The proportion of patients visiting sentinel physicians for influenza-like illness was 16.8% (up from 9.8% last week).

This week there were 12 cases of influenza A and 0 case of influenza B reported.

A total of 39 cases of influenza A and 6 cases of influenza B have been reported since the start of the current influenza season.

Laboratory detections of Influenza A have been increasing over the past two weeks, and Influenza A is now the dominant circulating respiratory pathogen.

There have been 8 hospitalizations, of which 1 resulted in ICU admission, this season.

So far this season, 0 Manitobans with laboratory-confirmed influenza have died.

Outpatient ILI (sentinels)

The following regional proportions are observed among cases of influenza to date:
- Winnipeg (49%)
- Northern (21%)
- Prairie Mountain (0%)
- Southern (21%)
- Interlake-Eastern (9%)

Between Dec. 22 and Dec. 28, 2013, 18 units of oseltamivir were dispensed from community retail pharmacies.
- The total number of units dispensed since November 1, 2013 was 158.

• Manitoba’s influenza activity, as estimated by Google search data, is high.
- There were 26 calls to Health Links - Info Santé this week, which is higher than the previous week (12 calls).

Geography

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

As of Dec. 28, 2013, there have been 0 lab-confirmed outbreaks of influenza reported this season.

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

Treatment

Immunization

Antiviral Resistance

Institutional Outbreaks

Syndromic Surveillance
This week, there were:
• 12 cases of influenza A reported;
• 0 cases of influenza B reported.

Since the beginning of this season, there have been:
• 39 cases of influenza A reported;
• 6 cases of influenza B reported.

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.

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).

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.*

![Graph showing ILI proportion](image)

*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 (for sites outside Winnipeg) or strive@wrha.mb.ca (Winnipeg).

<table>
<thead>
<tr>
<th>Influenza A</th>
<th>Influenza B</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRIVE* lab-confirmed influenza cases:</td>
<td>6</td>
<td>2</td>
</tr>
</tbody>
</table>

(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 26 calls, which was higher than 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.

*Since the beginning of the season, there have been:
  - 8 hospitalizations, of which
  - 1 resulted in an ICU admission; and
  - 0 deaths.¹

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.

¹ 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.
This week there were:

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

From the beginning of the season until Dec 21, 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 30, 2013 Manitoba’s influenza activity was high.
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

<table>
<thead>
<tr>
<th></th>
<th>A/H1</th>
<th>A/H3</th>
<th>A Unsubtyped</th>
<th>A Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>17</td>
<td>0</td>
<td>5</td>
<td>22</td>
</tr>
</tbody>
</table>

Strain Characterization:
Since September 1, 2013, NML has antigenically characterized 150 influenza viruses (17 H3N2, 112 H1N1, and 26 B viruses) that were received from Canadian laboratories with the following results:

<table>
<thead>
<tr>
<th>Strain</th>
<th>Number of viruses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Canada</td>
</tr>
<tr>
<td>A/Texas/50/2012 (H3N2)-like²</td>
<td>17</td>
</tr>
<tr>
<td>A/California/07/09 (H1N1)-like³</td>
<td>79</td>
</tr>
<tr>
<td>B/Brisbane/60/2008-like (B/Victoria/02/87 lineage)⁴</td>
<td>5</td>
</tr>
<tr>
<td>B/Massachusetts/02/12-like (B Yamagata lineage)⁵</td>
<td>21</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Virus type/subtype</th>
<th>Oseltamivir</th>
<th>Zanamivir</th>
<th>Amantadine</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># Resistant (%)</td>
<td># Sensitive (%)</td>
<td># Resistant (%)</td>
</tr>
<tr>
<td>A(H3N2)</td>
<td>0</td>
<td>15 (100)</td>
<td>0</td>
</tr>
<tr>
<td>A(H1N1)</td>
<td>0</td>
<td>95 (100)</td>
<td>0</td>
</tr>
<tr>
<td>B</td>
<td>0</td>
<td>25 (100)</td>
<td>0</td>
</tr>
</tbody>
</table>

N/A = Not applicable

The isolates tested from CPL had the following results:

<table>
<thead>
<tr>
<th>Virus type/subtype</th>
<th>Oseltamivir</th>
<th>Zanamivir</th>
<th>Amantadine</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># Resistant</td>
<td># Sensitive</td>
<td># Resistant</td>
</tr>
<tr>
<td>A(H3N2)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>A(H1N1)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>B</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

² Strain match to recommended H3N2 component for the 2013/2014 northern hemisphere influenza vaccine.
³ Strain match to recommended H1N1 component for the 2013/2014 northern hemisphere influenza vaccine.
⁴ Strain match to recommended influenza B component of the 2011/2012 influenza vaccine.
⁵ 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 Jan 3, 2014, 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:  

For national surveillance data, refer to:  