NOVA SCOTIA
Health Promotion and Protection

RESPIRATORY WATCH

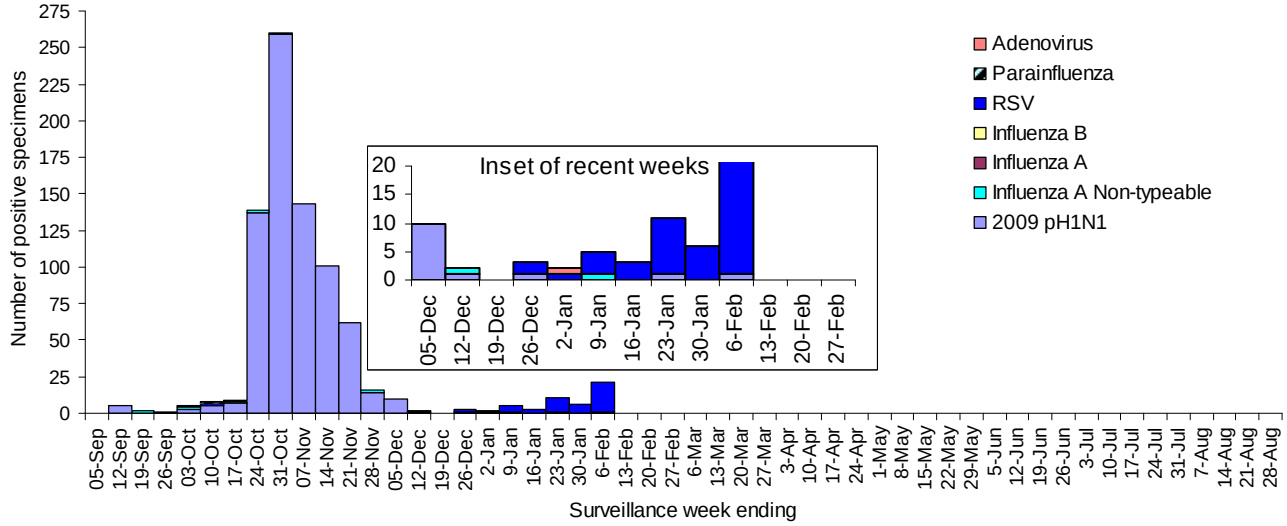
Week 5 (January 31 to February 6, 2010)

Summary of Nova Scotia surveillance findings, week ending February 6, 2010:

- 2009 pH1N1 activity remains low in Nova Scotia. There have been 751 lab-confirmed cases to date for the 2009–2010 influenza season. One lab-confirmed case of pH1N1 was reported during week 5. (Variation in total cases to-date this season from Week 4 is attributable to data cleaning processes.)
- The outbreak reported in Week 4 has now been attributed to influenza A pH1N1 (typing results received).
- There have been 276 hospitalizations and six deaths due to pH1N1 reported so far this season. One hospitalization was reported in week 5.
- Most DHAs reported no influenza activity during surveillance week 5; DHAs 2 and 4 reported sporadic influenza activity.
- The percentage of ER visits with ILI was 3.3% (similar to 3% in week 4).
- The percentage of visits with ILI from sentinel physicians was 3.4% (compared to 0% in week 4).
- During the current surveillance week circulating viruses detected by laboratory testing included RSV (20 cases) and influenza A pH1N1 (1 case).

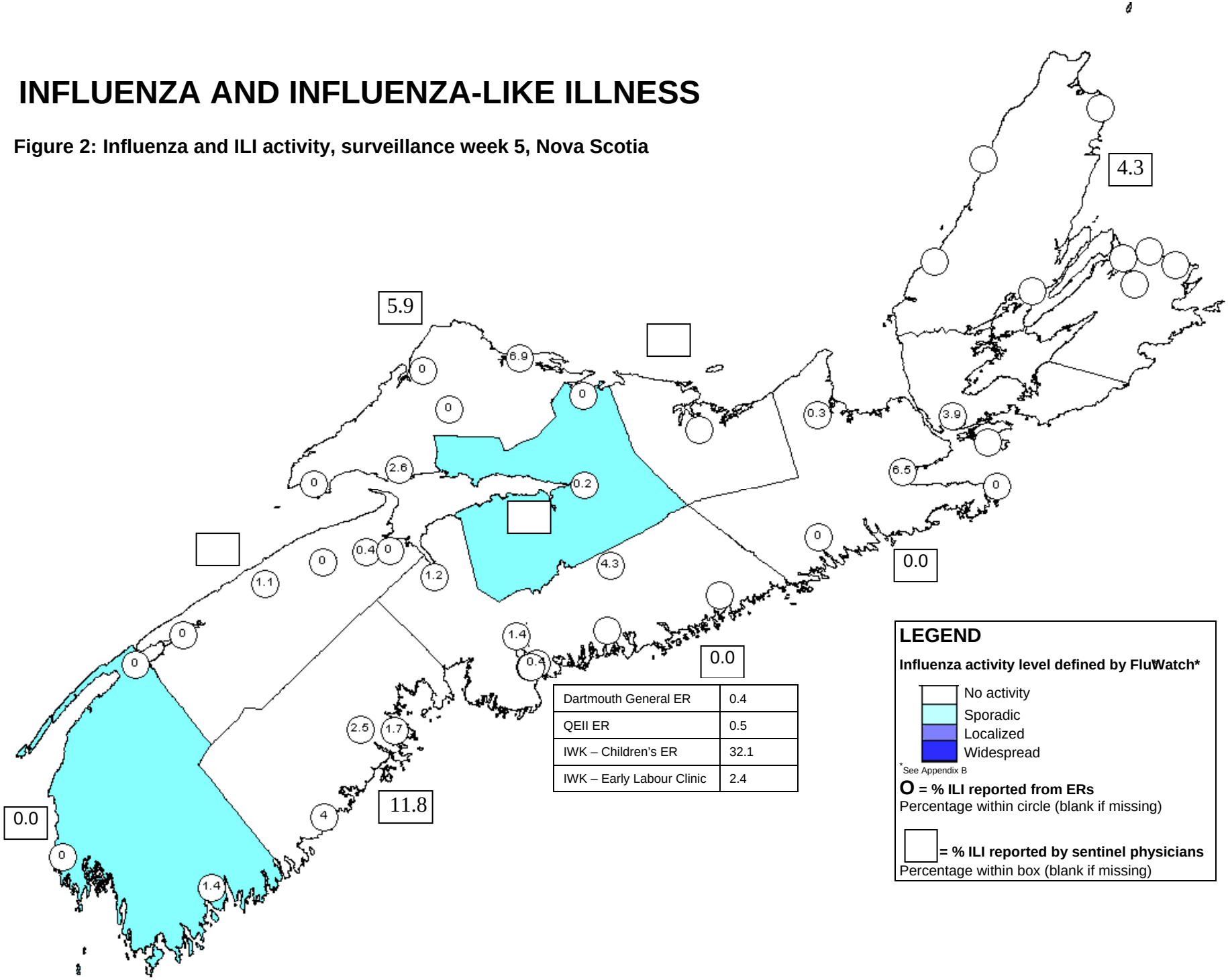
Figure 1 summarizes all laboratory detected respiratory pathogens for the 2009-2010 season. Some influenza A viruses are not typeable (as seasonal versus pandemic). These non-typeable influenza A cases are included for the 2009-2010 season and presented in Figure 1 below.

Figure 1: Summary of laboratory detected circulating respiratory pathogens, Nova Scotia, 2009–2010



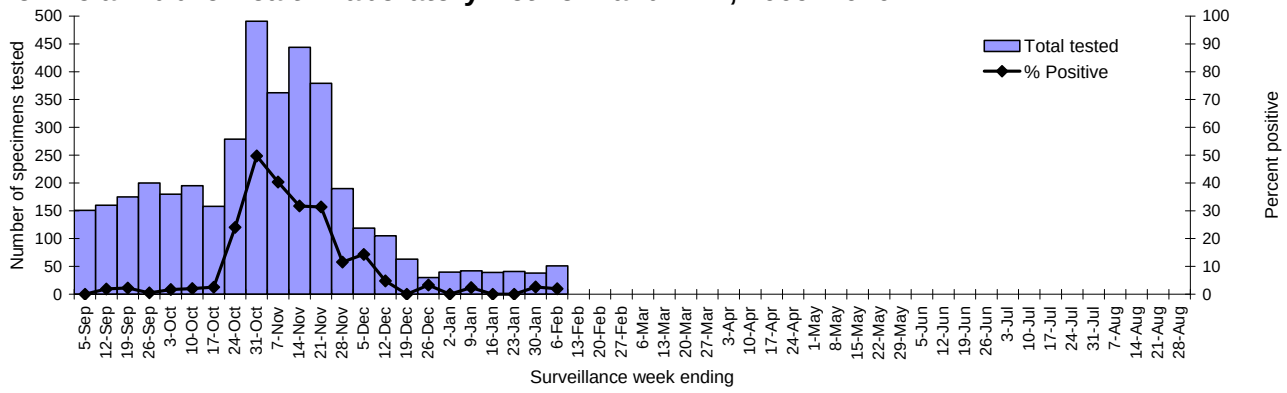
INFLUENZA AND INFLUENZA-LIKE ILLNESS

Figure 2: Influenza and ILI activity, surveillance week 5, Nova Scotia



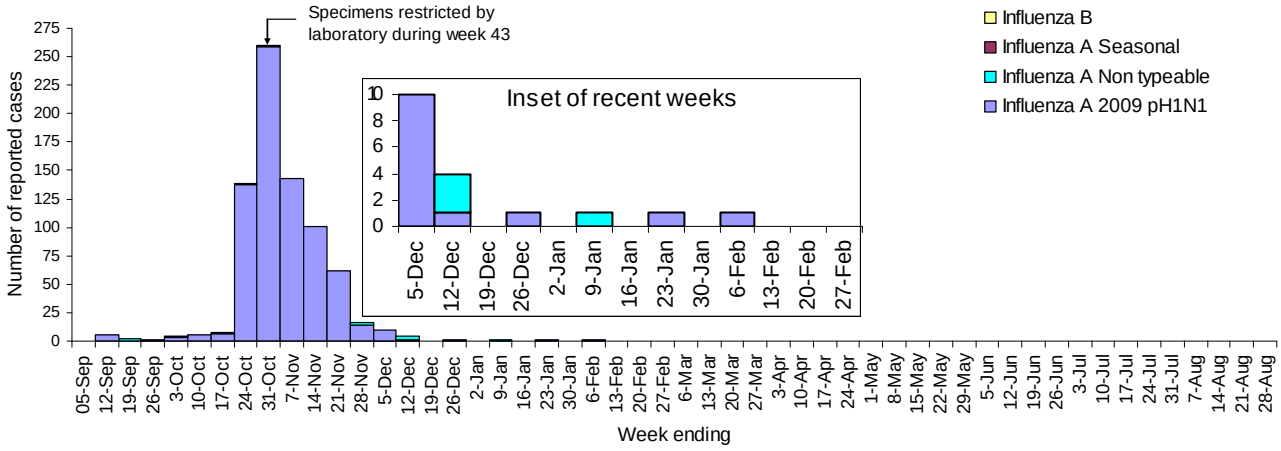
Dartmouth General ER	0.4
QEII ER	0.5
IWK – Children's ER	32.1
IWK – Early Labour Clinic	2.4

Figure 3: Number of specimens tested for influenza and percent positive, Nova Scotia Provincial Public Health Laboratory Network and IWK, 2009–2010*



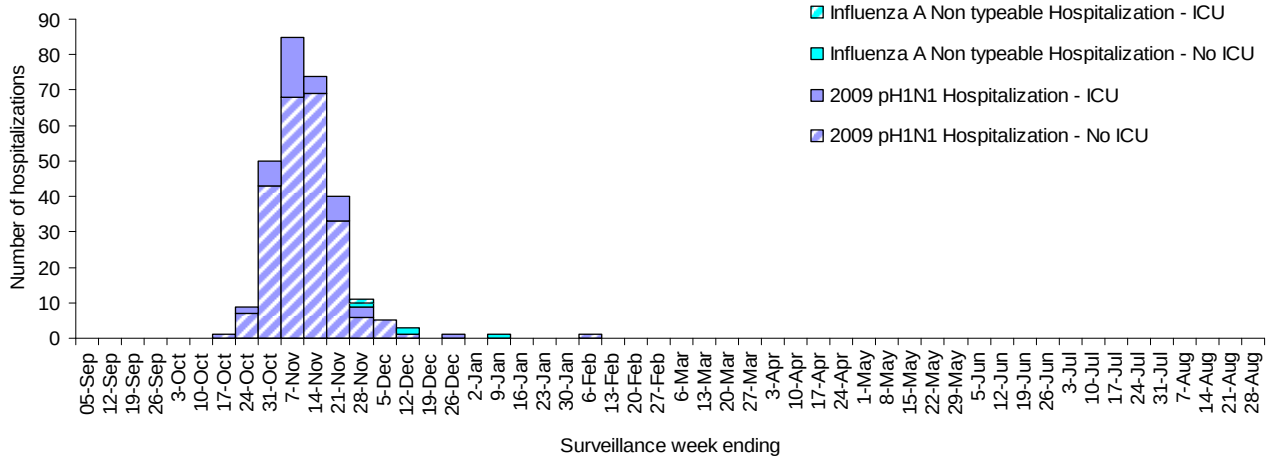
*Data presented in this figure refers to week specimen was tested. All other data in report refers to onset date of symptoms. Due to a dramatic increase in the number of specimens submitted for influenza testing, the PPHLN restricted testing to hospitalized patients only during week 43 (October 27, 2009).

Figure 4: Number of reported lab-confirmed influenza cases by type and report week, Nova Scotia, 2009–2010 (n=764)



Source: Application for Notifiable Disease Surveillance System (ANDS), February 9, 2010. Data provisional and subject to updates.

Figure 5: Number of influenza hospitalizations by type and report week, Nova Scotia, 2009–2010 (n=281)*



*Case report form for week 5 hospitalization outstanding; ICU admission to be updated as information is available. Note that this does not represent individuals currently admitted to hospital; patients may be discharged home by time of report to NSHPP. Hospitalizations for influenza A and B will be added as they are reported.

Figure 6: Influenza rate per 100,000 population by type and age group, cumulative, Nova Scotia, 2009–2010

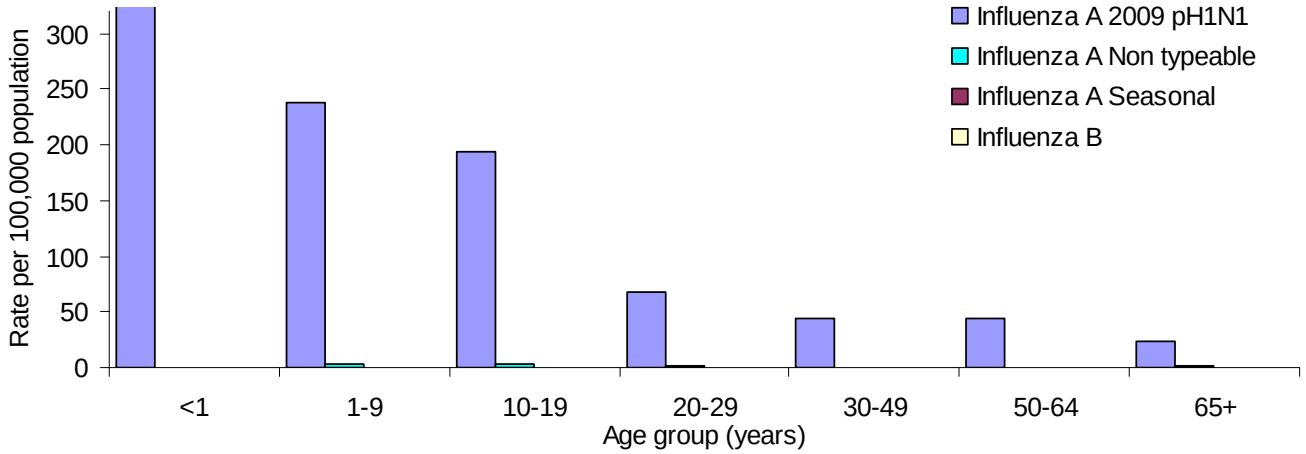


Figure 7: Influenza rate per 100,000 population by type and DHA, cumulative, Nova Scotia, 2009–2010

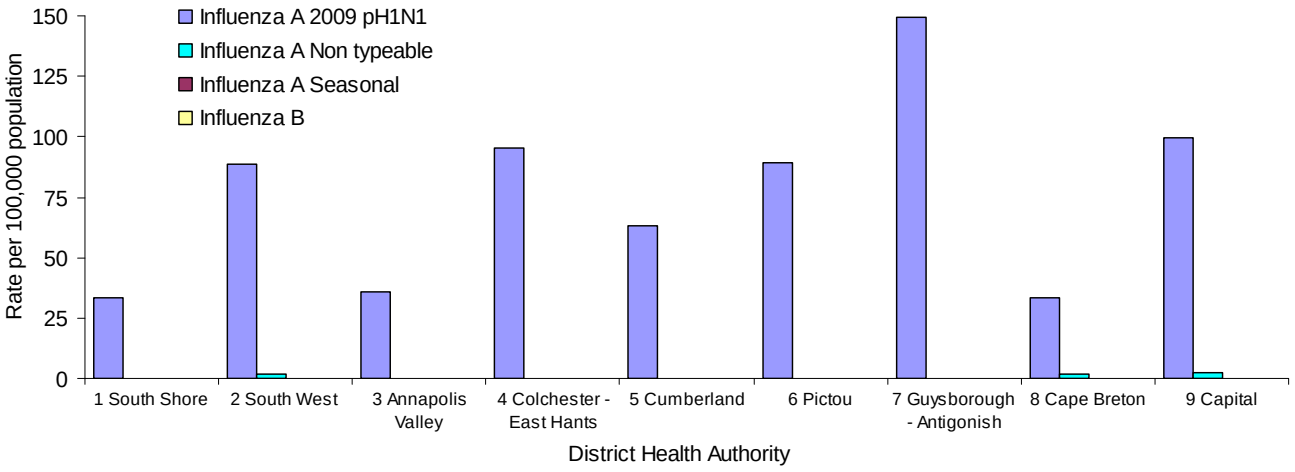


Table 1: Influenza case counts by DHA, surveillance week 5 and cumulative, Nova Scotia, 2009–2010

	DHA 1	DHA 2	DHA 3	DHA 4	DHA 5	DHA 6	DHA 7	DHA 8	DHA 9	Nova Scotia
2009 pH1N1										
Week 05	0	0	0	1	0	0	0	0	0	1
Cumulative	20	55	29	70	20	41	66	42	408	751
2008–2009 season	7	15	26	17	4	4	12	47	450	582
Influenza A (non-typeable)*										
Week 05	0	0	0	0	0	0	0	0	0	0
Cumulative	0	1	0	0	0	0	0	2	10	13
Influenza A (seasonal)										
Week 05	0	0	0	0	0	0	0	0	0	0
Cumulative	0	0	0	0	0	0	0	0	0	0
2008–2009 season	6	4	7	5	0	1	7	13	56	99
Influenza B										
Week 05	0	0	0	0	0	0	0	0	0	0
Cumulative	0	0	0	0	0	0	0	0	0	0
2008–2009 season	3	5	5	6	2	1	4	8	30	64

*non-typeable influenza A cases presented for 2009-2010 season only

Note: Given the influenza situation in the province, the QE II Health Sciences Centre has streamlined laboratory practices and is not currently testing community specimens for influenza B.

Table 2: Influenza case demographics, surveillance week 5 and cumulative, Nova Scotia, 2009–2010

		n	Rate (CI)*	% Male	Mean age	Median age	Age range
Week 05							
2009 pH1N1							
Cases		1	0.1 (0-0.3)	–	–	–	–
Total hospitalizations		1	0.1 (0-0.3)	–	–	–	–
	Non-ICU	0	–	–	–	–	–
	ICU	0	–	–	–	–	–
Deaths**		0	–	–	–	–	–
Influenza A (seasonal)							
Cases		0	–	–	–	–	–
Total hospitalizations		0	–	–	–	–	–
	Non-ICU	0	–	–	–	–	–
	ICU	0	–	–	–	–	–
Deaths		0	–	–	–	–	–
Influenza A (non-typeable)							
Cases		0	–	–	–	–	–
Total hospitalizations		0	–	–	–	–	–
	Non-ICU	0	–	–	–	–	–
	ICU	0	–	–	–	–	–
Deaths		0	–	–	–	–	–
Influenza B							
Cases		0	–	–	–	–	–
Total hospitalizations		0					
	Non-ICU	0	–	–	–	–	–
	ICU	0	–	–	–	–	–
Deaths		0	–	–	–	–	–
Cumulative 2009–2010 season							
2009 pH1N1							
Cases		751	80.5 (74.7–86.3)	48.9	24.3	17.0	2 wks–91 yrs
Total hospitalizations		276*	29.5 (26.0–33.0)	49.8	29.5	25.0	2 wks–91 yrs
	Non-ICU	233	25.0 (21.8–28.2)	51.1	27.1	18.0	2 wks–91 yrs
	ICU	42	4.5 (3.1–5.9)	42.9	42.8	47.5	7–67 yrs
Deaths**		6	0.6 (0.1–1.1)	33.3	50.5	44.5	40+
Influenza A (seasonal)							
Cases		0	–	–	–	–	–
Total hospitalizations		0	–	–	–	–	–
	Non-ICU	0	–	–	–	–	–
	ICU	0	–	–	–	–	–
Deaths		0	–	–	–	–	–
Influenza A (non-typeable)							
Cases		13	1.4 (0.6-2.2)	46.2	34.9	25.0	5-74 yrs
Total hospitalizations		5	0.5 (0.1-1.0)	40.0	62.4	65.0	40-74 yrs
	Non-ICU	4	0.4 (0-0.8)	50.0	59.5	64.0	40-70 yrs
	ICU	1	0.1 (0-0.3)	–	–	–	40+
Deaths		0	–	–	–	–	–
Influenza B							
Cases		0	–	–	–	–	–
Total hospitalizations		0	–	–	–	–	–
	Non-ICU	0	–	–	–	–	–
	ICU	0	–	–	–	–	–
Deaths		0	–	–	–	–	–

*Rate per 100,000 population; CI=confidence interval for rate. Dashes used for small numbers. ICU status of one case under follow up.

**Age group rather than age presented for deaths due to small numbers.

Table 3: Surveillance week 5 ILI reporting from emergency departments, FluWatch sentinel physicians and provincial sentinel physicians, Nova Scotia

	ER SURVEILLANCE		SENTINEL SURVEILLANCE*	
	%ILI	Reporting ERs	%ILI	Reporting Practices
DHA 1	2.9	3 of 3	11.8	1 of 1**
DHA 2	0.4	3 of 3	0.0	1 of 4
DHA 3	0.4	5 of 5	–	0 of 2**
DHA 4	0.2	2 of 2	–	–**
DHA 5	1.1	5 of 5	5.9	1 of 1**
DHA 6	–	0 of 1	–	0 of 2
DHA 7	1.8	5 of 6	0.0	1 of 4**
DHA 8	–	0 of 8	4.3	2 of 5**
DHA 9	0.8	5 of 7	0.0	2 of 7
Nova Scotia (excl. IWK)	**1.0**	**29 of 41 (70%)**	**3.4**	**8 of 26 (31%)**
Nova Scotia (incl. IWK)	**3.3**			
IWK	25.9	1 of 1		

* Includes Nova Scotia Sentinel Network and Fluwatch sentinels

** Recruitment ongoing. Please call 722-1494 if you are interested in participation in the Nova Scotia Sentinel Network

Figure 8: Percentage of ER visits with ILI, Nova Scotia, 2009–2010

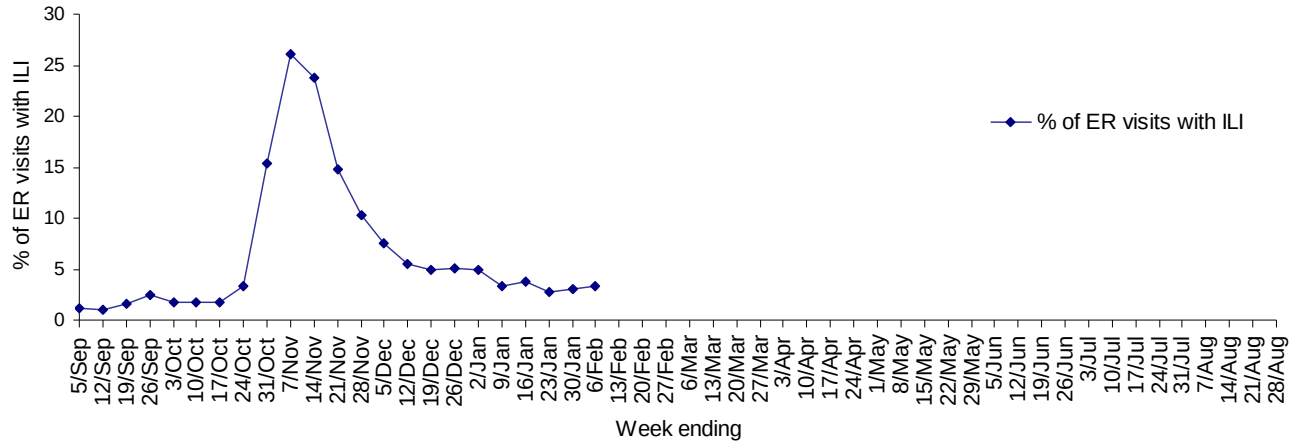
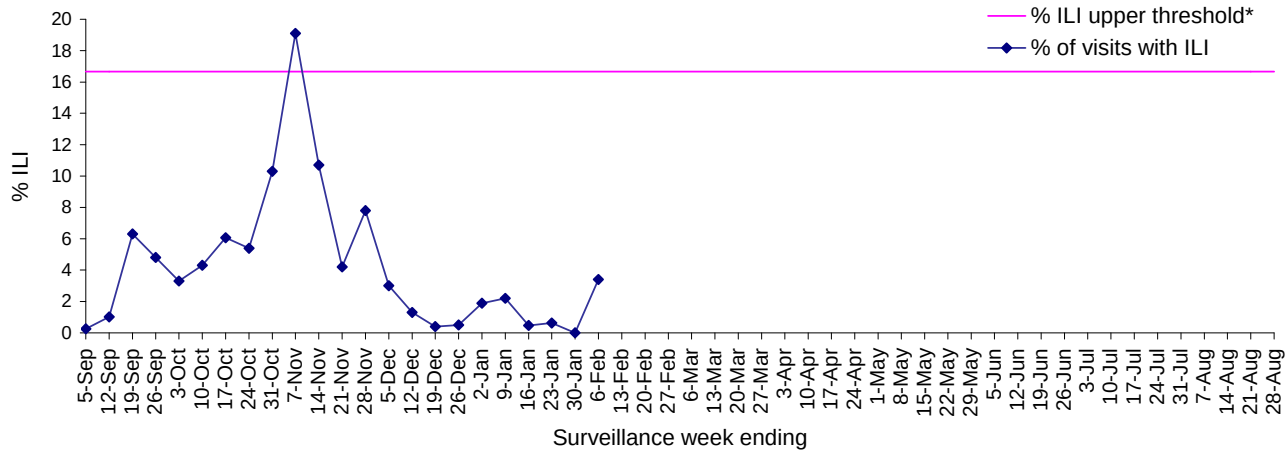


Figure 9: Percent of patient visits to FluWatch and provincial sentinel physicians with ILI, Nova Scotia, 2009–2010



*Note: Threshold ILI rate of 16.7% represents the highest proportion of patient visits reported with ILI over the past five influenza seasons.

Figure 10: Percent of patient visits to FluWatch and provincial sentinel physicians with ILI by age group, Nova Scotia, 2009–2010

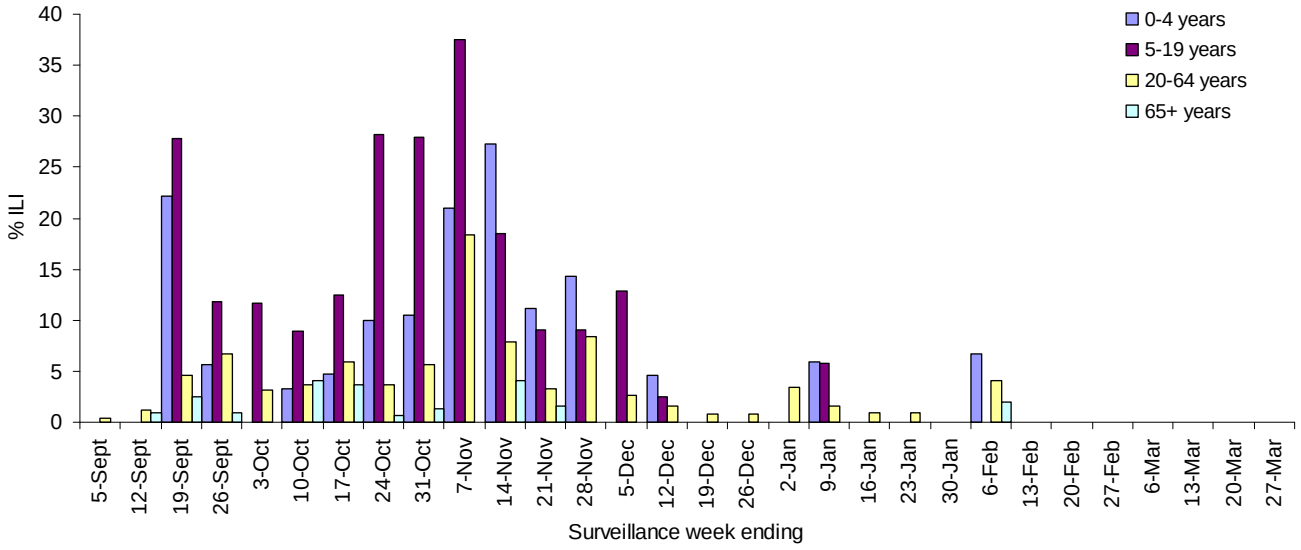
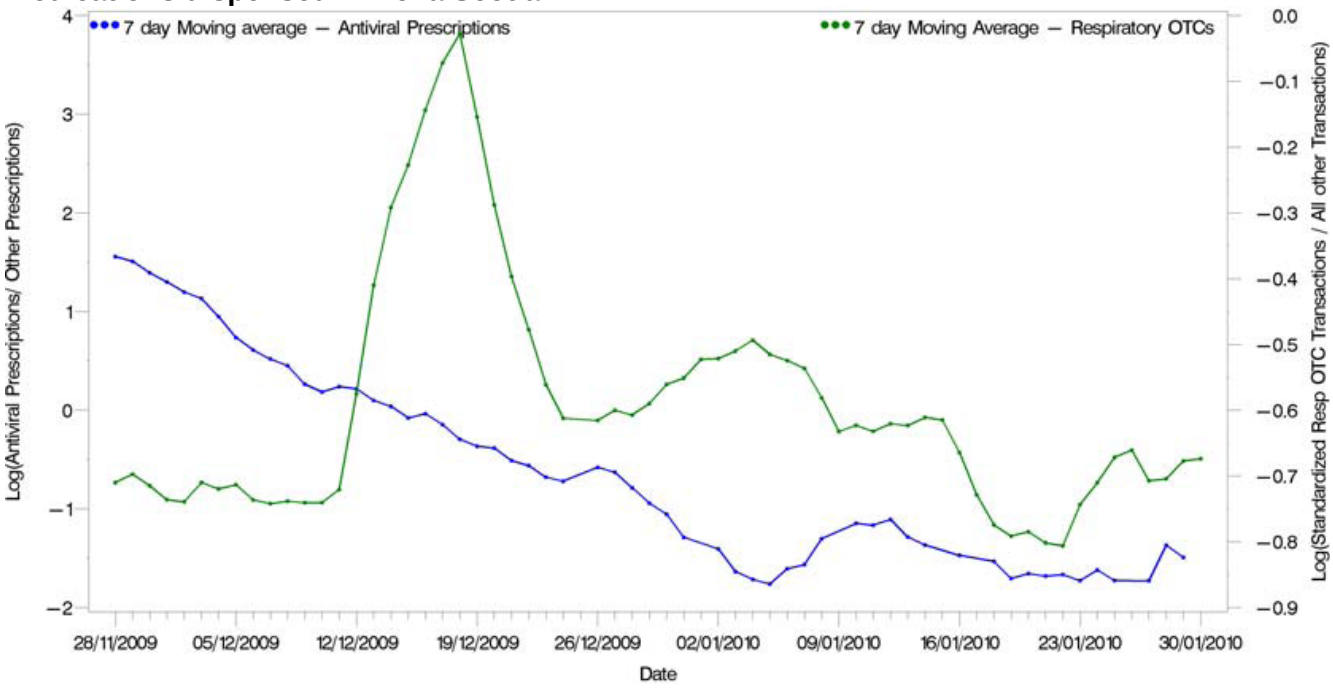


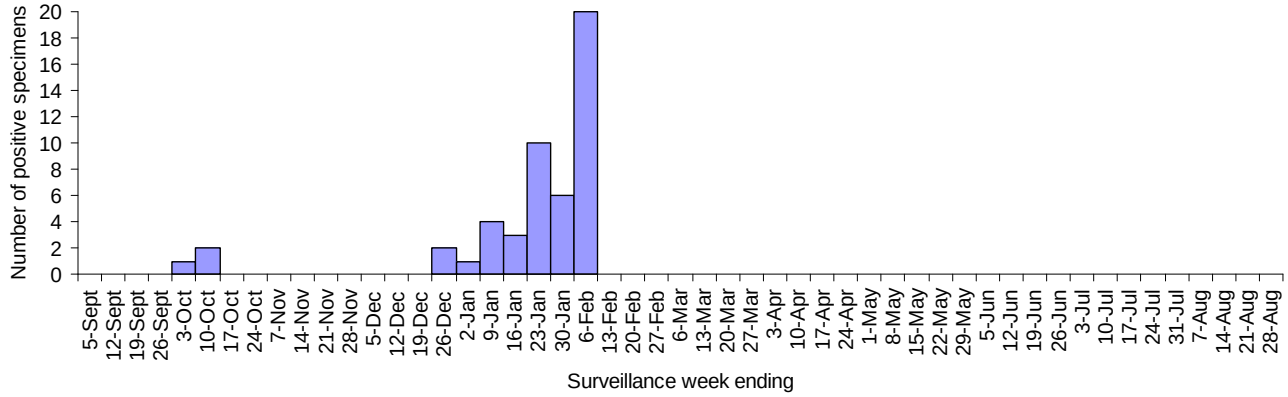
Figure 11: Seven day moving average of antivirals and respiratory over-the-counter medications dispensed in Nova Scotia



Reference: H1N1 Antiviral and OTC Surveillance Weekly Report. 2010. Rx Canada.

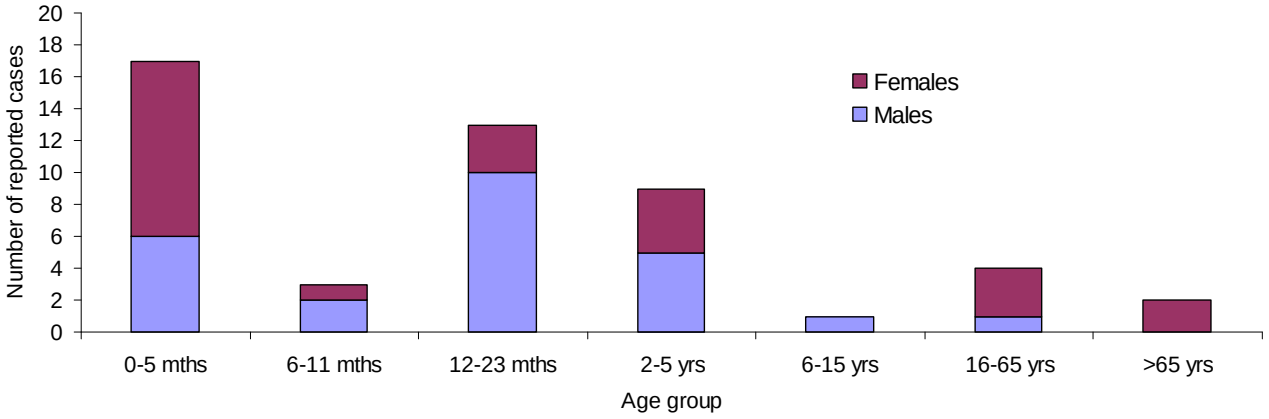
RESPIRATORY SYNCYTIAL VIRUS (RSV)*

Figure 12: Number of positive RSV specimens by report week, Nova Scotia, 2009–2010 (n=49)



*Note: Given the influenza situation in the province, the QE II Health Sciences Centre has streamlined laboratory practices and stopped routine RSV testing on April 27th 2009.

Figure 13: Cumulative number of positive RSV specimens by age group and sex, Nova Scotia, 2009–2010 (n=49)



PARAINFLUENZA VIRUS (PIV) and ADENOVIRUS

Table 5: Total number of specimens tested and number (%) positive for parainfluenza and adenovirus by report week and cumulative season, Nova Scotia, 2009–2010

	Surveillance Week 05 January 31-February 6, 2010		Cumulative Season-to-Date Totals	
Number of specimens tested:	11		254	
Number and percent positive for:	n positive	% positive	n positive	% positive
Parainfluenza virus 1	0	0.0	2	0.8
Parainfluenza virus 2	0	0.0	0	0.0
Parainfluenza virus 3	0	0.0	0	0.0
Parainfluenza virus 4	0	0.0	0	0.0
Total parainfluenza virus	0	0.0	2	0.8
Adenovirus	0	0.0	1	0.4

*Note: Given the influenza situation in the province, the QE II Health Sciences Centre has streamlined laboratory practices and stopped routine parainfluenza and adenovirus testing on April 27th 2009.

APPENDIX A: Definitions used in Influenza Surveillance, 2009-2010

1) 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 five years, gastrointestinal symptoms may also be present. In patients under five or over 65, fever may not be prominent.

2) Outbreaks of influenza / ILI by setting:

Schools and work sites:
Greater than 10% absenteeism on any day that is 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*. Institutional outbreaks should be reported within 24-hours of identification.

3) National FluWatch Definitions for Influenza Activity Levels:

Influenza activity levels are defined as:

1 =	**No activity:**	i.e. no laboratory confirmed influenza detections during the past four weeks; however, sporadically occurring ILI may be reported
2 =	**Sporadic:**	Sporadically occurring **ILI and confirmed influenza* with NO outbreaks** detected within the influenza surveillance region†
3 =	**Localized:**	Sporadically occurring **ILI and confirmed influenza* together with outbreaks of ILI** in schools and worksites or laboratory confirmed influenza in residential institutions occurring **in less than 50% of the influenza surveillance region(s)**†
4 =	**Widespread:**	Sporadically occurring **ILI and confirmed influenza* together with outbreaks of ILI** in schools and worksites or laboratory confirmed influenza in residential institutions occurring **in greater than or equal to 50% of the influenza surveillance region(s)**†

* Confirmation of influenza within the surveillance region at any time within the prior four weeks
† sub-regions within the province or territory as defined by the provincial/territorial epidemiologist

4) District Health Authorities (DHAs), Nova Scotia:

DHA 1 – South Shore Health
DHA 2 – South West Health
DHA 3 – Annapolis Valley Health
DHA 4 – Colchester East Hants Health Authority
DHA 5 – Cumberland Health Authority
DHA 6 – Pictou County Health Authority
DHA 7 – Guysborough Antigonish Strait Health Authority
DHA 8 – Cape Breton District Health Authority
DHA 9 – Capital Health