

# RESPIRATORY WATCH

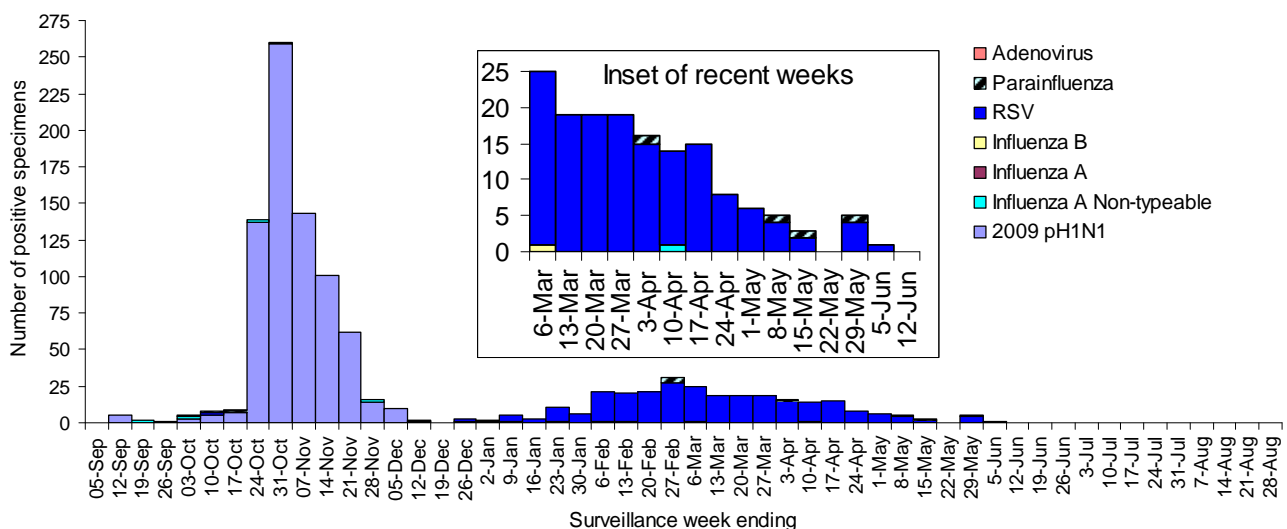
Week 22 (May 30 – June 5, 2010)

## Summary of Nova Scotia surveillance findings, week ending June 5, 2010:

- No influenza activity was reported in Nova Scotia during week 22. There have been 752 lab-confirmed cases of pH1N1 to date for the 2009–2010 influenza season. No lab-confirmed cases of pH1N1 were reported during week 22. The first (and only) case of influenza B for this season reported symptom onset during week 9.
- There have been 277 hospitalizations and six deaths due to pH1N1 reported so far this season. There has been one hospitalization and death due to influenza B reported so far this season. No hospitalizations were reported in week 22.
- All DHAs reported no influenza activity during surveillance week 22.
- The percentage of ER visits with ILI was 1.4% (1.5% in week 21).
- The percentage of visits with ILI from sentinel physicians was 0% (0% in week 21).
- During the current surveillance week, circulating respiratory pathogens detected through routine laboratory testing included RSV (1 case).
- Specimens have tested positive for human metapneumovirus this season. This is a reminder that there are respiratory pathogens circulating that are not covered by routine testing algorithms.

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.

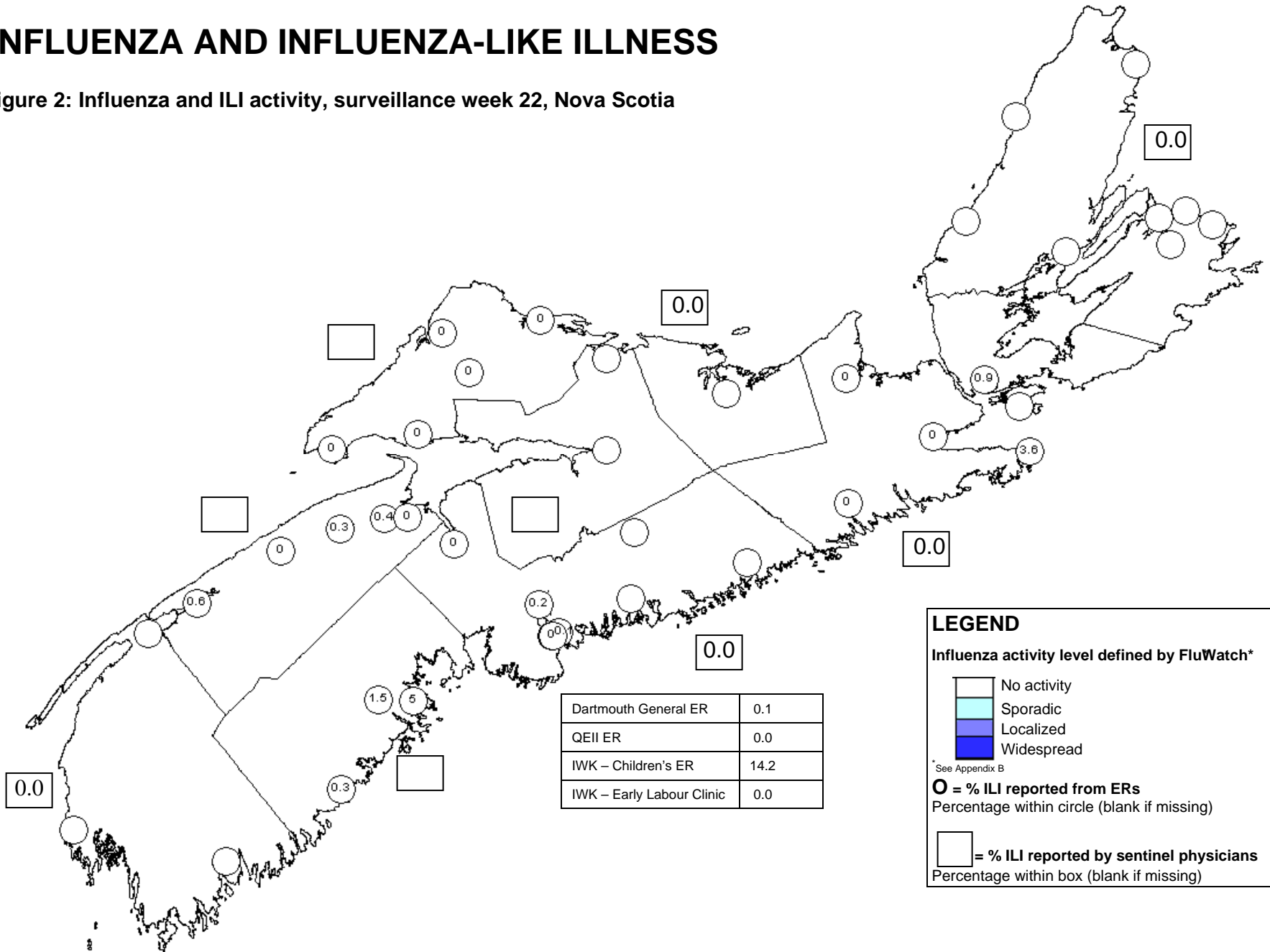
**Figure 1: Summary of laboratory detected circulating respiratory pathogens, Nova Scotia, 2009–2010\***



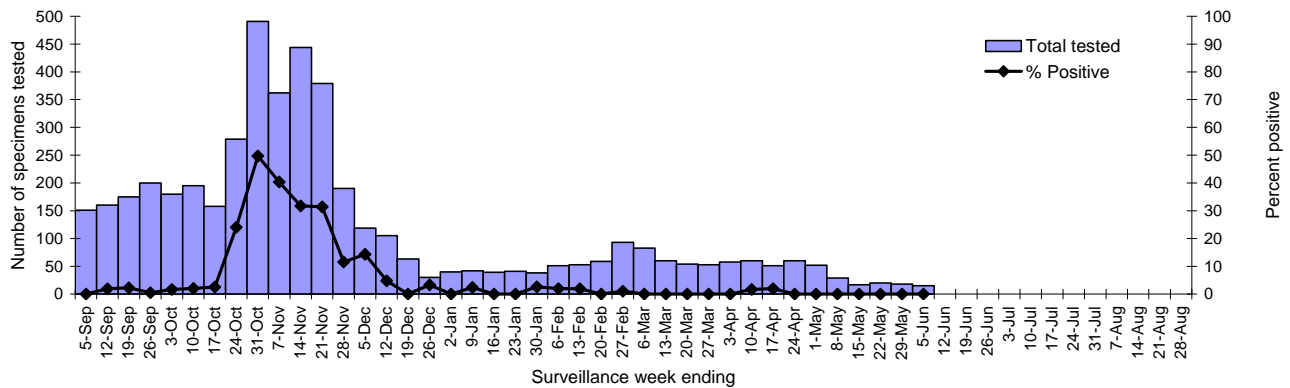
\*Includes respiratory pathogens detected through routine laboratory testing practices in Nova Scotia.

# INFLUENZA AND INFLUENZA-LIKE ILLNESS

Figure 2: Influenza and ILI activity, surveillance week 22, Nova Scotia

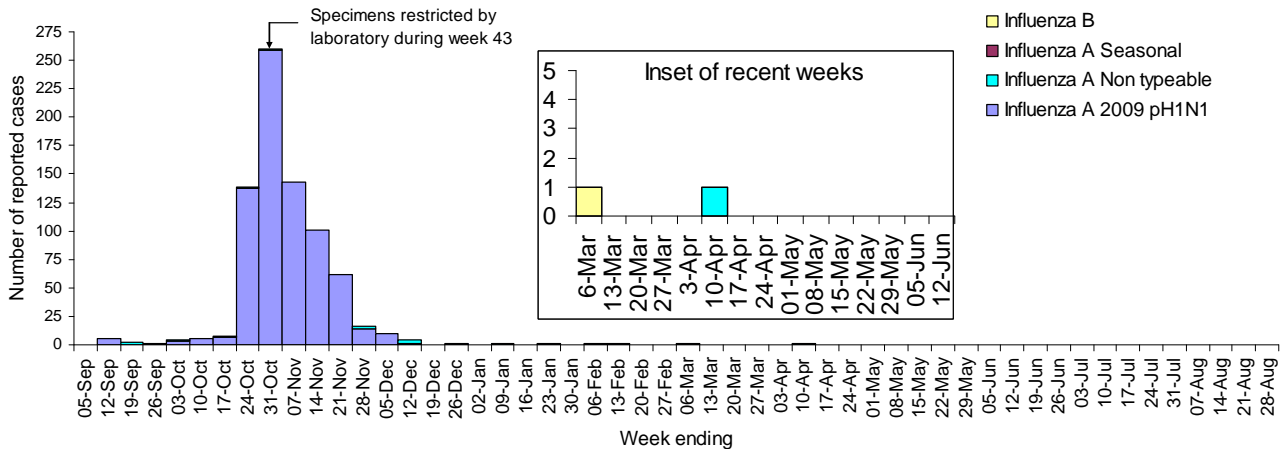


**Figure 3: Number of specimens tested for influenza and percent positive, Nova Scotia Provincial Public Health Laboratory Network, 2009–2010\***



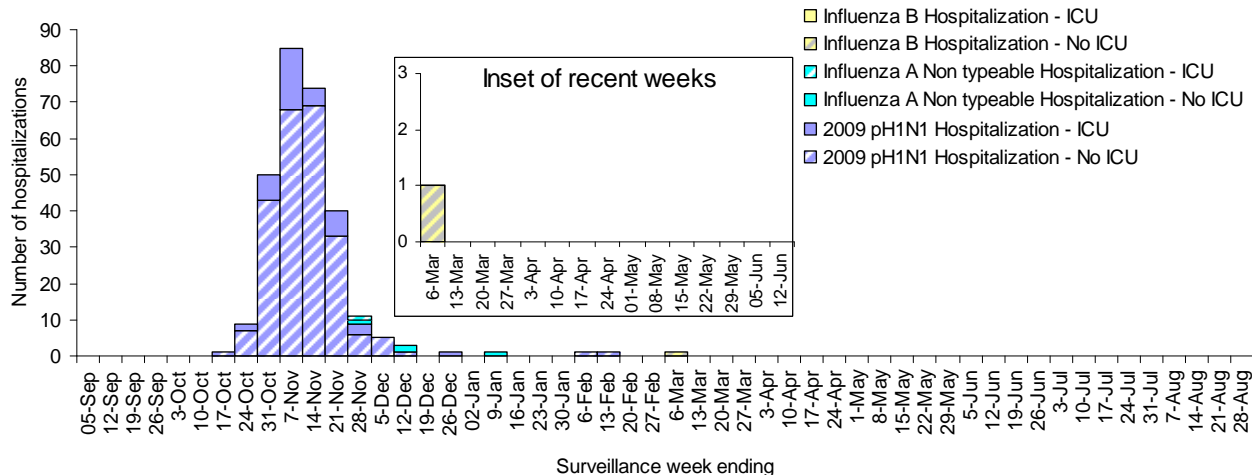
\*Data presented in this figure refers to week specimen was tested. All other data in report refers to onset date of symptoms. Due to a dramatic increase in the number of specimens submitted for influenza testing, the PPHLN restricted testing to hospitalized patients only during week 43 (October 27, 2009). One positive influenza A pH1N1 specimen was detected in Week 16 (ending April 17), but is not reflected in the remainder of the report as the specimen was not from a Nova Scotia resident.

**Figure 4: Number of reported lab-confirmed influenza cases by type and report week, Nova Scotia, 2009–2010 (n=767)**



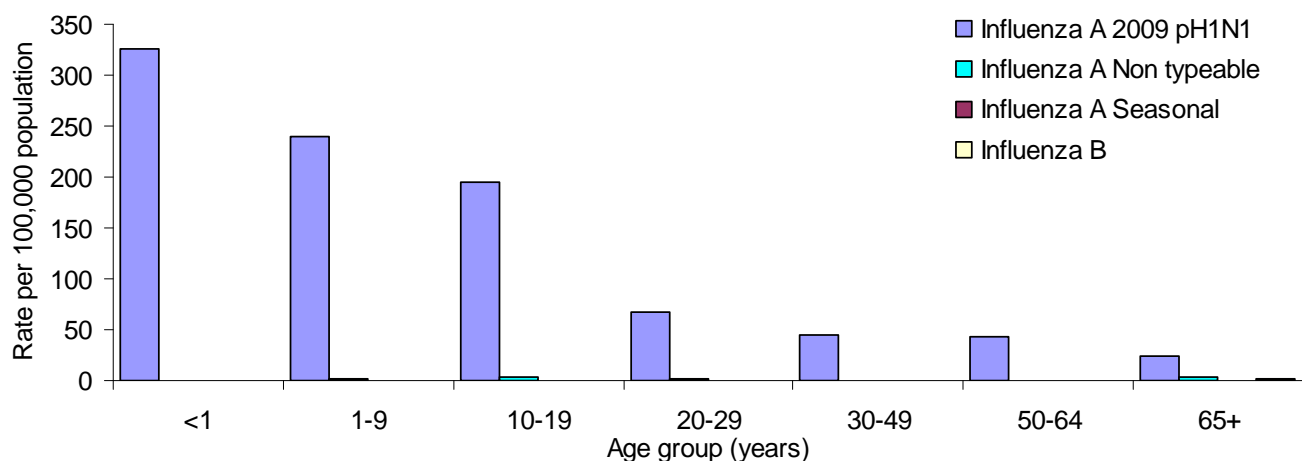
Source: Application for Notifiable Disease Surveillance System (ANDS), May 3, 2010. Data provisional and subject to updates.

**Figure 5: Number of influenza hospitalizations by type and report week, Nova Scotia, 2009–2010 (n=283)\***

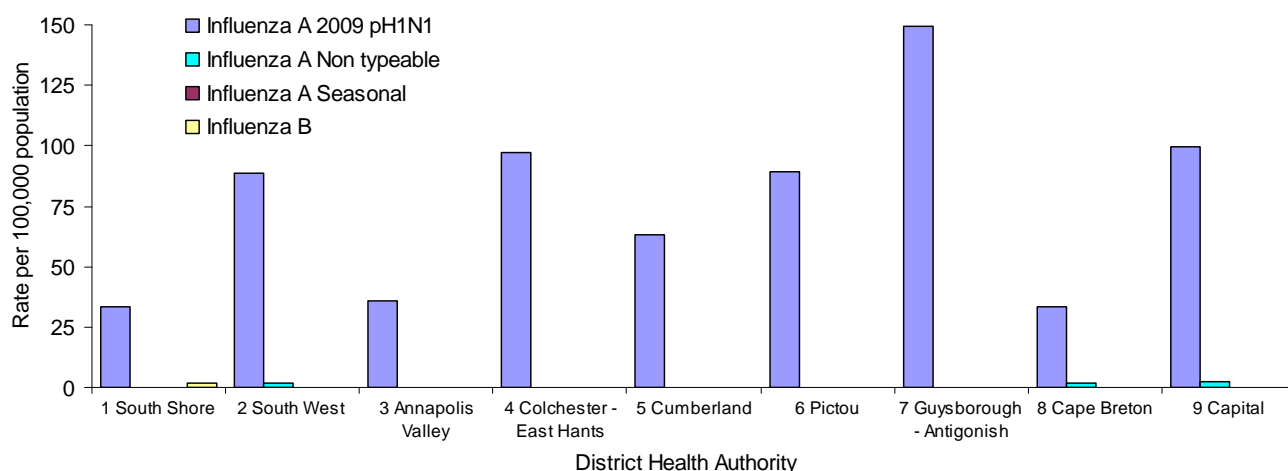


\*ICU admission to be updated as information is available. Note that this does not represent individuals currently admitted to hospital; patients may be discharged home by time of report to NSHPP. Hospitalizations for influenza A will be added as they are reported.

**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 22 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 |
|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| <b>2009 pH1N1</b>                  |       |       |       |       |       |       |       |       |       |             |
| Week 22                            | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0           |
| Cumulative                         | 20    | 55    | 29    | 71    | 20    | 41    | 66    | 42    | 408   | 752         |
| 2008–2009 season                   | 7     | 15    | 26    | 17    | 4     | 4     | 12    | 47    | 450   | 582         |
| <b>Influenza A (non-typeable)*</b> |       |       |       |       |       |       |       |       |       |             |
| Week 22                            | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0           |
| Cumulative                         | 0     | 1     | 0     | 0     | 0     | 0     | 0     | 2     | 11    | 14          |
| <b>Influenza A (seasonal)</b>      |       |       |       |       |       |       |       |       |       |             |
| Week 22                            | 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          |
| <b>Influenza B</b>                 |       |       |       |       |       |       |       |       |       |             |
| Week 22                            | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0           |
| Cumulative                         | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 1           |
| 2008–2009 season                   | 3     | 5     | 5     | 6     | 2     | 1     | 4     | 8     | 30    | 64          |

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

**Table 2: Influenza case demographics, surveillance week 22 and cumulative, Nova Scotia, 2009–2010**

|                                    | n   | Rate (CI)*       | % Male | Mean age | Median age | Age range    |
|------------------------------------|-----|------------------|--------|----------|------------|--------------|
| <b>Week 22</b>                     |     |                  |        |          |            |              |
| <b>2009 pH1N1</b>                  |     |                  |        |          |            |              |
| Cases                              | 0   | –                | –      | –        | –          | –            |
| Total hospitalizations             | 0   | –                | –      | –        | –          | –            |
| Non-ICU                            | 0   | –                | –      | –        | –          | –            |
| ICU                                | 0   | –                | –      | –        | –          | –            |
| Deaths**                           | 0   | –                | –      | –        | –          | –            |
| <b>Influenza A (seasonal)</b>      |     |                  |        |          |            |              |
| Cases                              | 0   | –                | –      | –        | –          | –            |
| Total hospitalizations             | 0   | –                | –      | –        | –          | –            |
| Non-ICU                            | 0   | –                | –      | –        | –          | –            |
| ICU                                | 0   | –                | –      | –        | –          | –            |
| Deaths                             | 0   | –                | –      | –        | –          | –            |
| <b>Influenza A (non-typeable)</b>  |     |                  |        |          |            |              |
| Cases                              | 0   | –                | –      | –        | –          | –            |
| Total hospitalizations             | 0   | –                | –      | –        | –          | –            |
| Non-ICU                            | 0   | –                | –      | –        | –          | –            |
| ICU                                | 0   | –                | –      | –        | –          | –            |
| Deaths                             | 0   | –                | –      | –        | –          | –            |
| <b>Influenza B</b>                 |     |                  |        |          |            |              |
| Cases                              | 0   | –                | –      | –        | –          | –            |
| Total hospitalizations             | 0   | –                | –      | –        | –          | –            |
| Non-ICU                            | 0   | –                | –      | –        | –          | –            |
| ICU                                | 0   | –                | –      | –        | –          | –            |
| Deaths                             | 0   | –                | –      | –        | –          | –            |
| <b>Cumulative 2009–2010 season</b> |     |                  |        |          |            |              |
| <b>2009 pH1N1</b>                  |     |                  |        |          |            |              |
| Cases                              | 752 | 80.6 (74.8–86.4) | 48.9   | 24.3     | 16.5       | 2 wks–91 yrs |
| Total hospitalizations             | 277 | 29.7 (26.2–33.2) | 50.2   | 29.3     | 24.0       | 2 wks–91 yrs |
| Non-ICU                            | 235 | 25.2 (22.0–28.4) | 51.5   | 26.9     | 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+          |
| <b>Influenza A (seasonal)</b>      |     |                  |        |          |            |              |
| Cases                              | 0   | –                | –      | –        | –          | –            |
| Total hospitalizations             | 0   | –                | –      | –        | –          | –            |
| Non-ICU                            | 0   | –                | –      | –        | –          | –            |
| ICU                                | 0   | –                | –      | –        | –          | –            |
| Deaths                             | 0   | –                | –      | –        | –          | –            |
| <b>Influenza A (non-typeable)</b>  |     |                  |        |          |            |              |
| Cases                              | 14  | 1.5 (0.7-2.3)    | 42.9   | 37.7     | 29.5       | 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   | –                | –      | –        | –          | –            |
| <b>Influenza B</b>                 |     |                  |        |          |            |              |
| Cases                              | 1   | 0.1 (0–0.3)      | –      | –        | –          | 40+          |
| Total hospitalizations             | 1   | 0.1 (0–0.3)      | –      | –        | –          | 40+          |
| Non-ICU                            | 1   | 0.1 (0–0.3)      | –      | –        | –          | 40+          |
| ICU                                | 0   | –                | –      | –        | –          | –            |
| Deaths**                           | 1   | 0.1 (0–0.3)      | –      | –        | –          | 40+          |

\*Rate per 100,000 population; CI=confidence interval for rate. Dashes used for small numbers.

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

**Table 3: Surveillance week 22 ILI reporting from emergency departments, FluWatch sentinel physicians and provincial sentinel physicians, Nova Scotia**

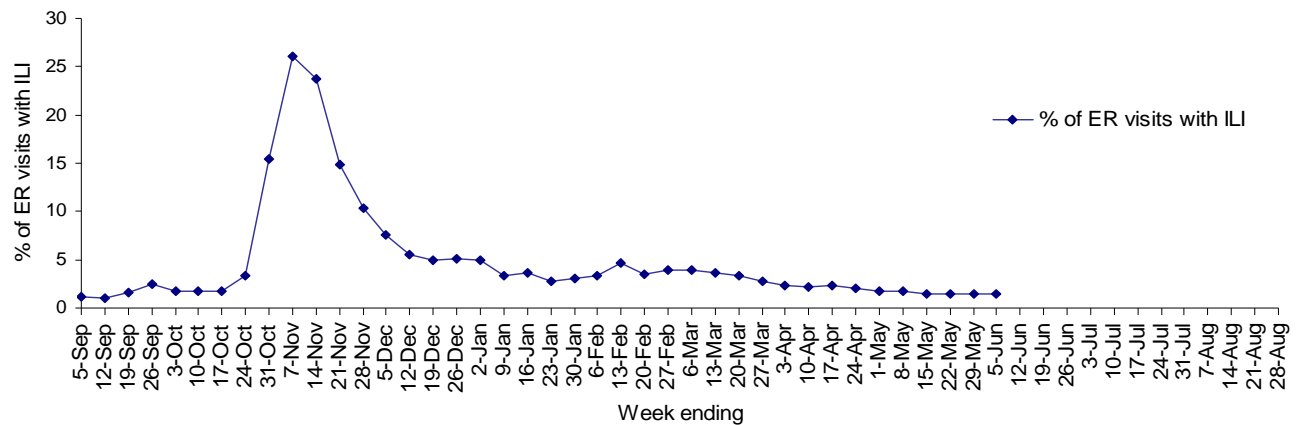
|                                 | ER SURVEILLANCE |                       | SENTINEL SURVEILLANCE* |                      |
|---------------------------------|-----------------|-----------------------|------------------------|----------------------|
|                                 | %ILI            | Reporting ERs         | %ILI                   | Reporting Practices  |
| DHA 1                           | 1.8             | 3 of 3                | —                      | 0 of 1**             |
| DHA 2                           | —               | 0 of 3                | 0.0                    | 1 of 4               |
| DHA 3                           | 0.3             | 5 of 5                | —                      | 0 of 2**             |
| DHA 4                           | —               | 0 of 2                | —                      | —**                  |
| DHA 5                           | 0.0             | 5 of 5                | —                      | 0 of 1**             |
| DHA 6                           | —               | 0 of 1                | 0.0                    | 2 of 2               |
| DHA 7                           | 0.4             | 5 of 6                | 0.0                    | 1 of 4**             |
| DHA 8                           | —               | 0 of 8                | 0.0                    | 1 of 5**             |
| DHA 9                           | 0.1             | 4 of 7                | 0.0                    | 2 of 7               |
| <b>Nova Scotia (excl. IWK)†</b> | <b>0.4</b>      | <b>22 of 40 (55%)</b> | <b>0.0</b>             | <b>7 of 26 (27%)</b> |
| <b>Nova Scotia (incl. IWK)</b>  | <b>1.4</b>      | <b>23 of 41 (56%)</b> |                        |                      |
| IWK                             | 10.6            | 1 of 1                |                        |                      |

\* Includes Nova Scotia Sentinel Network and Fluwatch sentinels

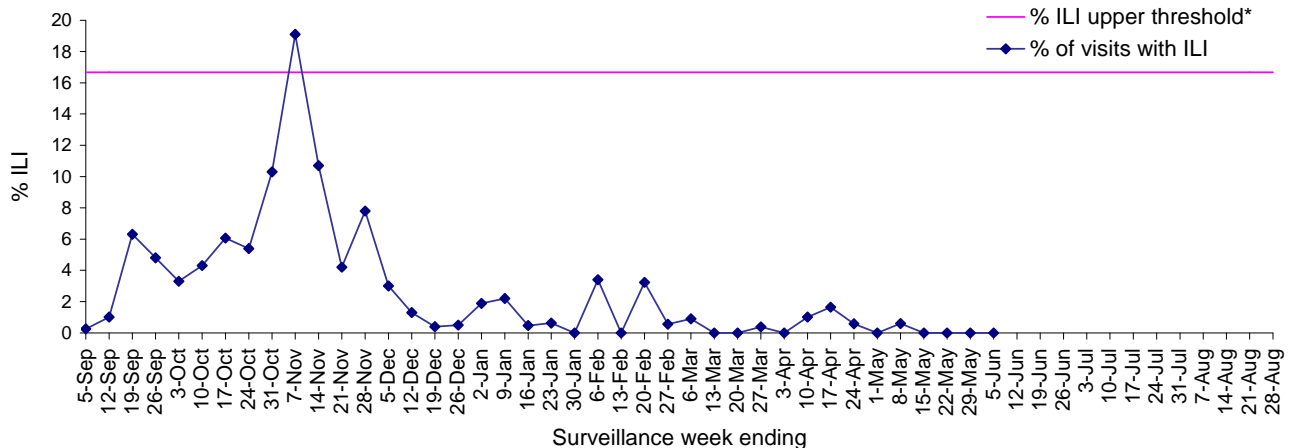
\*\* Recruitment ongoing. Please call 722-1494 if you are interested in participation in the Nova Scotia Sentinel Network

†Excludes the children's ER from IWK

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

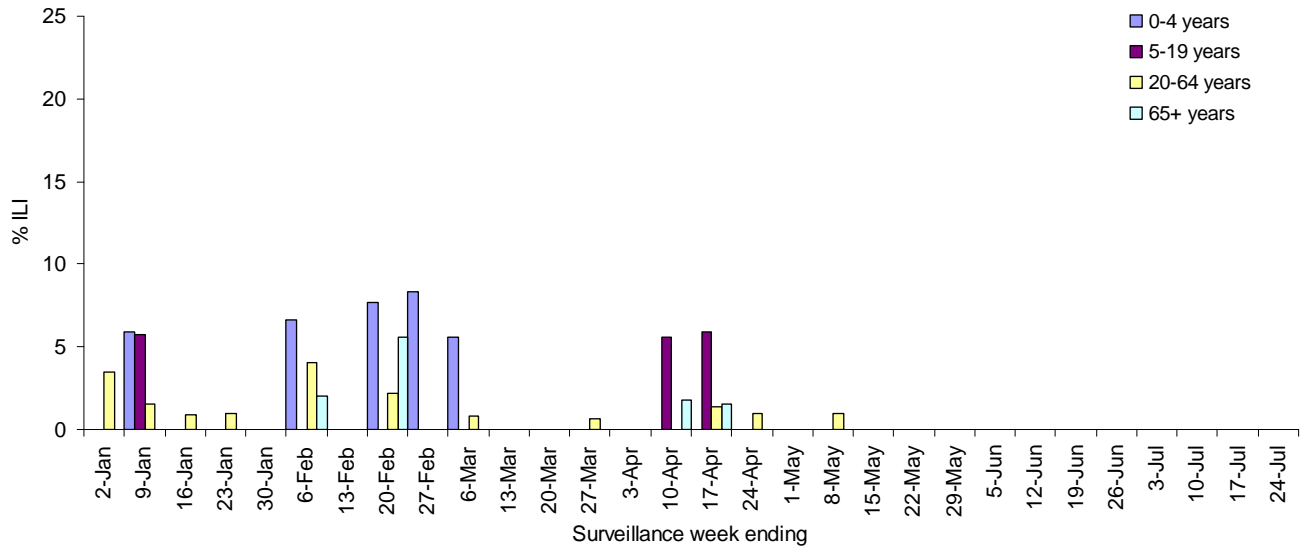


**Figure 9: Percent of patient visits to FluWatch and provincial sentinel physicians with ILI, Nova Scotia, 2009–2010**



\*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=267)

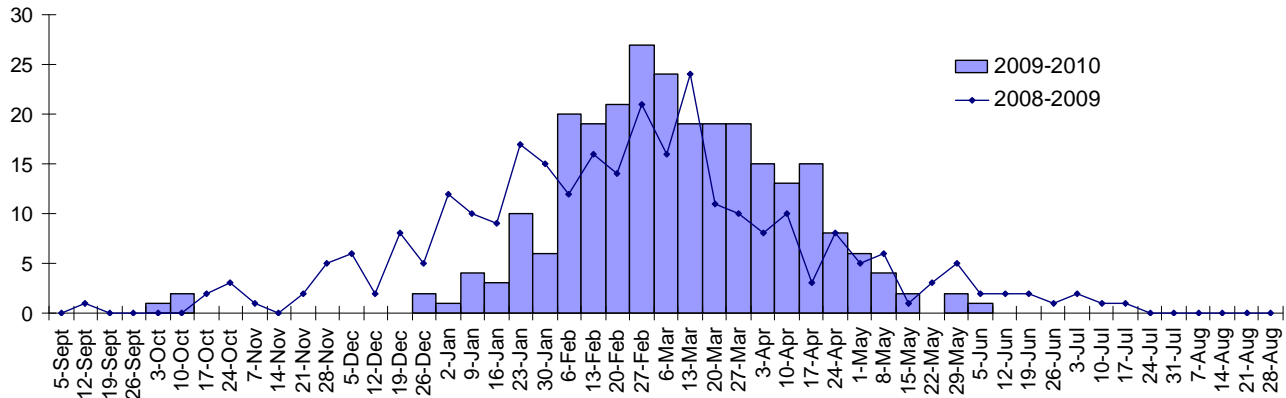
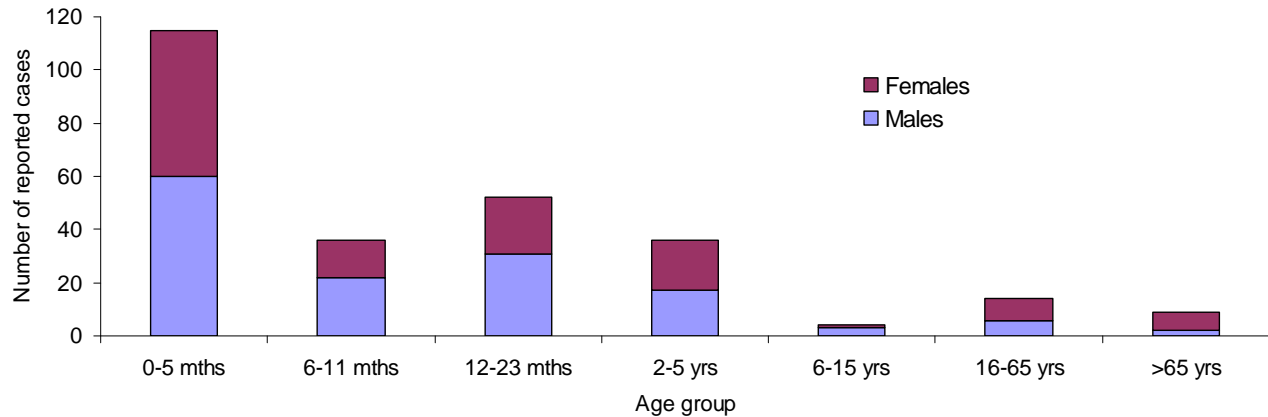


Figure 13: Cumulative number of positive RSV specimens by age group and sex, Nova Scotia, 2009–2010 (n=267)



# 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 22<br>May 30–June 5, 2010 |            | Cumulative<br>Season-to-Date Totals |            |
|----------------------------------|---|------------|-------------------------------------|------------|
| Number of specimens tested:      | 5   |            | 408                                 |            |
| Number and percent positive for: | n positive                                  | % positive | n positive                          | % positive |
| Parainfluenza virus 1            | 0   | 0.0        | 7                                   | 1.7        |
| Parainfluenza virus 2            | 0   | 0.0        | 1                                   | 0.2        |
| Parainfluenza virus 3            | 0   | 0.0        | 1                                   | 0.2        |
| Parainfluenza virus 4            | 0   | 0.0        | 0                                   | 0.0        |
| <b>Total parainfluenza virus</b> | <b>0</b>                                    | <b>0.0</b> | <b>9</b>                            | <b>2.2</b> |
| <b>Adenovirus</b>                | <b>0</b>                                    | <b>0.0</b> | <b>2</b>                            | <b>0.5</b> |

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

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### 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