

- The proportion of patients visiting sentinel physicians for influenza-like-illness was **7.4%** (**no change** from last week)

### Outpatient ILL (sentinels)



- This week there were **4** cases of influenza A and **0** cases of influenza B reported
- A total of **16** cases of influenza A and **5** cases of influenza B have been reported since the start of the current influenza season
- Cadhams Provincial Laboratory has continued to detect a variety of respiratory viruses at low levels this week, with no dominant pathogen emerging

### Laboratory



- There was **1** hospitalization associated with a laboratory-confirmed diagnosis of influenza reported this week, **0** ICU admissions and **0** deaths.
- There have been **6** hospitalizations, of which **1** resulted in ICU admission, this season
- So far this season, **0** Manitobans with laboratory-confirmed influenza have died

### Severity



- The following regional proportions are observed among cases of influenza to date:
  - Winnipeg (70%)
  - Northern (15%)
  - Prairie Mountain (0%)
  - Southern (10%)
  - Interlake-Eastern (5%)

### Geography



- Between Dec. 8 and Dec. 14, 2013, **22** units of oseltamivir were dispensed from community retail pharmacies.
- The total number of units dispensed since November 1, 2013 was **115**

### Treatment



- Manitoba's influenza activity, as estimated by Google search data, is **moderate**
- There were **12** calls to Health Links - Info Santé this week, which is the same as the previous week

### Syndromic Surveillance



- Since September 1, 2013, no isolates have tested positive for resistance to either Oseltamivir or Zanamivir

### Antiviral Resistance



- As of Dec. 14, 2013, there have been **0** lab-confirmed outbreaks of influenza reported this season

### Institutional Outbreaks



- As of December 6, 2013, **14.2%** of Manitobans had received the seasonal influenza vaccine.

### Immunization



## In Summary

- There were 4 laboratory-confirmed cases of influenza A and 0 cases of influenza B reported last week.

# Surveillance Measures

## 1. Laboratory Surveillance

Reports of influenza nucleic acid detection, culture isolation, and enzyme immunoassay (EIA) detections are received from Cadham Provincial Laboratory (CPL) and occasionally other laboratories, and are forwarded to the Public Health Surveillance (PHS) Unit within 24 hours of confirmation.

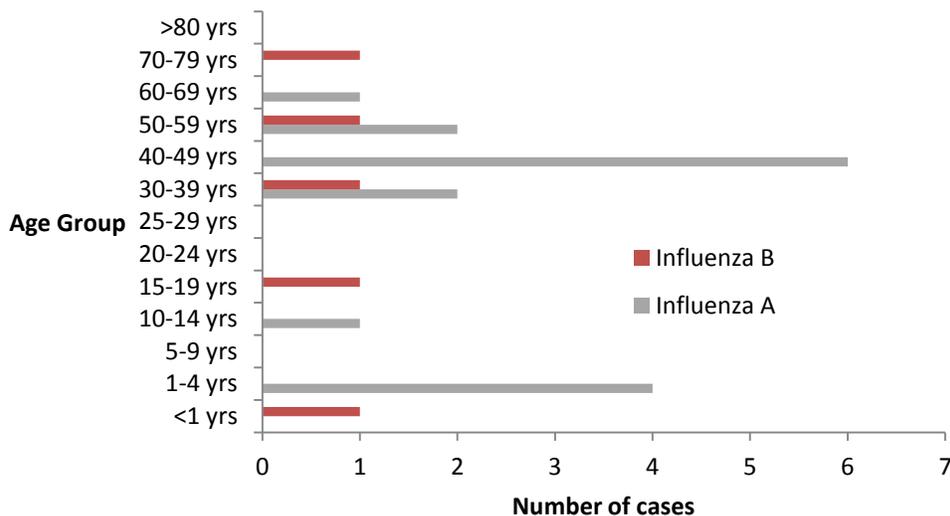
CPL performs testing for other respiratory viruses including parainfluenza, RSV, adenovirus, rhinovirus, coronavirus, enterovirus, and bocavirus. The total number of other respiratory viruses detected are reported to PHS on a weekly basis.

This week, there were:

- 4 cases of influenza A reported;
- 0 cases of influenza B reported.

Since the beginning of this season, there have been:

- 16 cases of influenza A reported;
- 5 cases of influenza B reported.



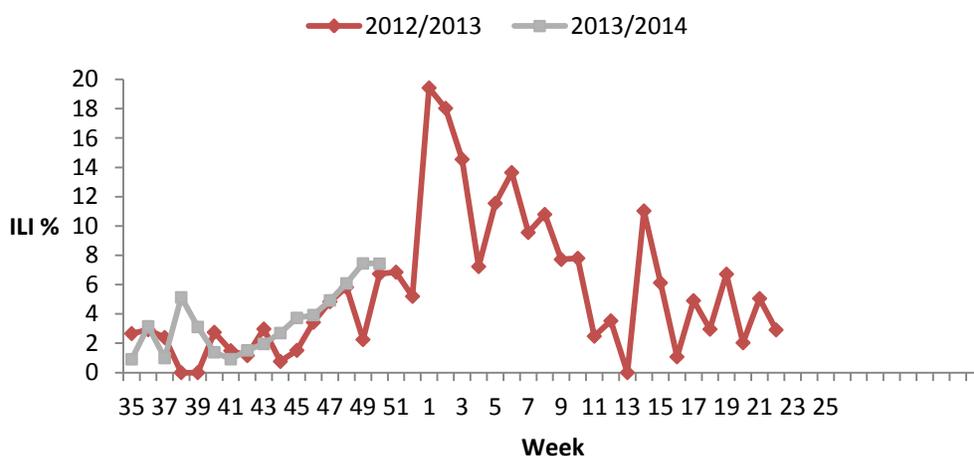
**Figure 1** Reported cases of Influenza A and B by age group, Manitoba, 2013/14

## 2. Outpatient ILI (Sentinel Physicians)

Manitoba Health participates in the National *FluWatch* Program coordinated by PHAC. In addition to laboratory-confirmation of influenza, this program relies on weekly reports of ILI as reported by 22 current Manitoban sentinel physicians in all five RHAs (Northern, Southern, Prairie Mountain, Interlake-Eastern, and Winnipeg).

The proportion of patients seen for an ILI this week was comparable to last week (7.4%). The proportion is slightly higher than observed at the same time last season.

Manitoba Health receives weekly reports from PHAC presenting the provincial ILI rate and the specific data for each of the participating sentinel physicians. The graph below depicts the proportion of total patients who were seen for an ILI. **These numbers should be interpreted with caution as the number of sentinel physicians reporting to *FluWatch* varies from week to week and may not be representative of ILI activity across the province.**



**Figure 2** Proportion of patients seen for influenza-like illness as reported by *FluWatch* sentinel physicians by week for the 2012/13 and 2013/14 influenza seasons, Manitoba

## STRIVE (Surveillance Team Research on Influenza Vaccine Effectiveness)

Manitoba Health has participated in STRIVE, a national multi-site vaccine effectiveness surveillance network since the 2012/13 influenza season. Operated in collaboration with Cadham Provincial Laboratory, STRIVE aims to assess the effectiveness of the seasonal trivalent influenza vaccine in protecting against influenza, and to monitor influenza activity in the region. STRIVE specimens are tested for influenza and other respiratory viruses through PCR and Seeplex RV15 panel. Results of respiratory testing performed by network members will be regularly featured in this column. While recruitment is ongoing, we would like to thank sentinel clinicians and sites who have thus far supported this public health initiative in Manitoba. For more information about the study, please e-mail [Arielle.GoldmanSmith@gov.mb.ca](mailto:Arielle.GoldmanSmith@gov.mb.ca) (for sites outside Winnipeg) or [strive@wrha.mb.ca](mailto:strive@wrha.mb.ca) (Winnipeg).

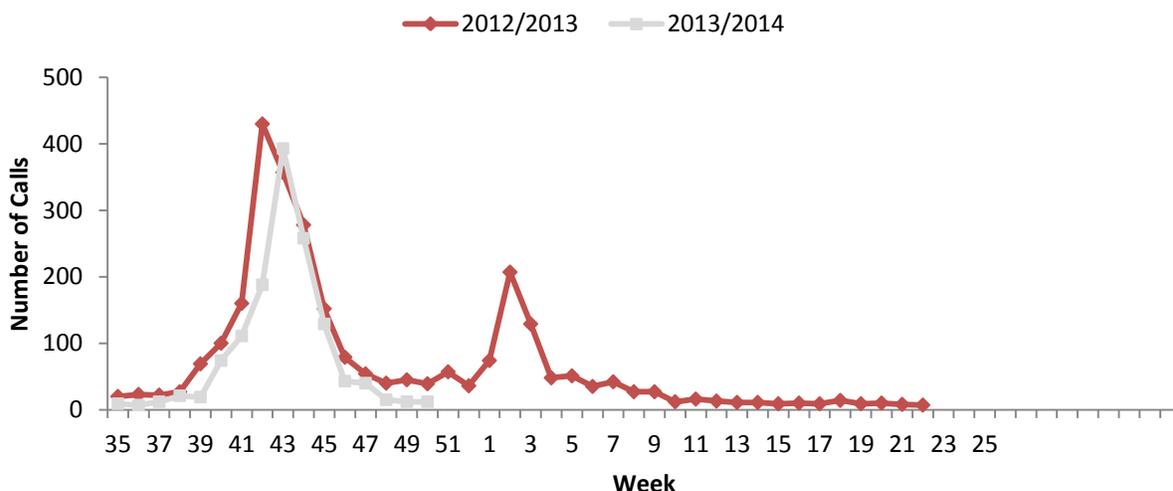
|  | Influenza A | Influenza B | Total    |
|--|-------------|-------------|----------|
| <b>Total STRIVE* lab-confirmed influenza cases:</b>                          | <b>6</b>    | <b>2</b>    | <b>8</b> |
| (These cases are included in the total number of provincial influenza cases) |             |             |          |

\*Data Source: STRIVE Network; data is based on specimen collection date and includes cases from the beginning of October to December 14, 2013

### Health Links – Info Santé (HL-IS)

HL-IS is a 24-hour, 7-days a week telephone information service staffed by registered nurses with the knowledge to provide answers over the phone to health care questions and guidance to appropriate care. When a caller phones HL-IS and selects the Influenza Service, they are given an option to select information on (1) the groups of individuals who are at an increased risk of serious illness, (2) how to arrange a flu shot, (3) the annual influenza immunization campaign, or (4) the management of flu and its potential complications.

This week there were 12 calls, which was the same as the previous week. The weekly total is lower than the total observed at the same time last season.



**Figure 3.** The number of calls to Health Links – Info Santé in the 2012/13 and 2013/14 influenza seasons, Manitoba

### Severity (Clinically Severe Cases)

This season, PHAC is requesting provinces and territories to report the number of hospitalizations, ICU admissions, and deaths associated with a lab-confirmed report of influenza. The reason for hospitalization, ICU admission, or death does not have to be attributable to the influenza diagnosis in order to be included in this count. These data are collected in order to continue with the surveillance system implemented during the 2009 H1N1 pandemic to help monitor the severity/burden of illness during the influenza season.

|   |  |
|---|--|
| <p>This week there was:</p> <ul style="list-style-type: none"> <li>• 1 hospitalization, of which</li> <li>• 0 resulted in an ICU admission; and</li> <li>• 0 deaths.<sup>1</sup></li> </ul> | <p>*Since the beginning of the season, there have been:</p> <ul style="list-style-type: none"> <li>• 6 hospitalizations, of which</li> <li>• 1 resulted in an ICU admission; and</li> <li>• 0 deaths.<sup>1</sup></li> </ul> |
|---|--|

There was 1 child (aged 9 or under) admitted to hospital with laboratory-confirmed influenza A or B since the start of the season.

\*Hospitalized cases are reported based on laboratory report date.

<sup>1</sup> The reason for hospitalization, ICU admission, or death does not have to be attributable to the influenza diagnosis in order to be included in this count.

### Institutional Outbreaks

Outbreaks of influenza must be accompanied by a positive influenza lab report to be counted. The outbreak-related cases reflected on tables and figures within this report are lab-confirmed. However, most outbreak-related cases will not be lab-confirmed.

This week there were:

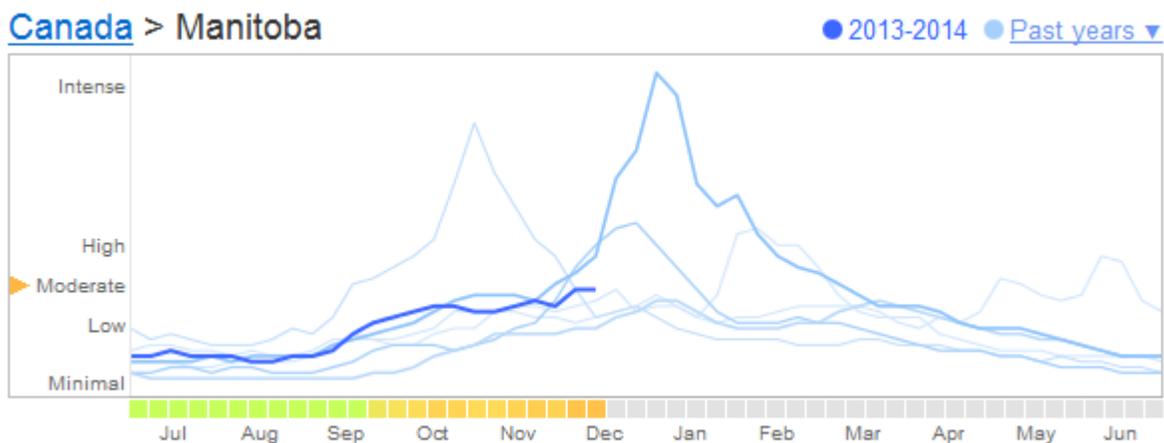
- 0 outbreaks of influenza A;
- 0 outbreaks of influenza B.

From the beginning of the season until Nov. 30, 2013 there have been:

- 0 outbreaks of influenza A;
- 0 outbreaks of influenza B.

### Syndromic Surveillance

[Google Flu Trends](#) uses aggregated Google search data to estimate influenza activity. As of December 16, 2013 Manitoba's influenza activity was **moderate**.



## Sub-Typing, Strain Characterization, and Antiviral Resistance

### Sub-Typing:

Table 3. Sub-typing of influenza A specimens as reported by CPL, 2013/2014 flu season, Manitoba

| A/H1 | A/H3 | A Unsubtyped | A Total |
|------|------|--------------|---------|
| 13   | 0    | 3            | 16      |

### Strain Characterization:

Since September 1, 2013, NML has antigenically characterized **117** influenza viruses (14 H3N2, 79 H1N1, and 24 B viruses) that were received from Canadian laboratories with the following results:

| Strain  | Number of viruses |          |
|---|-------------------|----------|
|   | Canada            | Manitoba |
| A/Texas/50/2012 (H3N2)-like <sup>2</sup>                        | 14                | 0        |
| A/California/07/09 (H1N1)-like <sup>3</sup>                     | 79                | 8        |
| B/Brisbane/60/2008-like (B/Victoria/02/87 lineage) <sup>4</sup> | 5                 | 2        |
| B/Massachusetts/02/12-like (B Yamagata lineage) <sup>5</sup>    | 19                | 0        |

### Antiviral Resistance:

Since September 1, 2013, NML has performed drug susceptibility testing on influenza isolates received from Canadian laboratories with the following results:

| Antiviral resistance by influenza virus type and subtype, Canada, 2012/2013 |                 |                 |                 |                 |                 |                 |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Virus type/subtype  | Oseltamivir     |                 | Zanamivir       |                 | Amantadine      |                 |
|   | # Resistant (%) | # Sensitive (%) | # Resistant (%) | # Sensitive (%) | # Resistant (%) | # Sensitive (%) |
| <b>A(H3N2)</b>  | 0               | 15 (100)        | 0               | 15(100)         | 14 (100)        | 0               |
| <b>A(H1N1)</b>  | 0               | 78 (100)        | 0               | 76 (100)        | 55 (100)        | 0               |
| <b>B</b>  | 0               | 25 (100)        | 0               | 25 (100)        | N/A             | N/A             |

N/A = Not applicable

The isolates tested from CPL had the following results:

| Antiviral resistance by influenza virus type and subtype, Manitoba, 2012/2013 |             |             |             |             |             |             |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| Virus type/subtype  | Oseltamivir |             | Zanamivir   |             | Amantadine  |             |
|   | # Resistant | # Sensitive | # Resistant | # Sensitive | # Resistant | # Sensitive |
| <b>A(H3N2)</b>  | 0           | 0           | 0           | 0           | 0           | 0           |
| <b>A(H1N1)</b>  | 0           | 0           | 0           | 0           | 2           | 0           |
| <b>B</b>  | 0           | 2           | 0           | 2           | N/A         | N/A         |

<sup>2</sup> Strain match to recommended H3N2 component for the 2013/2014 northern hemisphere influenza vaccine.

<sup>3</sup> Strain match to recommended H1N1 component for the 2013/2014 northern hemisphere influenza vaccine.

<sup>4</sup> Strain match to recommended influenza B component of the 2011/2012 influenza vaccine.

<sup>5</sup> Strain match to recommended influenza B component for the 2013/2014 northern hemisphere influenza vaccine.

## Abbreviations

ACF = acute care facility  
CPL = Cadham Provincial Laboratory  
HL-IS = Health Links – Info Santé  
PHAC = Public Health Agency of Canada  
ICU = intensive care unit  
ILI = influenza-like-illness  
LTCF = long term care facility  
NML = National Microbiology Laboratory  
PHS = Public Health Surveillance  
RHA = Regional Health Authority  
WRHA = Winnipeg Regional Health Authority

## Explanatory Notes and Definitions

### ***Cumulative data:***

Cumulative data includes updates to previous weeks; due to reporting delays or amendments, the sum of weekly report totals may not add up to cumulative totals.

### ***Data extraction date:***

Manitoba-specific information contained within this update is based on data confirmed in Manitoba's PHS Unit databases on or before **Dec. 20, 2013**, the date of data extraction.

### ***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 is likely due to influenza. In children under 5, gastrointestinal symptoms may also be present. In patients under 5 or 65 and older, fever may not be prominent.

### ***ILI outbreaks:***

Schools: Greater than 10% absenteeism (or absenteeism that is higher (e.g. >5-10%) than expected level as determined by school or public health authority) which is likely due to ILI.

Hospitals and residential institutions: Two or more cases of ILI within a seven-day period, including at least one laboratory confirmed case.

Other settings: Two or more cases of ILI within a seven-day period, including at least one laboratory confirmed case; i.e. workplace, closed communities.

### ***Specimen collection date:***

The date the laboratory specimen is taken is used to assign cases to the appropriate week in this report. However, hospitalized/ICU cases are reported based on laboratory report date.

For other Epidemiology and Surveillance reports, please view the Manitoba Health internet website:

<http://www.gov.mb.ca/health/publichealth/surveillance/index.html>

For national surveillance data, refer to:

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