



Ontario Respiratory Virus Bulletin | 2012-2013

SURVEILLANCE WEEK 43 (October 21, 2012 – October 27, 2012)

This is the first issue of the Ontario Respiratory Virus Bulletin. This report now combines information formerly presented in Public Health Ontario's Ontario Influenza Bulletins and the Laboratory-Based Respiratory Pathogen Surveillance Reports.

This issue of the Ontario Respiratory Virus Bulletin provides information on the surveillance period from October 21, 2012 to October 27, 2012 (Week 43). Unless otherwise specified, **the data presented are for week 43** and data extraction and analysis for this issue of the Bulletin occurred on Wednesday, October 31, 2012. In order to enable our readers to better assess influenza and other respiratory virus activity in Ontario, we have combined various sources of information in the following table.

Assessment of Influenza and Respiratory Virus Activity in Ontario

Measure of activity	Assessment of measure compared to previous week (Lower, Similar, Higher)	Reasoning behind assessment
Laboratory confirmed influenza cases	Higher	Thirteen influenza cases were reported* in week 43 (Table 1), which is higher than the number (4) reported in week 42. The percent positivity** of laboratory tests for influenza A in Ontario was 1.84% for week 43 (Table 2), which is higher than for week 42 at 1.18%.
Other respiratory virus activity	Enterovirus/rhinovirus activity is lower	Among other circulating respiratory viruses, enterovirus/rhinovirus had the highest percent positivity** at 12.33% in week 43 (Table 2), which is lower than week 42 at 17.54%.
Institutional respiratory infection outbreaks	Lower	One new institutional influenza A outbreak was identified† in week 43. There were four other new institutional respiratory infection outbreaks identified, one of which was laboratory-confirmed as enterovirus/rhinovirus (Table 3, Figure 5).
Influenza activity levels reported by health units	Higher	Ottawa, Toronto, and Wellington-Dufferin-Guelph health units reported 'localized' levels of influenza activity. Huron, Halton, Lambton, and Waterloo health units reported 'sporadic' levels of influenza activity (Figure 6).
ILI consultation rate reported by sentinel physicians	Lower	The provincial ILI consultation rate decreased from 25.83/1,000 patient visits in week 42 to 18.57/1,000 patient visits in week 43. This rate is lower than the average rate for the same week from previous years (Figure 7).
OVERALL ASSESSMENT	Influenza activity: Higher Respiratory virus activity: Lower	From week 42 to 43, overall the indicators show that influenza activity increased and was driven by influenza A activity; viral respiratory activity decreased and remains driven by enterovirus/rhinovirus activity.

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

** Positivity reflects positive specimens reported to Public Health Ontario by the Centre for Immunization and Respiratory Infectious Diseases (CIRID).

† The number of new outbreaks identified for the current week is based on the onset date of illness for the first case in an outbreak.

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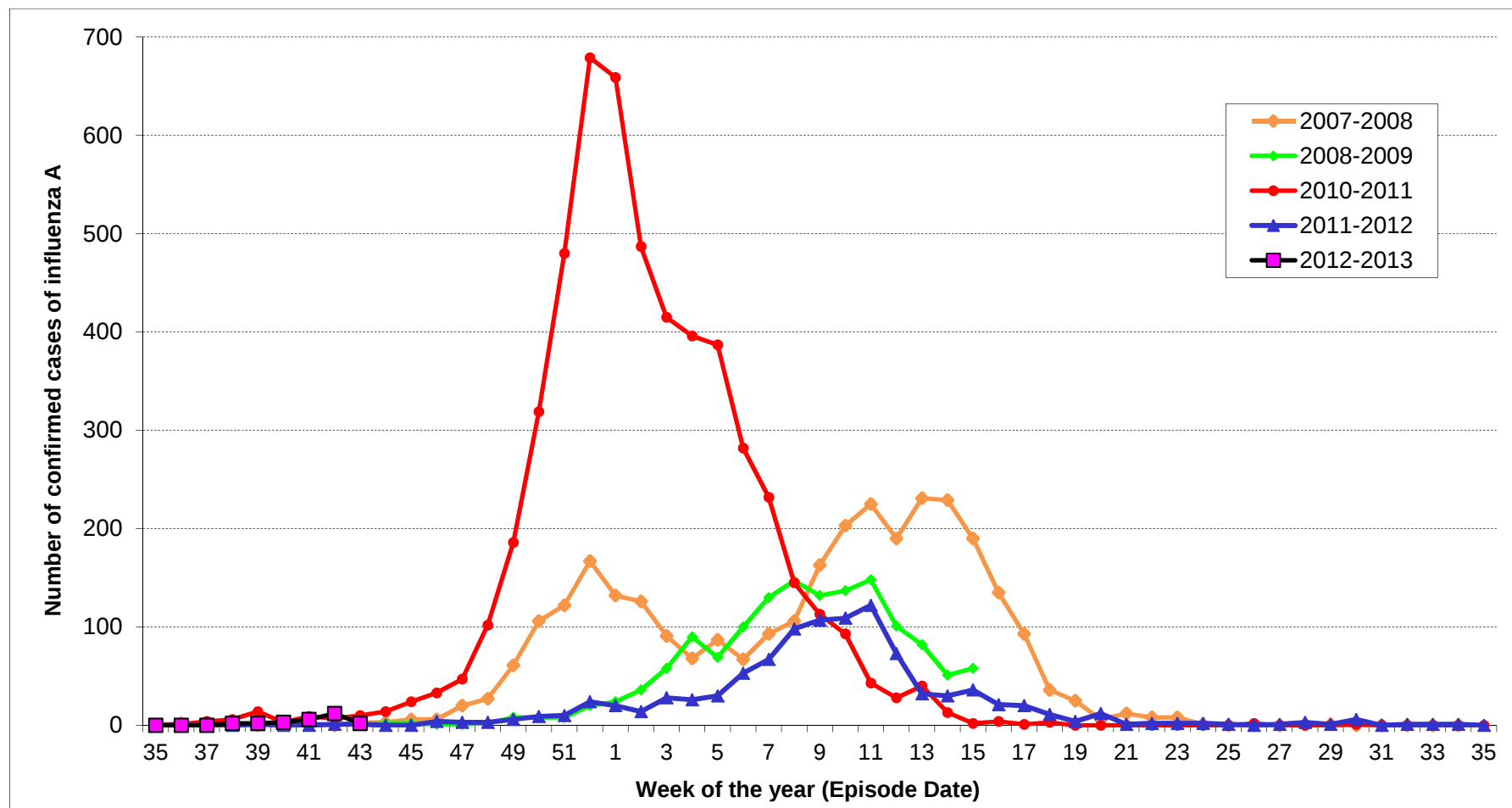
Summary of current and season-to-date respiratory virus activity

- There has been little influenza activity in the 2012-2013 season to date.
 - Influenza activity is primarily occurring in the Central West, Toronto, Eastern, and South West health regions (Figure 6).
 - The percentage of positive tests for influenza A is increasing (Figure 3, Appendix: Figure I).
 - A total of 31 influenza cases have been reported for the 2012-2013 surveillance season to date. Among these cases, the majority (93.5%; 29/31) were influenza A (Table 1).
 - In week 43, there were a total of five new institutional respiratory infection outbreaks, of which one was identified as influenza A (Table 3).
 - In this season to date, 138 institutional respiratory infection outbreaks have been reported, six of which are laboratory-confirmed influenza A.
- The majority of ILI activity in the 2012-2013 season to date can be attributed to entero/rhinovirus.

The majority of outbreaks identified in the season to date had entero/rhinovirus as the causative organism (Table 3).

 - Entero/rhinovirus had the highest percent positivity for week 43 at 12.33%. Parainfluenza virus had the second highest percent positivity among specimens submitted for testing in week 43, at 3.33% (Table 2).

Figure 1. Confirmed cases of influenza A in Ontario by episode date reported from September 1, 2007 to October 27, 2012[†]



Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2012/10/31].

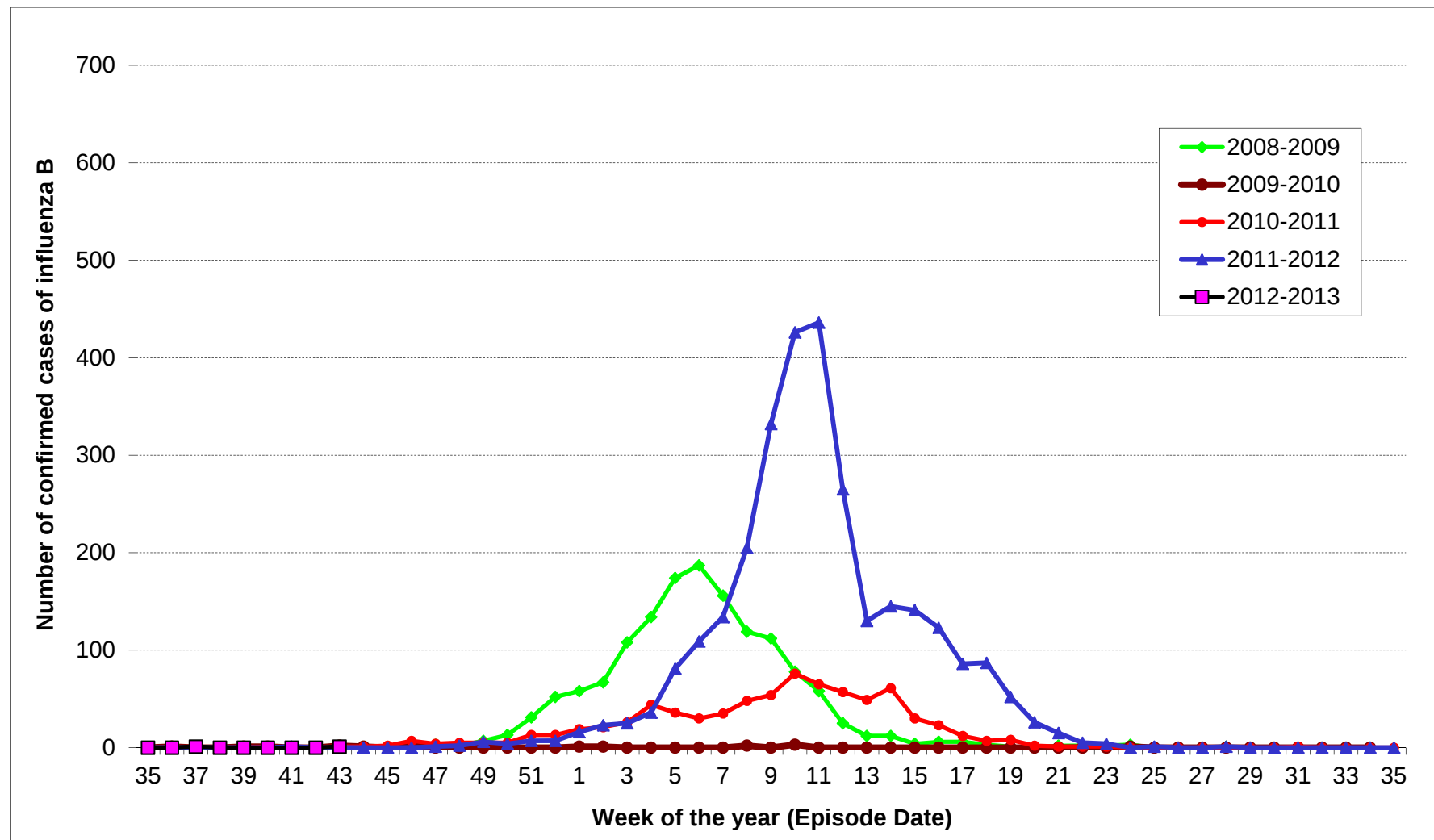
[†] Episode Date for a case corresponds to the earliest date on record for the case according to the iPHIS hierarchy (Symptom Date > Clinical Diagnosis Date > Specimen Collection Date > Lab Test Date > Reported Date). Case counts based on episode dates may not be the same as case counts based on reported dates.

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 influenza season. Additionally, all cases from the 2009-10 influenza season were excluded from this graph due to its incomparability to a regular influenza season as a result of the influenza A(H1N1)pdm09 pandemic.

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

Note: Interpret tail of 2012-2013 line with caution due to reporting lags.

Figure 2. Confirmed cases of influenza B in Ontario by episode date reported from September 1, 2008 to October 27, 2012[†]



Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2012/10/31].

[†] 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). Case counts based on episode dates may not be the same as case counts based on reported dates.

Note: Interpret tail of 2012-2013 line with caution due to reporting lags.

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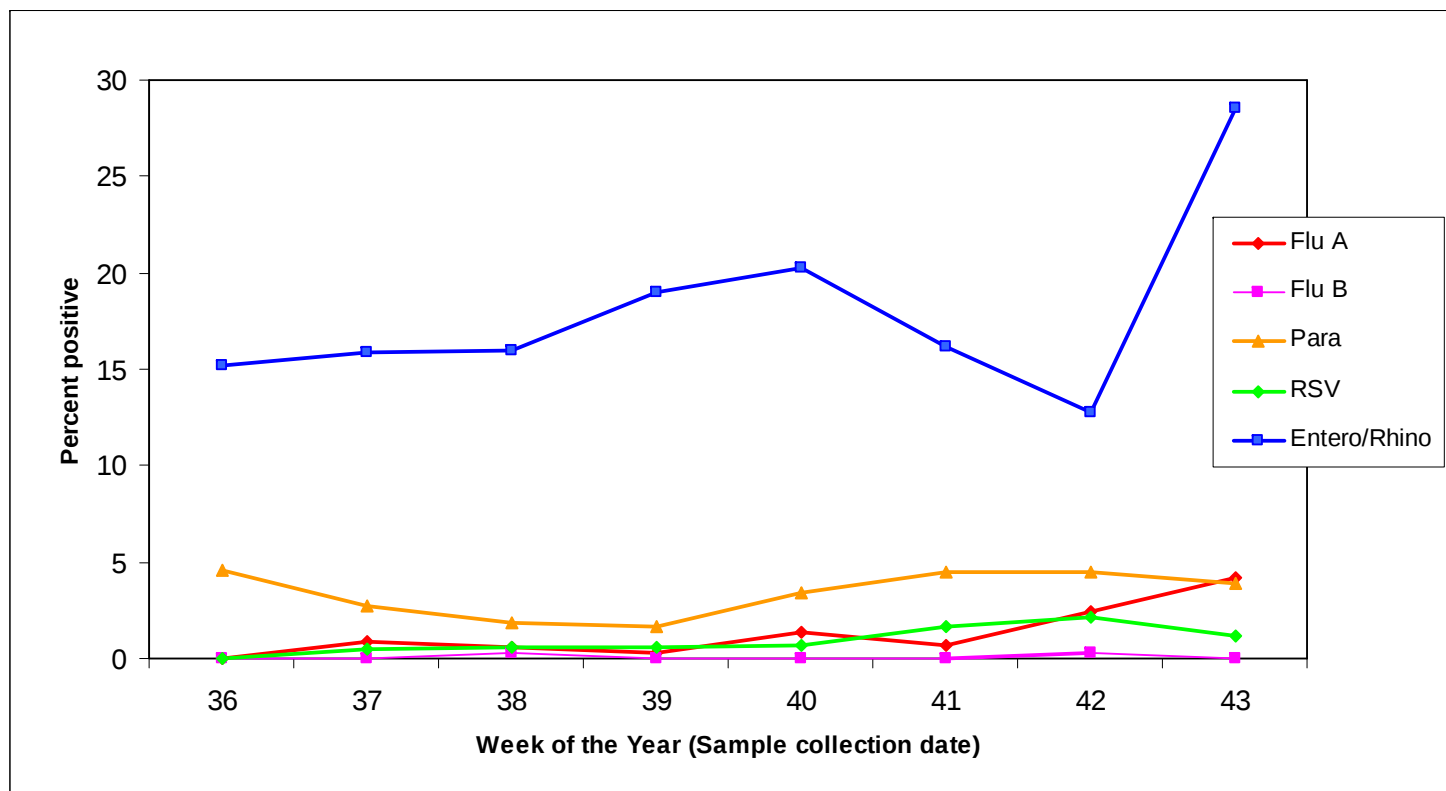
Table 1. Confirmed cases with a reported date during week 43 and cumulative cases (in brackets) of influenza by health unit and health region since September 1, 2012

Region	Health Unit	Influenza A				Influenza A & B	Influenza B	TOTAL
		(H1N1) pdm09	No Subtype/ Not Subtyped	Other*	H3			
North West	Northwestern	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	Thunder Bay District	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	TOTAL NORTH WEST	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
North East	Algoma	0 (0)	0 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (1)
	North Bay Parry Sound District	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	Porcupine	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	Sudbury & District	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	Timiskaming	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	TOTAL NORTH EAST	0 (0)	0 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (1)
Eastern	City of Ottawa	0 (0)	3 (3)	0 (0)	0 (0)	0 (0)	0 (0)	3 (3)
	Eastern Ontario	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	Hastings & Prince Edward Counties	0 (0)	0 (0)	0 (0)	0 (1)	0 (0)	0 (0)	0 (1)
	Kingston, Frontenac, Lennox & Addington	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	Leeds, Grenville And Lanark District	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	Renfrew County And District	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	TOTAL EASTERN	0 (0)	3 (3)	0 (0)	0 (1)	0 (0)	0 (0)	3 (4)
Central East	Durham Region	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	Haliburton, Kawartha, Pine Ridge	0 (0)	0 (0)	0 (0)	0 (1)	0 (0)	0 (0)	0 (1)
	Peel Region	0 (0)	0 (0)	0 (0)	0 (1)	0 (0)	0 (1)	0 (2)
	Peterborough County-City	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	Simcoe Muskoka District	0 (0)	0 (0)	0 (0)	0 (2)	0 (0)	0 (0)	0 (2)
	York Region	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	TOTAL CENTRAL EAST	0 (0)	0 (0)	0 (0)	0 (4)	0 (0)	0 (1)	0 (5)
Toronto	Toronto	0 (0)	4 (4)	0 (0)	1 (3)	0 (0)	0 (0)	5 (7)
	TOTAL TORONTO	0 (0)	4 (4)	0 (0)	1 (3)	0 (0)	0 (0)	5 (7)
South West	Chatham-Kent	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	Elgin-St. Thomas	0 (0)	0 (0)	0 (1)	0 (0)	0 (0)	0 (0)	0 (1)
	Grey Bruce	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	Huron County	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)
	Lambton County	0 (0)	0 (0)	0 (0)	0 (1)	0 (0)	1 (1)	1 (2)
	Middlesex-London	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	Oxford County	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	Perth District	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	Windsor-Essex County	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	TOTAL SOUTHWEST	0 (0)	1 (1)	0 (1)	0 (1)	0 (0)	1 (1)	2 (4)
Central West	Brant County	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	City Of Hamilton	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	Haldimand-Norfolk	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	Halton Region	0 (0)	0 (1)	0 (0)	1 (1)	0 (0)	0 (0)	1 (2)
	Niagara Region	0 (0)	0 (0)	0 (0)	0 (1)	0 (0)	0 (0)	0 (1)
	Waterloo Region	0 (0)	0 (0)	0 (0)	2 (6)	0 (0)	0 (0)	2 (6)
	Wellington-Dufferin-Guelph	0 (0)	0 (0)	0 (0)	0 (1)	0 (0)	0 (0)	0 (1)
	TOTAL CENTRAL WEST	0 (0)	0 (1)	0 (0)	3 (9)	0 (0)	0 (0)	3 (10)
	TOTAL ONTARIO	0 (0)	8 (10)	0 (1)	4 (18)	0 (0)	1 (2)	13 (31)

Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2012/10/31].

* Includes indeterminate, untypeable and other subtypes

Figure 3. Percentage of respiratory viral pathogens (influenza A, influenza B, parainfluenza, respiratory syncytial virus, entero/rhinovirus) detected among specimens tested by all methods, PHOLs, September 2, 2012 to October 27, 2012

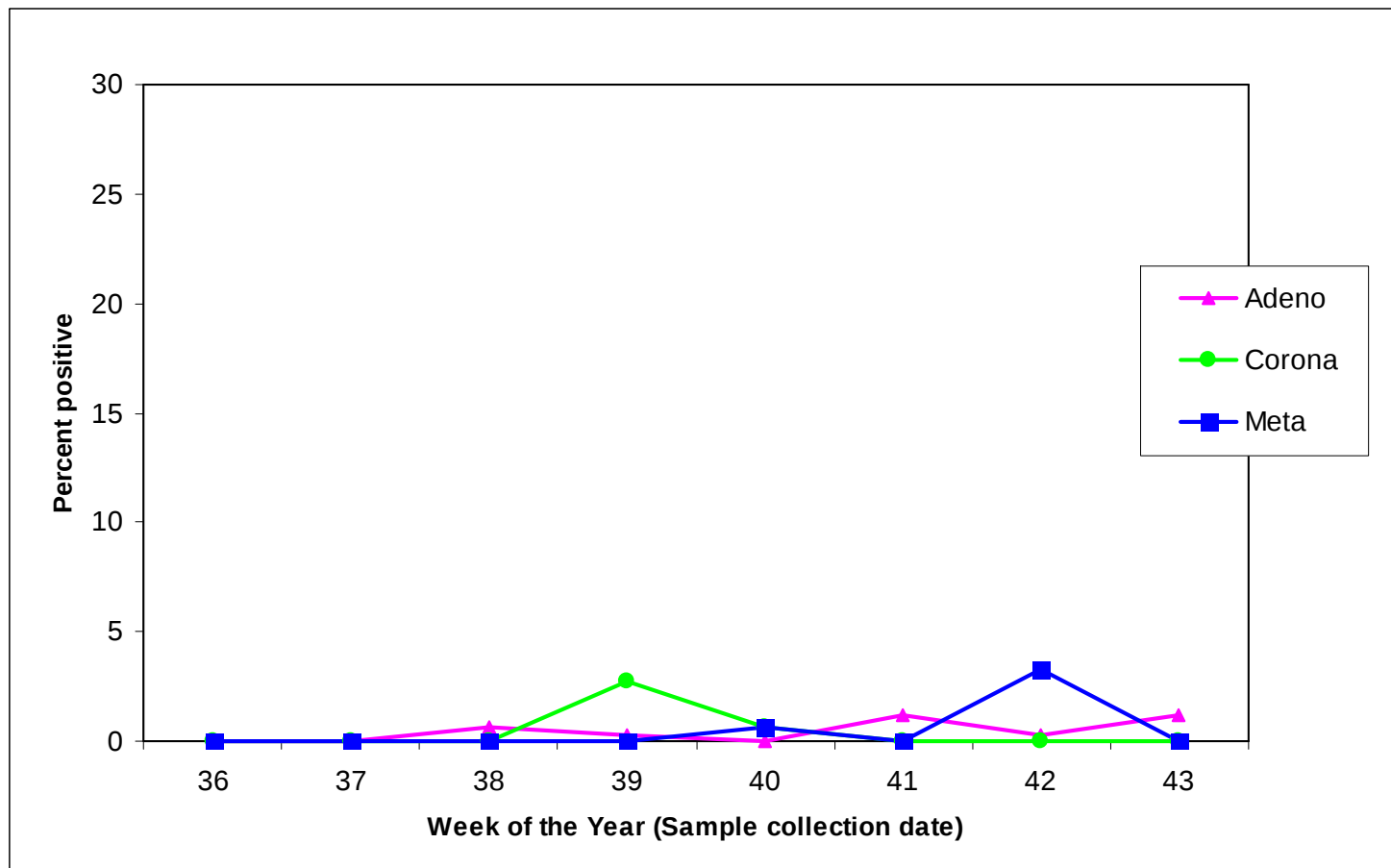


Source: Public Health Ontario Laboratory, extracted from the Laboratory Information Management System [2012/10/30].

Notes:

- The data in this figure is presented by specimen collection date. Because of the lag time from the date the specimens were collected to the date test results are confirmed (up to 10 days for negative results to be finalized), not all specimens collected during the current weeks are included and the percent positivity for the most current week may be overestimated. Therefore, the most appropriate comparison for week 43 is the percent positivity that was known for week 42 as of one week ago (not presented in this figure).
- The PHOL performs the majority of testing for influenza and other respiratory viruses, but other microbiology laboratories also perform these tests. Therefore, the numbers reported here do not represent the total number of respiratory viruses identified in Ontario laboratories.
- These data represent the number of specimens tested which may not necessarily correspond with the number of patients as more than one specimen may have been submitted per patient.

Figure 4: Percentage of respiratory viral pathogens (coronavirus, metapneumovirus, adenovirus) detected among specimens tested by all methods, PHOLs, September 2, 2012 to October 27, 2012



Source: Public Health Ontario Laboratory, extracted from the Laboratory Information Management System [2012/10/30].

Notes:

- The data in this figure is presented by specimen collection date. Because of the lag time from the date the specimens were collected to the date test results are confirmed (up to 10 days for negative results to be finalized), not all specimens collected during the current weeks are included and the percent positivity for the most current week may be overestimated. Therefore, the most appropriate comparison for week 43 is the percent positivity that was known for week 42 as of one week ago (not presented in this figure).
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- These data represent the number of specimens tested which may not necessarily correspond with the number of patients as more than one specimen may have been submitted per patient.

Table 2. Number of respiratory specimens tested by all methods for influenza and other respiratory viruses and percent positivity, week 43

Detected viruses	Number and percent positive specimens		Total number of specimens tested	
	Current n (%)	Cumulative n (%)	Current n (%)	Cumulative n (%)
Influenza A (all)	14 (1.84)	42 (0.92)	762	4566
Influenza B	1 (0.13)	2 (0.04)	762	4566
Parainfluenza virus	23 (3.33)	121 (2.94)	691	4111
Adenovirus	6 (0.81)	19 (0.46)	741	4132
Respiratory Syncytial Virus	17 (2.28)	39 (0.93)	744	4184
Enterovirus	62 (12.33)	556 (16.48)	503	3373
Human metapneumovirus	5 (1.29)	10 (0.42)	388	2380
Coronavirus	0 (0)	11 (0.69)	150	1592

Source: Centre for Immunization and Respiratory Infectious Diseases, Public Health Agency of Canada (PHAC). These data have been obtained from the Respiratory Virus Detection tables of Public Health Agency of Canada from 16 labs in Ontario and do not include data from late reports to PHAC for the current season: Week 43, 2012. Please note that the last version received from PHAC as of 12:00 PM on October 31, 2012 was used.

Notes:

- The data in this table is based on when test results are reported. Total numbers reported include late reports from previous weeks; therefore, totals may not be equal to the sum of the weekly numbers.
- Cumulative numbers include reports from week 35, as reporting by PHAC includes week 35 as part of the 2012-2013 season. Cumulative numbers for the season to date are also available through FluWatch: <http://www.phac-aspc.gc.ca/fluwatch/>
- The numbers reported in this table represent respiratory viruses identified in both Public Health Ontario Laboratories and other microbiology laboratories in Ontario.
- These data represent the number of specimens tested which may not necessarily correspond with the number of patients as more than one specimen may have been submitted per patient.

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Table 3. Institutional respiratory infection outbreaks in Ontario: new outbreaks* in week 43 and total outbreaks for the season**

Institutional Respiratory Infection Outbreaks		
New outbreaks*	N	% (of outbreaks)
Influenza A (All subtypes)	1	20.0
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 ^α	0	0.0
Entero/rhinovirus	1	20.0
No organism identified	3	60.0
TOTAL	5	100.0
Total respiratory infection outbreaks of the season to date**		
Influenza A (All subtypes)	6	4.3
Influenza B	0	0.0
Influenza A and B	0	0.0
Parainfluenza (All types)	2	1.4
RSV	1	0.7
Combined outbreaks [†]	5	3.6
Other organisms ^α	1	0.7
Entero/rhinovirus	78	56.5
No organism identified	45	32.6
TOTAL	138	100.0
Types of institutions –All outbreaks **		
Long-term care homes	95	68.8
Hospitals	8	5.8
Retirement homes	11	8.0
Other	0	0.0
Unknown	24	17.4
TOTAL	138	100.0

Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2012/10/31].

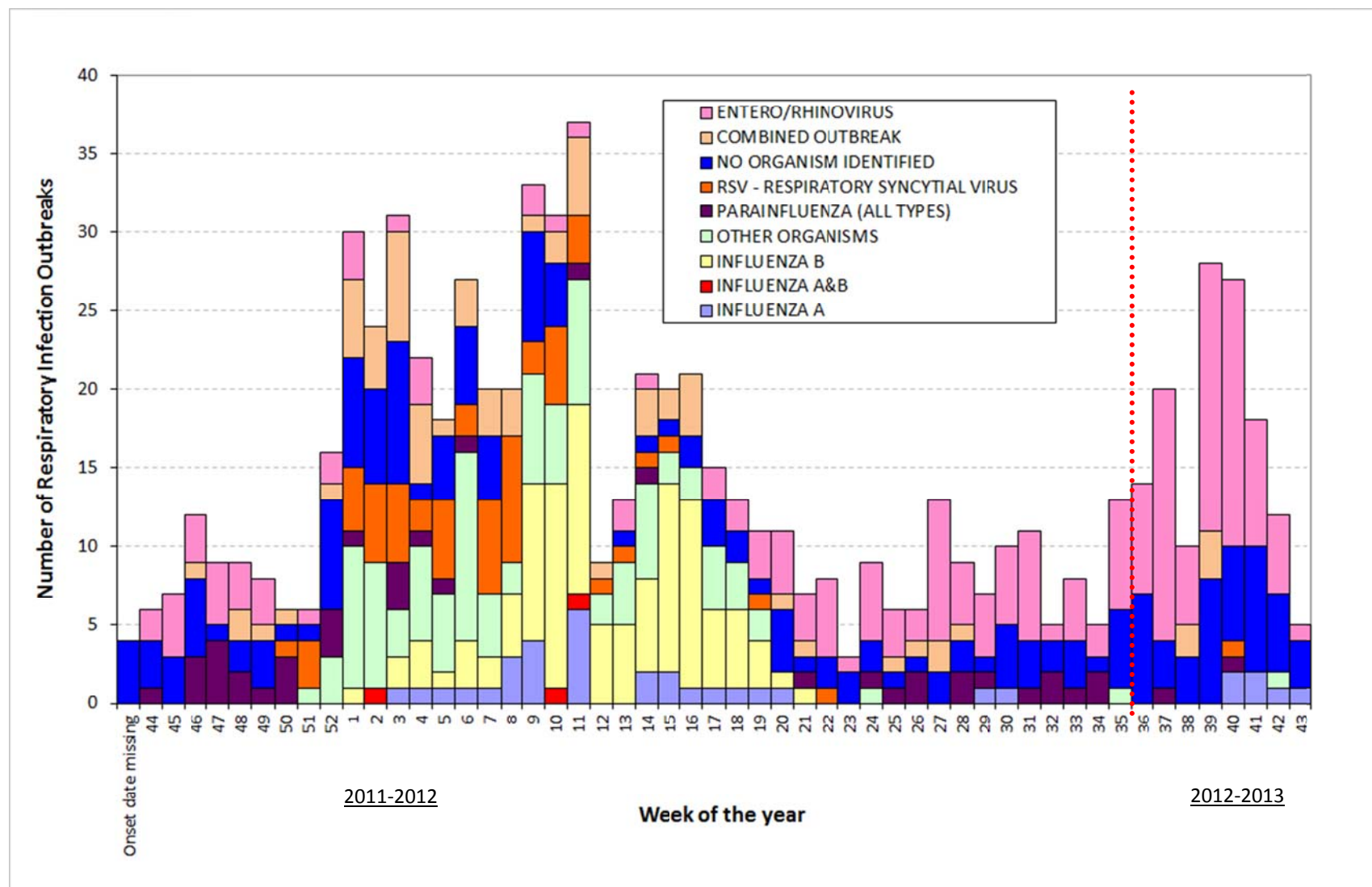
* New outbreaks are those in which the date of onset of illness in the first case occurred and was recorded through iPHIS in the current surveillance period; i.e. October 21, 2012 – October 27, 2012.

** Season to date includes all outbreaks in which the date of onset of illness in the first case occurred up to Week 43.

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

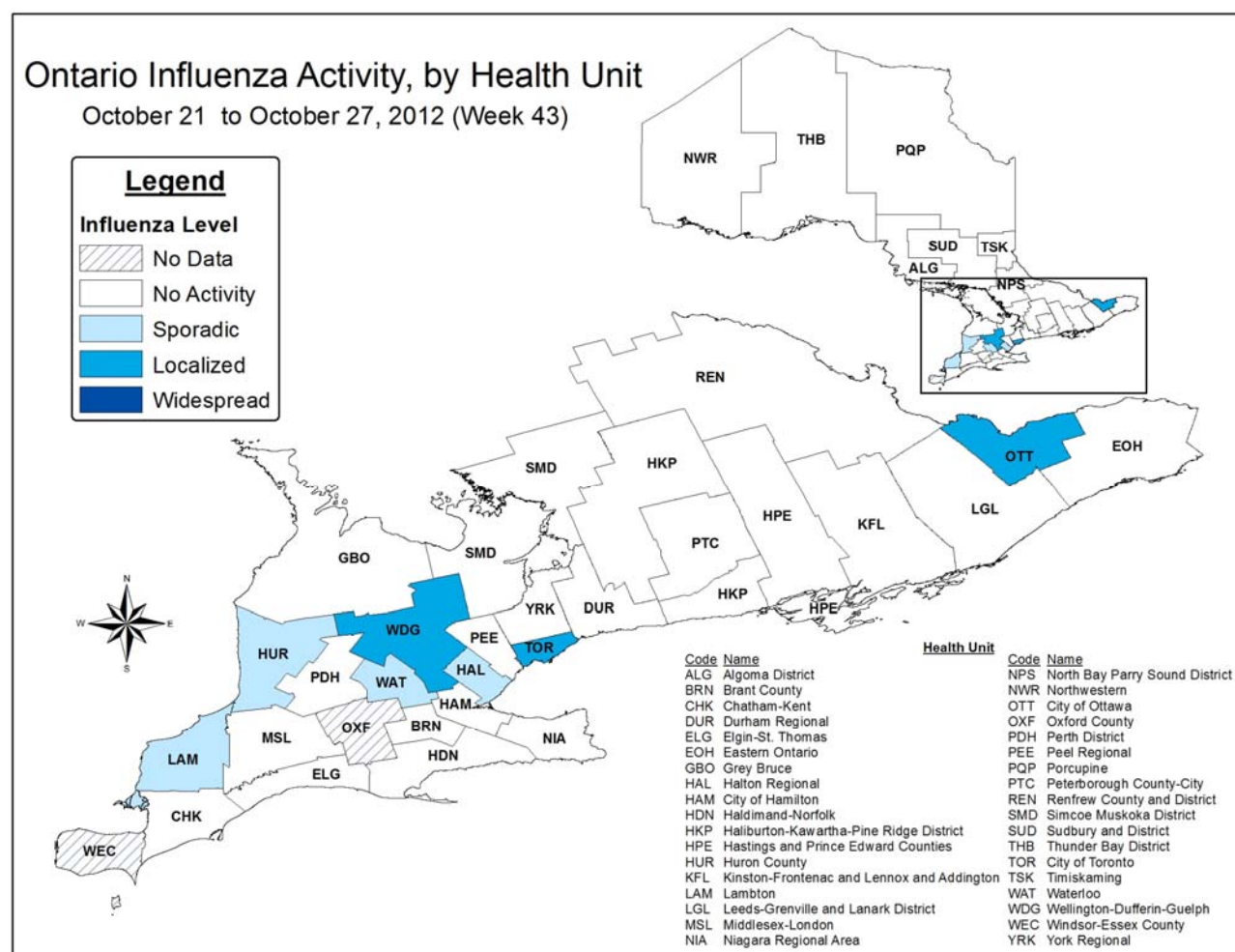
^α Other organisms include outbreaks involving other aetiological agents, such as human metapneumovirus, adenovirus, and coronavirus.

Figure 5. Institutional respiratory infection outbreaks in Ontario by onset of illness in the first case: Total outbreaks up to and including week 43 by causative organism



Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2012/10/31].

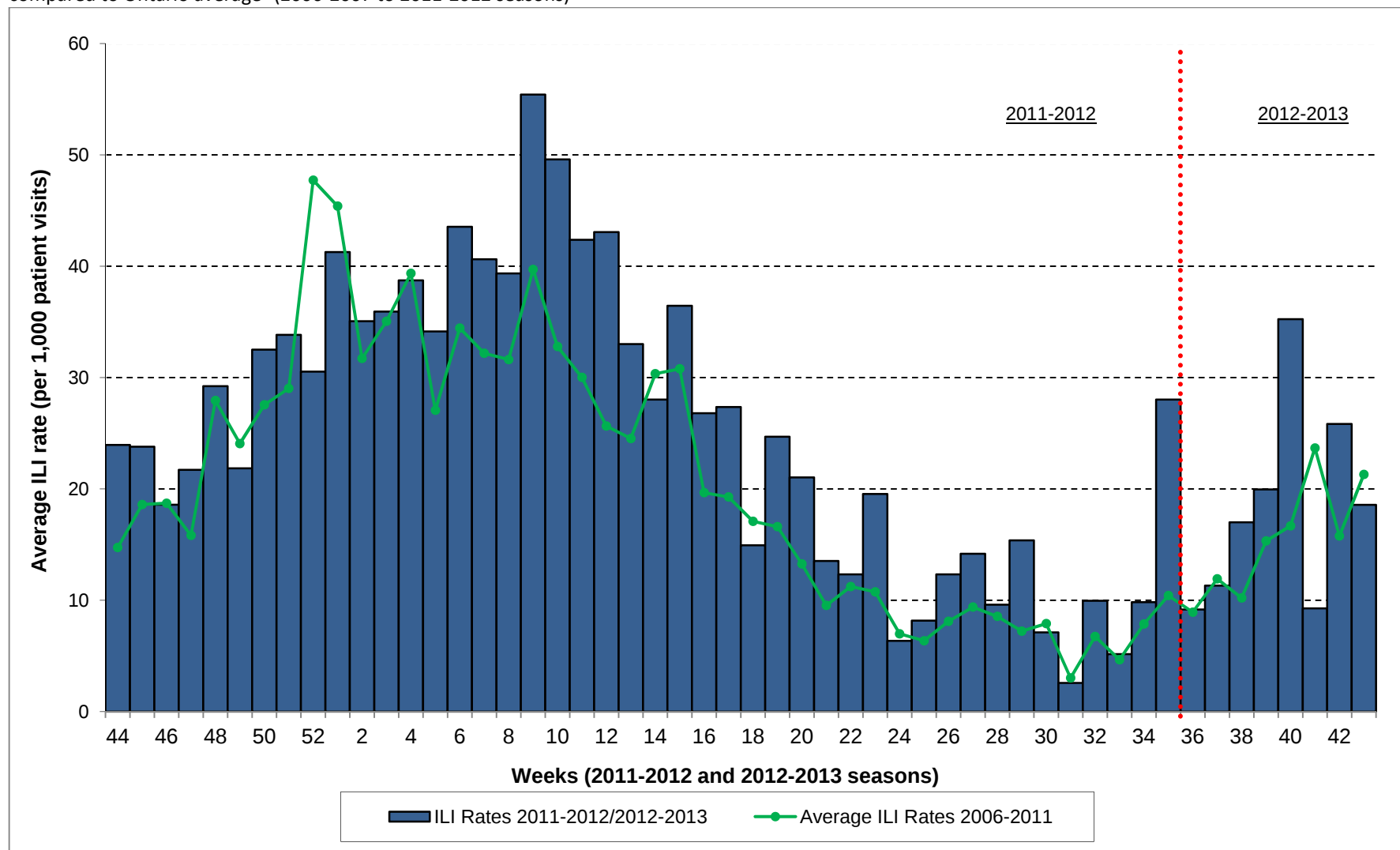
Figure 6. Influenza activity levels* in Ontario by health unit for week 43, 2011



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 by the Tuesday following the end of the surveillance week at 4:00PM. Activity levels are assigned based on laboratory confirmations, ILI reports from various sources, and laboratory confirmed institutional respiratory infection outbreaks. Please click here for [detailed definitions for the 2012-2013 season](#).

Figure 7. Average ILI consultation rate (per 1,000 patient visits) reported by sentinels* in Ontario up to week 43 of the 2012-2013 surveillance season, by report week, compared to Ontario average[†] (2006-2007 to 2011-2012 seasons)

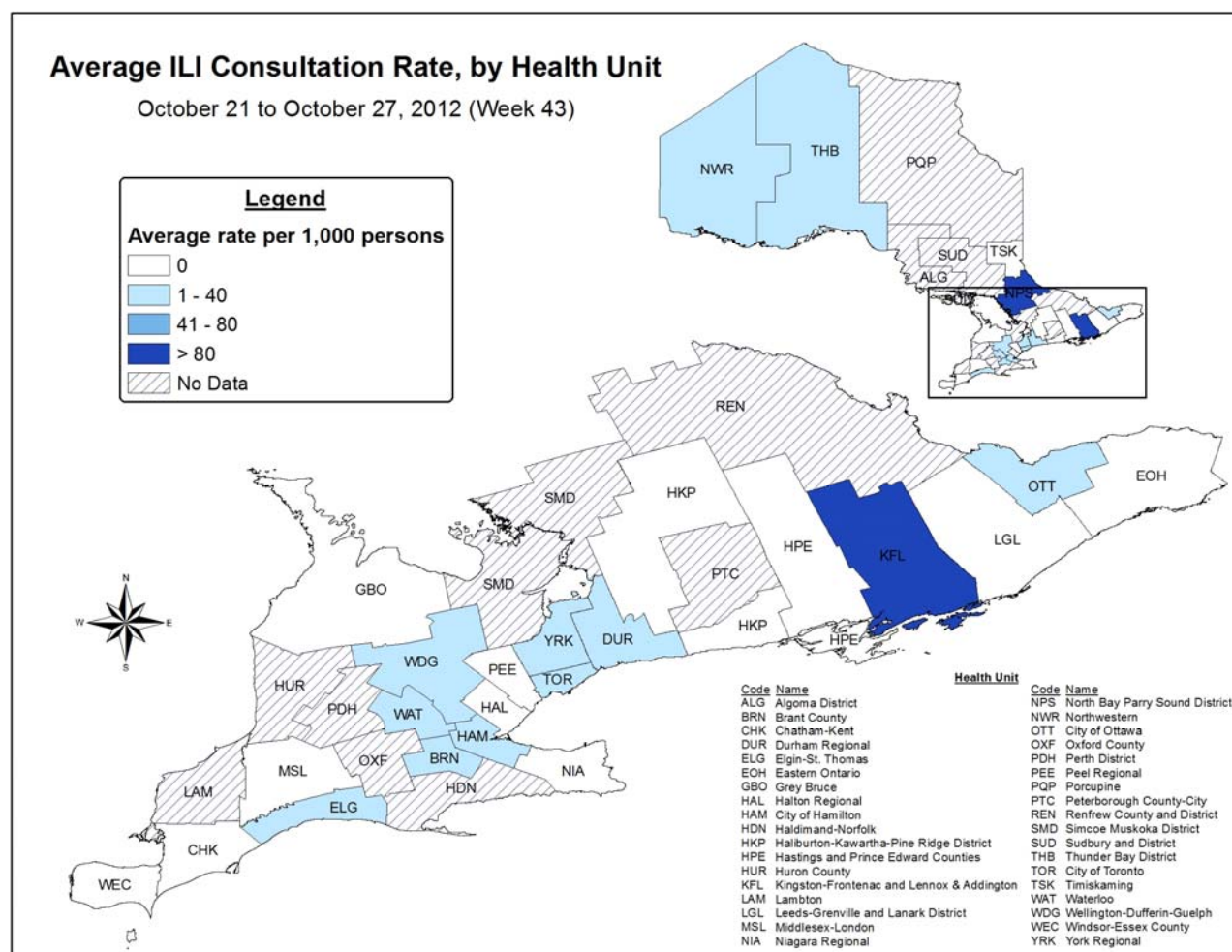


Source: Public Health Agency of Canada

* Sentinel information is reported to Public Health Agency of Canada; 66 sentinels reported in week 43.

[†] Ontario average ILI rates include data from the 2006-2007 to the 2011-2012 seasons, excluding ILI rates during the time period of the influenza A(H1N1)pdm09 pandemic in Ontario (April 2009 to January 2010) due to the incomparability of those rates to a regular influenza season.

Figure 8. Average influenza-like illness consultation rate (per 1,000 patient visits) by health unit as reported by sentinel physicians* in Ontario, for week 43



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 43, of which 63 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 4. Average influenza-like illness consultation rate (per 1,000 patient visits) by age group as reported by sentinel physicians* in Ontario, for week 43

Age Category	0 – 4	5 – 19	20 – 64	65 +	Unknown	TOTAL
Number of ILI Consultations	9	1	20	4	0	34
ILI Consultation Rate (per 1,000 patient visits)	78.95	5.49	17.57	10.08	0.00	18.57

Source: Public Health Agency of Canada

*Sentinel physician information is reported to the Public Health Agency of Canada; 66 sentinels reported in week 43.

APPENDIX**Table I.** Current (cumulative) number of specimens submitted and results for influenza by PHU, PHOLs, weeks 42-43

Health Unit	Specimens submitted	Influenza B	Number of positive influenza A specimens			Total tested	% positive influenza A
			H3	A(H1N1) pdm09	Total influenza A		
ALGOMA DISTRICT	11 (49)	0 (0)	0 (0)	0 (0)	0 (1)	10 (48)	0.0 (2.1)
BRANT COUNTY	9 (19)	0 (0)	0 (0)	0 (0)	0 (0)	6 (16)	0.0 (0.0)
CHATHAM-KENT	6 (23)	0 (0)	0 (0)	0 (0)	0 (0)	3 (20)	0.0 (0.0)
CITY OF HAMILTON	18 (37)	0 (0)	1 (1)	0 (0)	0 (0)	13 (31)	0.0 (0.0)
CITY OF OTTAWA	10 (24)	0 (0)	0 (0)	0 (0)	3 (3)	6 (19)	50.0 (15.8)
CITY OF TORONTO	171 (635)	0 (0)	3 (3)	0 (0)	7 (7)	119 (552)	5.9 (1.3)
DURHAM REGIONAL	38 (98)	0 (0)	0 (0)	0 (0)	0 (0)	27 (87)	0.0 (0.0)
ELGIN-ST. THOMAS	5 (26)	0 (0)	0 (0)	0 (0)	0 (3)	1 (21)	0.0 (14.3)
EASTERN ONTARIO	7 (26)	0 (0)	0 (0)	0 (0)	0 (0)	6 (25)	0.0 (0.0)
GREY BRUCE	20 (44)	0 (0)	0 (0)	0 (0)	0 (0)	9 (30)	0.0 (0.0)
HALTON REGIONAL	22 (102)	0 (0)	0 (0)	0 (0)	0 (0)	16 (95)	0.0 (0.0)
HALDIMAND-NORFOLK	2 (14)	0 (0)	0 (0)	0 (0)	0 (0)	1 (12)	0.0 (0.0)
HALIBURTON-KAWARTHA-PINE RIDGE DISTRICT	15 (52)	0 (0)	0 (1)	0 (0)	0 (1)	12 (49)	0.0 (2.0)
HASTINGS AND PRINCE EDWARD COUNTIES	17 (65)	0 (0)	0 (1)	0 (0)	0 (1)	11 (57)	0.0 (1.8)
HURON COUNTY	7 (22)	0 (0)	1 (1)	0 (0)	1 (1)	7 (21)	14.3 (4.8)
KINGSTON-FRONTENAC AND LENNOX AND ADDINGTON	26 (45)	0 (0)	0 (0)	0 (0)	0 (0)	21 (40)	0.0 (0.0)
LAMBTON	10 (48)	1 (1)	0 (3)	0 (0)	0 (3)	5 (43)	0.0 (7.0)
LEEDS-GRENVILLE AND LANARK DISTRICT	4 (18)	0 (0)	0 (0)	0 (0)	0 (0)	3 (17)	0.0 (0.0)
MIDDLESEX-LONDON	7 (108)	0 (0)	0 (0)	0 (0)	0 (0)	5 (105)	0.0 (0.0)

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Health Unit	Specimens submitted	Influenza B	Number of positive influenza A specimens			Total tested	% positive influenza A
			H3	A(H1N1) pdm09	Total influenza A		
NIAGARA REGIONAL AREA	25 (92)	0 (0)	0 (0)	0 (0)	0 (0)	14 (77)	0.0 (0.0)
NORTH BAY PARRY SOUND DISTRICT	20 (62)	0 (0)	0 (0)	0 (0)	0 (0)	20 (61)	0.0 (0.0)
NORTHWESTERN	9 (36)	0 (0)	0 (0)	0 (0)	0 (0)	6 (33)	0.0 (0.0)
OXFORD COUNTY	3 (19)	0 (0)	0 (0)	0 (0)	0 (0)	2 (18)	0.0 (0.0)
PERTH DISTRICT	7 (40)	0 (0)	0 (0)	0 (0)	0 (0)	3 (36)	0.0 (0.0)
PEEL REGIONAL	87 (382)	0 (1)	0 (1)	0 (0)	0 (1)	68 (354)	0.0 (0.3)
PORCUPINE	28 (68)	0 (0)	0 (0)	0 (0)	0 (0)	23 (63)	0.0 (0.0)
PETERBOROUGH COUNTY-CITY	3 (35)	0 (0)	0 (0)	0 (0)	0 (0)	2 (34)	0.0 (0.0)
RENFREW COUNTY AND DISTRICT	5 (15)	0 (0)	0 (0)	0 (0)	0 (0)	1 (11)	0.0 (0.0)
SIMCOE MUSKOKA DISTRICT	64 (198)	0 (0)	2 (2)	0 (0)	2 (2)	55 (182)	3.6 (1.1)
SUDBURY AND DISTRICT	21 (61)	0 (0)	0 (0)	0 (0)	0 (0)	19 (58)	0.0 (0.0)
THUNDER BAY DISTRICT	6 (27)	0 (0)	0 (0)	0 (0)	0 (0)	3 (24)	0.0 (0.0)
TIMISKAMING	4 (13)	0 (0)	0 (0)	0 (0)	0 (0)	4 (13)	0.0 (0.0)
WATERLOO	37 (97)	0 (0)	0 (4)	0 (0)	0 (4)	19 (78)	0.0 (5.1)
WELLINGTON-DUFFERIN-GUELPH	21 (61)	0 (0)	3 (3)	0 (0)	6 (6)	18 (54)	33.3 (11.1)
WINDSOR-ESSEX COUNTY	5 (17)	0 (0)	0 (0)	0 (0)	0 (0)	4 (16)	0.0 (0.0)
YORK REGIONAL	69 (189)	0 (0)	0 (0)	0 (0)	0 (0)	47 (158)	0.0 (0.0)
OUT OF PROVINCE	3 (9)	0 (0)	0 (0)	0 (0)	0 (0)	3 (9)	0.0 (0.0)
TOTAL ONTARIO	822 (2,876)	1 (2)	10 (20)	0 (0)	19 (33)	592 (2,567)	3.2 (1.3)

Source: Public Health Ontario Laboratory, extracted from the Laboratory Information Management System [2012/10/30].

Notes:

- Cumulative numbers are from September 2, 2012 and are displayed in brackets.
- Health Unit reflects the jurisdiction where the patient resides. In the event this is not available, Health Unit of the specimen submitter is used.
- The PHOL performs the majority of testing for influenza and other respiratory viruses, but other microbiology laboratories also perform these tests. Therefore, the numbers reported here do not represent the total number of respiratory viruses identified in Ontario laboratories.
- The data in this table is presented by specimen collection date. Because of the lag time from the date the specimens were collected to the date test results are confirmed (up to 10 days for negative results to be finalized), not all specimens collected during the current weeks are included and the percent positivity for the most current week may be overestimated. Therefore, the most appropriate comparison for weeks 42-43 is the percent positivity that was known for weeks 40-41 in the last Laboratory-Based Respiratory Pathogen Surveillance Report.
- These data represent the number of specimens tested which may not necessarily correspond with the number of patients as more than one specimen may have been submitted per patient.

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Table II. National Microbiology Laboratory strain characterization, influenza isolates in Ontario and Canada, September 1, 2012 to October 25, 2012

Influenza strains	Ontario	Canada
Influenza A (H3N2) A/Victoria/361/2011-like	0	1
Influenza B B/Wisconsin/01/2010-like	1	2

Source: Influenza and Respiratory Viruses Section, National Microbiology Laboratory (NML).

Note: No updated data for week 43 was received from PHAC as of 11:00 AM on November 2, 2012.

Note: The World Health Organization recommended influenza vaccine strains for the North Hemisphere for the 2012-2013 season are: A/California/7/2009-like (A H1N1pdm09-like virus; A/Victoria/361/2011 (H3N2)-like virus; and B/Wisconsin/1/2010-like virus.

Table III. Amantadine, Oseltamivir and Zanamivir susceptibility assays completed on Canadian influenza isolates by the National Microbiology Laboratory, September 1, 2012 to October 25, 2012

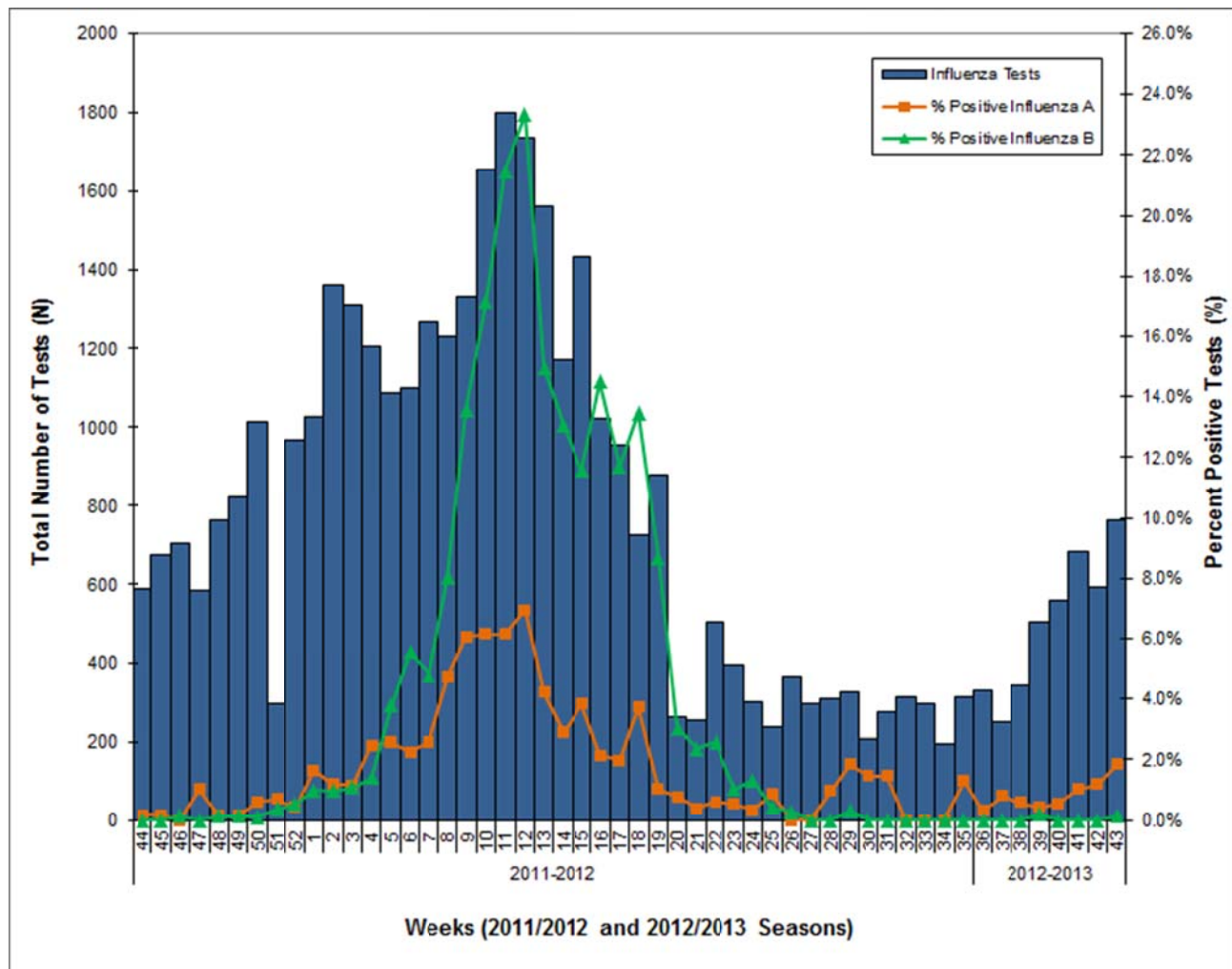
Influenza strains	Amantadine				Oseltamivir				Zanamivir			
	ONTARIO		CANADA		ONTARIO		CANADA		ONTARIO		CANADA	
	R	S	R	S	R	S	R	S	R	S	R	S
Influenza A (H3N2)	2	0	6	0	0	0	0	1	0	0	0	1
Influenza B	NA	NA	NA	NA	0	1	0	2	0	1	0	2

(R-Resistant, S- Susceptible, NA-Not applicable)

Source: Influenza and Respiratory Viruses Section, National Microbiology Laboratory (NML).

Note: No updated data for week 43 was received from PHAC as of 11:00 AM on November 2, 2012.

Figure I. Total number of influenza tests performed and percent of positive tests in Ontario, by report week



Source: Public Health Agency of Canada. These data have been obtained from the Respiratory Virus Detection tables of the Public Health Agency of Canada from 16 labs in Ontario and do not include data from late reports to PHAC for the current season: week 43, 2012. Please note that the last version received from PHAC as of 12:00PM on October 31, 2012 was used.

Notes:

- The data in figure is based on when test results are reported.
- Cumulative numbers for the season to date are also available through FluWatch: <http://www.phac-aspc.gc.ca/fluwatch/>
- The numbers reported in this table represent respiratory viruses identified in both Public Health Ontario Laboratories and other microbiology laboratories in Ontario.
- These data represent the number of specimens tested which may not necessarily correspond with the number of patients as more than one specimen may have been submitted per patient.

Bacterial respiratory pathogens identified at PHOL, weeks 42-43

Table IV. Number of respiratory specimens tested by all methods for any *Mycoplasma pneumoniae* and *Chlamydophila pneumoniae* species and percent positive results, PHOLs, weeks 42-43. Cumulative data are from September 2, 2012.

Detected organism	Number and percent positive specimens		Total number of specimens tested	
	Current n (%)	Cumulative n (%)	Current n	Cumulative n
<i>Mycoplasma pneumoniae</i>	1 (2.9)	6 (2.8)	34	217
<i>Chlamydophila pneumoniae</i>	0 (0.0)	0 (0.0)	34	217

Source: Public Health Ontario Laboratory, extracted from the Laboratory Information Management System [2012/10/30].

Table V. Number of respiratory specimens tested by all methods for any *Bordetella* species and percent positive results, PHOLs, weeks 42-43. Cumulative data are from January 1, 2012.

Detected organism	Number and percent positive specimens		Total number of specimens tested	
	Current n (%)	Cumulative n (%)	Current n	Cumulative n
<i>Bordetella pertussis</i>	15 (5.3)	566 (10.7)	285	5,266
<i>Bordetella parapertussis</i>	0 (0.0)	36 (0.7)	285	5,266
<i>Bordetella holmesii</i>	0 (0.0)	2 (0.0)	285	5,266

Source: Public Health Ontario Laboratory, extracted from the Laboratory Information Management System [2012/10/30].