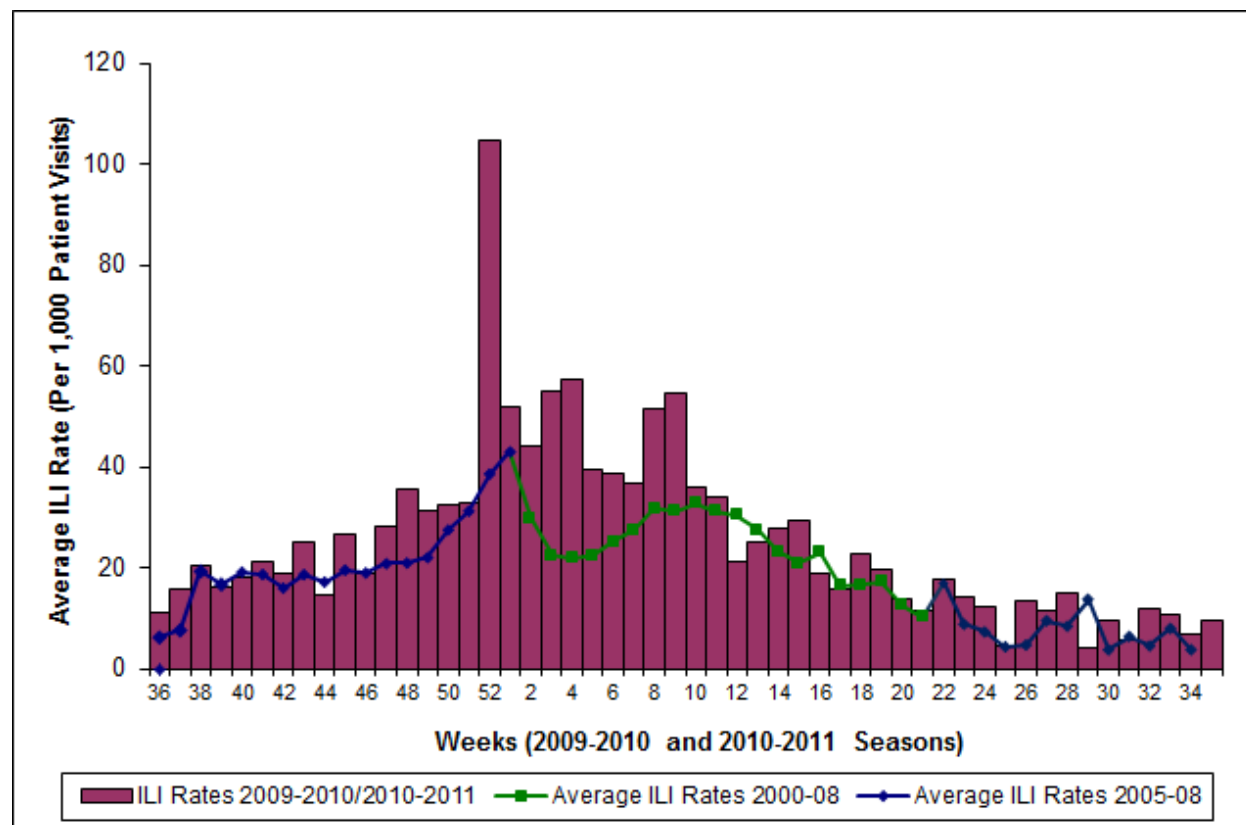
* Influenza activity levels are assigned by local public health units and reported to the MOHLTC by the Tuesday following the end of the surveillance week at 4 pm. Activity levels are assigned based on laboratory confirmations, ILI reports from various sources, and laboratory confirmed institutional outbreaks. Please refer to detailed [definitions](#) for the 2010-2011 season included in the Appendix-1]

Figure 10: Cumulative incidence rates and counts for cases of influenza in Ontario by health unit, September 1, 2010 – September 3, 2011)*



Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted [2011/09/08]

Figure 11: Average influenza-like illness (ILI) consultation rate (per 1,000 patient visits) reported by sentinel physicians* in Ontario up to the 2010-11 surveillance season, by report week, compared to Ontario average^{†**} (1999/2000 to 2007/08 seasons).



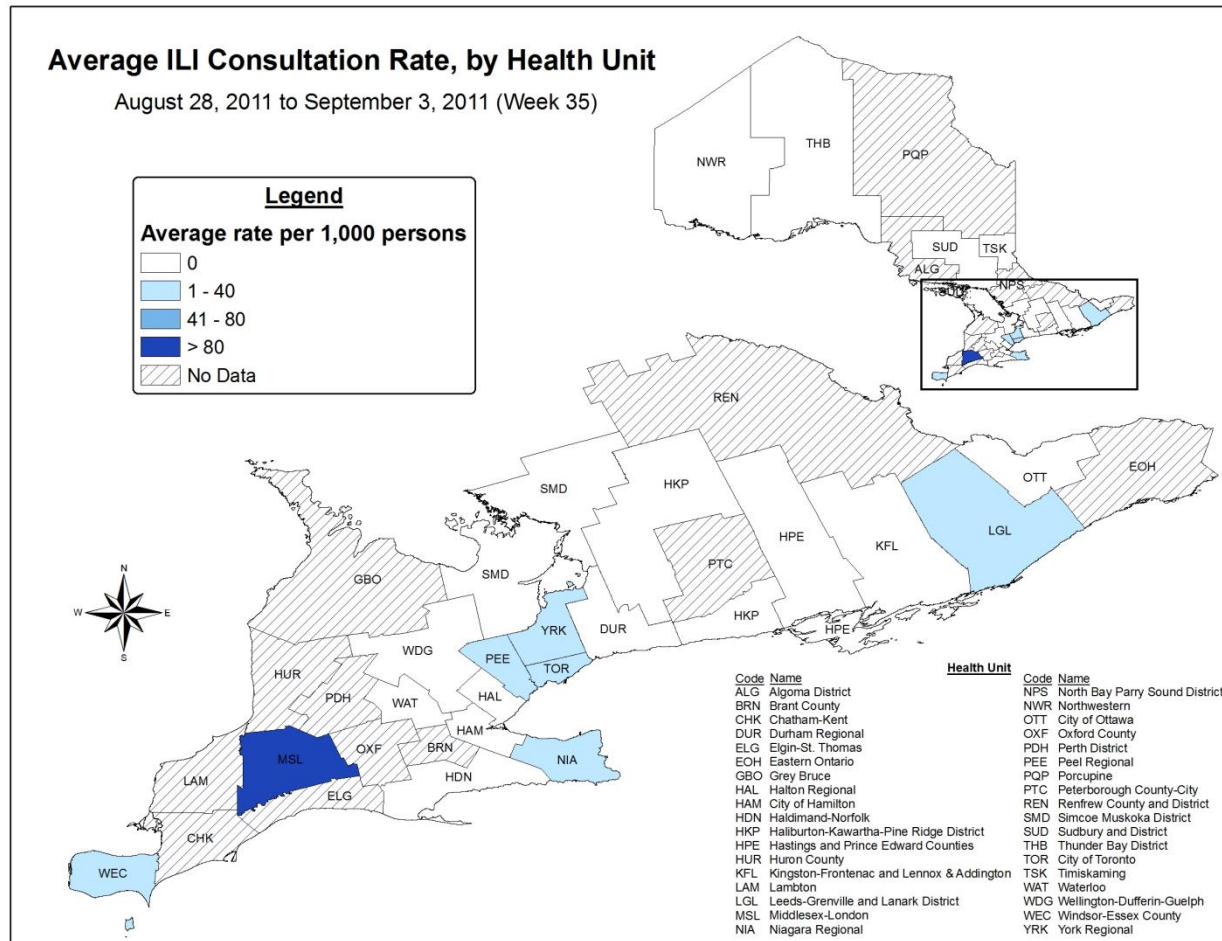
Source: Public Health Agency of Canada

* Sentinel physician information is reported to Public Health Agency of Canada, 66 sentinels reported in Week 35. The large increase in week 52 may be due to a combination of factors including: a true increase in influenza activity, reduced physician hours, fewer routine visits, and significantly fewer sentinel physicians reporting compared to normal (only 49 physicians reported in the last week of December, compared to at least 80 physicians normally reporting during any given week in the influenza season).

[†]No data available for mean rate in previous years for weeks 21 to 39 (1999-2000 through 2004-2005 seasons). During weeks 20-39, 2002-2003/2004-2005 seasons, ILI was reported once every two weeks, on even weeks only.

^{**}Please note that the ILI consultation rate for Week 4 has been updated due to several data errors identified in the original file.

Figure 12: Average influenza-like illness consultation rate (per 1,000 patient visits) by health unit as reported by sentinel physicians* in Ontario, for Week 35



Source: Public Health Agency of Canada

* Sentinel physicians report ILI and patient data to the Public Health Agency of Canada; 66 sentinels reported in week 35, of which 65 were matched to a health unit and represented in the above map.

Note: The small numbers of sentinel physicians reporting at the local level can make the ILI rates unstable. Please interpret these data correspondingly.

Table 7: Average influenza-like illness consultation rate (per 1,000 patient visits) by age group as reported by sentinel physicians* in Ontario, for Week 35.

Age Category	0 – 4	5 – 19	20 – 64	65 +	Unknown	TOTAL
ILI Sum	7	3	6	0	0	16
ILI Consultation Rate (per 1,000 patient visits)	97.22	16.04	6.44	0.00	0.00	9.51

Source: Public Health Agency of Canada

Source: Public Health Agency of Canada
Sentinel physician information is reported to the Public Health Agency of Canada; 66 sentinels reported in week 35.

FURTHER INFORMATION

1. Ontario Ministry of Health and Long-Term Care
Previous issues of the *Ontario Influenza Bulletin* can continue to be accessed at:
<http://www.health.gov.on.ca/en/pro/programs/publichealth/flu/bulletins/2010/default.aspx>

When referencing material from the Ontario Influenza Bulletin please use the following formats for the bulletin you are referencing:

Bulletins issued on or prior to June 30, 2011:

Ontario Ministry of Health and Long-Term Care, Ontario Influenza Bulletin 2010-2011 Season, Surveillance Week ##. <URL>

Bulletins issued after July 1, 2011:

Public Health Ontario, Ontario Influenza Bulletin 2010-2011 Season, Surveillance Week ##. <URL>

2. Public Health Ontario
PHO Weekly Laboratory Surveillance Update
<http://www.oahpp.ca/h1n1/index.html#2>
3. Public Health Agency of Canada
Issues of FluWatch can be accessed at:
www.phac-aspc.gc.ca/fluwatch/
4. United States Centers for Disease Control and Prevention
<http://www.cdc.gov/flu/weekly/fluactivitysurv.htm>
5. European Influenza Surveillance Scheme
<http://www.ecdc.europa.eu/en/activities/surveillance/EISN/Pages/home.aspx>

INFORMATION ABOUT H1N1 INFLUENZA (HUMAN SWINE INFLUENZA)

1. CDC (Human swine flu investigation)
<http://www.cdc.gov/swineflu/investigation.htm>
2. PHAC (Human swine flu investigation)
http://www.phac-aspc.gc.ca/alert-alerte/swine_200904-eng.php
3. WHO Swine Flu general info
<http://www.who.int/csr/disease/swineflu/en/index.html>
4. Ontario Ministry of Health (Important Health Notices)
<http://www.health.gov.on.ca/english/providers/program/emu/ihn.html>

INFORMATION ABOUT AVIAN INFLUENZA

For latest information on the status of avian influenza worldwide please use the following link:

Public Health Agency of Canada
<http://www.phac-aspc.gc.ca/h5n1/index.html>

Influenza Surveillance Weeks for 2011-2012 and date of submission of Appendix C

WEEKS	START	END	Appendix C Submission to Public Health Ontario
WK35	28-Aug-11	3-Sep-11	6-Sep-11
WK36	4-Sep-11	10-Sep-11	13-Sep-11
WK37	11-Sep-11	17-Sep-11	20-Sep-11
WK38	18-Sep-11	24-Sep-11	27-Sep-11
WK39	25-Sep-11	1-Oct-11	4-Oct-11
WK40	2-Oct-11	8-Oct-11	11-Oct-11
WK41	9-Oct-11	15-Oct-11	18-Oct-11
WK42	16-Oct-11	22-Oct-11	25-Oct-11
WK43	23-Oct-11	29-Oct-11	1-Nov-11
WK44	30-Oct-11	5-Nov-11	8-Nov-11
WK45	6-Nov-11	12-Nov-11	15-Nov-11
WK46	13-Nov-11	19-Nov-11	22-Nov-11
WK47	20-Nov-11	26-Nov-11	29-Nov-11
WK48	27-Nov-11	3-Dec-11	6-Dec-11
WK49	4-Dec-11	10-Dec-11	13-Dec-11
WK50	11-Dec-11	17-Dec-11	20-Dec-11
WK51	18-Dec-11	24-Dec-11	27-Dec-11
WK52	25-Dec-11	31-Dec-11	3-Jan-12
WK1	1-Jan-12	7-Jan-12	10-Jan-12
WK2	8-Jan-12	14-Jan-12	17-Jan-12
WK3	15-Jan-12	21-Jan-12	24-Jan-12
WK4	22-Jan-12	28-Jan-12	31-Jan-12
WK5	29-Jan-12	4-Feb-12	7-Feb-12
WK6	5-Feb-12	11-Feb-12	14-Feb-12
WK7	12-Feb-12	18-Feb-12	21-Feb-12
WK8	19-Feb-12	25-Feb-12	28-Feb-12
WK9	26-Feb-12	3-Mar-12	6-Mar-12
WK10	4-Mar-12	10-Mar-12	13-Mar-12
WK11	11-Mar-12	17-Mar-12	20-Mar-12
WK12	18-Mar-12	24-Mar-12	27-Mar-12
WK13	25-Mar-12	31-Mar-12	3-Apr-12
WK14	1-Apr-12	7-Apr-12	10-Apr-12
WK15	8-Apr-12	14-Apr-12	17-Apr-12
WK16	15-Apr-12	21-Apr-12	24-Apr-12
WK17	22-Apr-12	28-Apr-12	1-May-12
WK18	29-Apr-12	5-May-12	8-May-12
WK19	6-May-12	12-May-12	15-May-12
WK20	13-May-12	19-May-12	22-May-12
WK21	20-May-12	26-May-12	29-May-12
WK22	27-May-12	2-Jun-12	5-Jun-12

WEEKS	START	END	Appendix C Submission to Public Health Ontario
WK23	3-Jun-12	9-Jun-12	12-Jun-12
WK24	10-Jun-12	16-Jun-12	19-Jun-12
WK25	17-Jun-12	23-Jun-12	26-Jun-12
WK26	24-Jun-12	30-Jun-12	3-Jul-12
WK27	1-Jul-12	7-Jul-12	10-Jul-12
WK28	8-Jul-12	14-Jul-12	17-Jul-12
WK29	15-Jul-12	21-Jul-12	24-Jul-12
WK30	22-Jul-12	28-Jul-12	31-Jul-12
WK31	29-Jul-12	4-Aug-12	7-Aug-12
WK32	5-Aug-12	11-Aug-12	14-Aug-12
WK33	12-Aug-12	18-Aug-12	21-Aug-12
WK34	19-Aug-12	25-Aug-12	28-Aug-12
WK35	26-Aug-12	1-Sep-12	4-Sep-12

APPENDIX - I

Definitions for influenza activity levels:

No Data: No activity report corresponding to the surveillance week was received by Public Health Ontario by the Tuesday (at 4 p.m.) following the end of the surveillance period.

No Activity: No laboratory-confirmed* influenza and NO outbreaks detected within the health unit/ influenza surveillance area, within the prior week, although sporadically occurring ILI may or may not be present.†

Sporadic: Sporadically (infrequently) occurring **ILI and at least one lab-confirmed influenza* case with NO outbreaks** detected within the health unit area.†

Localized: sporadically occurring **ILI and lab-confirmed influenza* together with outbreaks of ILI** in schools§ and work sites, or laboratory-confirmed influenza in residential institutions occurring in < 50% of the health unit. Outbreaks affect a single and/or adjacent geographic area within the health unit jurisdiction, e.g. outbreaks in a nursing home and a school in close proximity to each other.†

Widespread: sporadically occurring **ILI and lab-confirmed influenza* together with outbreaks of ILI** in schools and work sites, or laboratory-confirmed influenza in residential institutions occurring in > 50% of the health unit. Outbreaks affect multiple and non-adjacent geographic areas within the health unit jurisdiction, such as two or more regions of the health unit, two or more municipalities, two or more electoral wards, etc.†

* Confirmation of influenza within the surveillance region at any time within the prior week

† Sub-regions within the province or territory as defined by the provincial/territorial epidemiologist

§ Health units have been requested to consider laboratory confirmed pH1N1 outbreaks in camps in their region when evaluating ILI activity levels

Influenza-Like Illness (ILI) Definitions:

A) ILI in the general population:

Acute onset of respiratory illness with fever and cough and with one or more of the following - sore throat, arthralgia, myalgia, or prostration which could be due to influenza virus. In children under 5, gastrointestinal symptoms may also be present. In patients under 5 or 65 and older, fever may not be prominent.

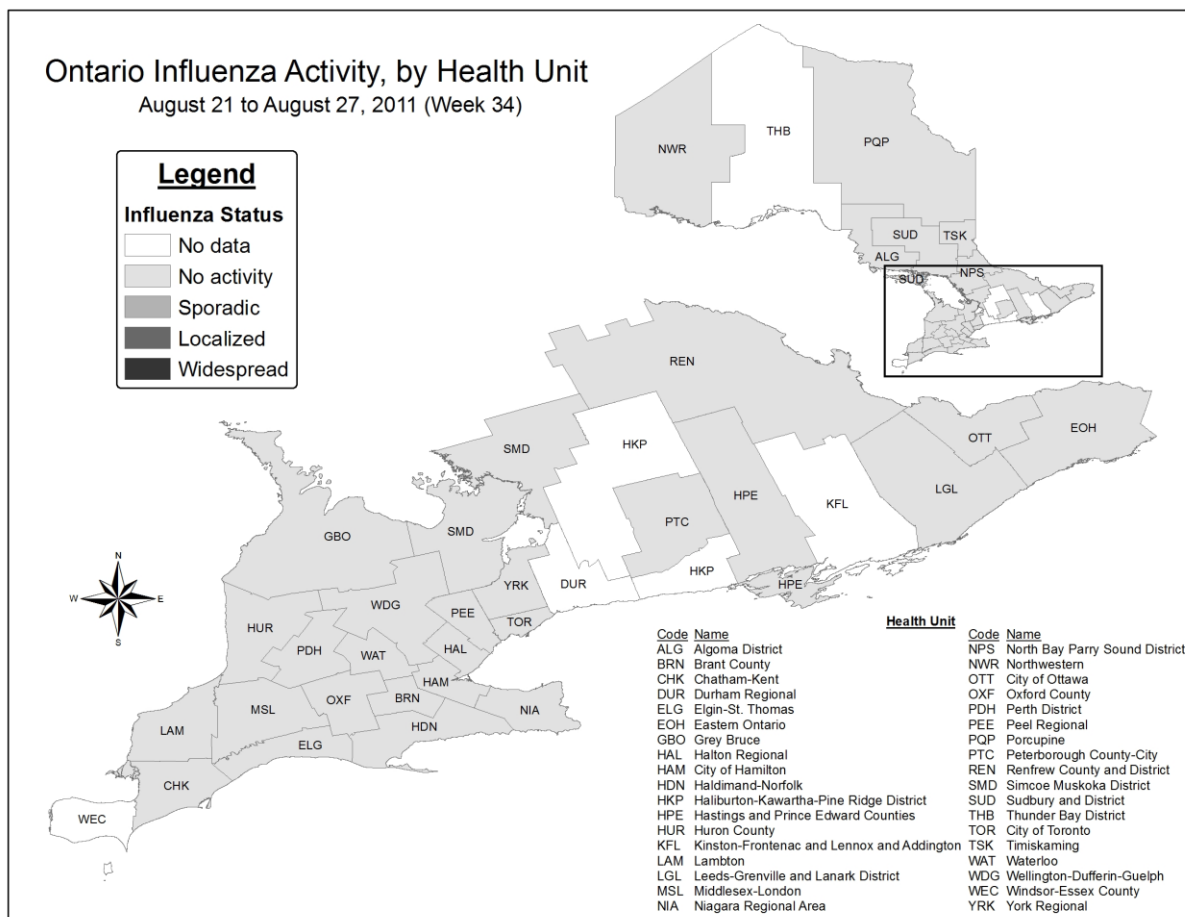
B) ILI/Influenza outbreaks:

Schools and work sites: greater than 10% absenteeism on any day, most likely due to ILI.

Residential institutions: two or more cases of ILI within a seven-day period, **including at least one laboratory confirmed case.**



Weekly Ontario Influenza Activity Map | 2010-11



SOURCE: Public Health Ontario, Provincial Influenza Activity Report (Appendix C) Database

Influenza Activity levels are assigned by local public health units and reported to Public Health Ontario every week. Activity levels are assigned based on laboratory confirmation of influenza, influenza like illness (ILI) reports from various sources including hospitals, institutions experiencing respiratory infection outbreaks, physicians' offices, etc.

ACTIVITY LEVEL DEFINITIONS FOR THE 2010-11 INFLUENZA SEASON ARE AS FOLLOWS:

- **No Data:** No activity report corresponding to the surveillance week was received at Public Health Ontario by the Tuesday (at 4 p.m.) following the end of the surveillance period.
- **No Activity:** No laboratory-confirmed* influenza and NO outbreaks detected within the health unit/ influenza surveillance area, within the prior week, although sporadically occurring ILI may or may not be present.†
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- **Widespread:** sporadically occurring ILI and lab-confirmed influenza* together with outbreaks of ILI in schools and work sites, or laboratory-confirmed influenza in residential institutions occurring in > 50% of the health unit. Outbreaks affect multiple and non-adjacent geographic areas within the health unit jurisdiction, such as two or more regions of the health unit, two or more municipalities, two or more electoral wards, etc.†

* Confirmation of influenza within the surveillance region at any time within the prior week

† Sub-regions within the province or territory as defined by the provincial/territorial epidemiologist

§Health units have been requested to consider laboratory confirmed pH1N1 outbreaks in camps in their region when evaluating ILI activity levels

Note:

The Weekly Ontario Influenza Activity Map will be posted on this site bi-weekly, alternating with the Ontario Influenza Bulletin (which contains the Influenza Activity map), until the end of October, 2011. As of November 4, 2011, the Ontario Influenza Bulletin will be published weekly.

For further information:

Past Ontario Influenza Bulletins and Influenza Activity Maps can be accessed online at:

<http://www.health.gov.on.ca/en/pro/programs/publichealth/flu/bulletins/2010/default.aspx>.

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