

Week 51: Dec 16-22, 2012

Influenza activity in Manitoba has increased since last week.

Summary:

- There were **24** cases of influenza A and **1** case of influenza B reported this week.
- The influenza-like-illness rate was **6.9%** with **36%** of sentinel physician sites reporting.
- There were **two** hospitalizations reported associated with a lab-confirmed report of influenza this week.
- There was **one** lab-confirmed outbreak of influenza A reported this week.

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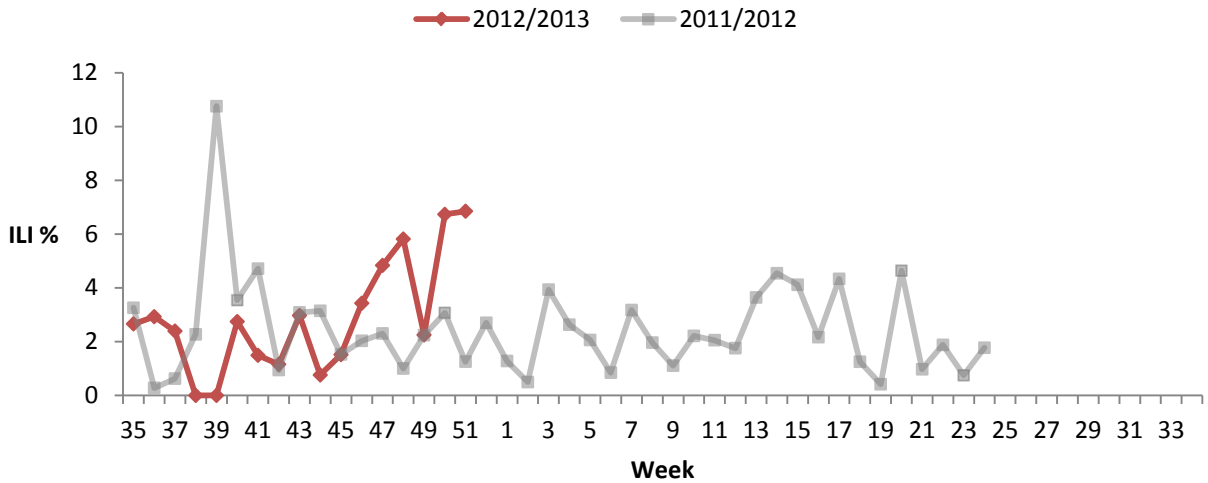
Sentinel Physicians

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.

The proportion of patients seen for an ILI this week was comparable to last week (6.9% from 6.7%). The proportion is higher than what was observed at the same time last season.

Figure 1. Proportion of patients seen for ILI as reported by *FluWatch* sentinel physicians by week and flu season, Manitoba



STRIVE (Surveillance Team Research on Influenza Vaccine Effectiveness)

Beginning with the 2012/2013 influenza season, Manitoba Health has joined STRIVE, a national multi-site vaccine effectiveness surveillance network already in operation in Alberta, British Columbia, Ontario, and Quebec. Operated in collaboration with Cadham Provincial Laboratory, STRIVE aims to assess the effectiveness of the 2012-2013 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).

| | Influenza A | Influenza B | Total |
|--|-------------|-------------|----------|
| New STRIVE lab-confirmed influenza cases: | 2 | 0 | 2 |
| Total STRIVE lab-confirmed influenza cases: | 4 | 1 | 5 |

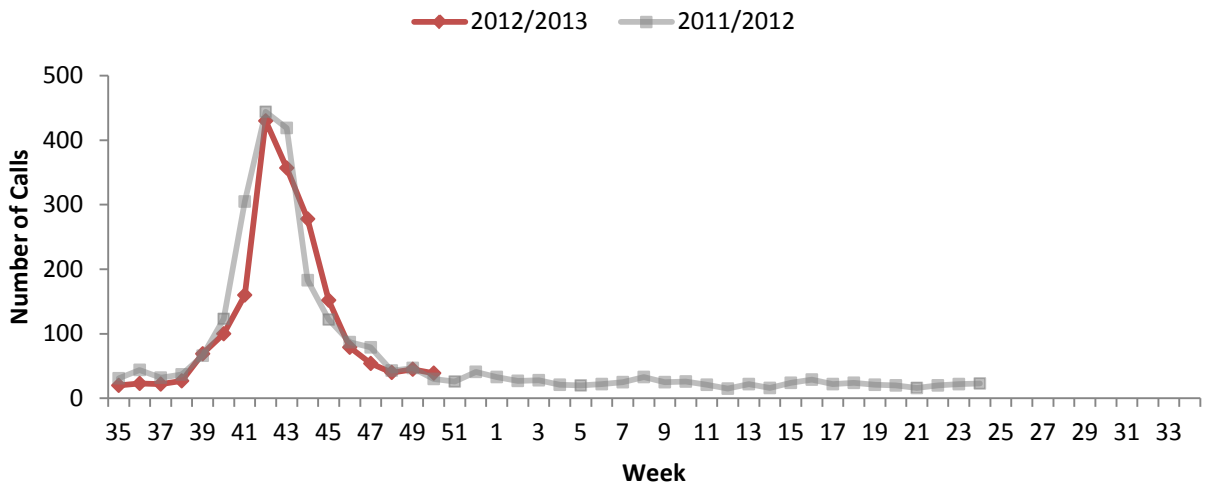
(These cases are included in the total number of provincial influenza cases)

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.

The weekly total is comparable to the total observed at the same time last season.

Figure 2. The number of calls to HL-IS Influenza Service by season, Manitoba



Laboratory Surveillance

Reports of culture isolations and enzyme immunoassay (EIA) detections from Cadham Provincial Laboratory (CPL) are forwarded to the Public Health Surveillance (PHS) Unit weekly. While EIA detections and culture isolations comprise the largest number of reports from CPL, seroconversions are similarly forwarded to the PHS Unit weekly.

This week, there were:

- 24 cases of influenza A reported;
- 1 case of influenza B reported.

Since the beginning of this season, there have been:

- 51 cases of influenza A reported;
- 11 cases of influenza B reported.

Table 1. Reported Cases of Influenza A and B by Age Group, Manitoba, 2012/2013

| Age Group | Influenza A | | Influenza B | |
|--------------|-------------|-------|-------------|-------|
| | # | % | # | % |
| <1 yrs | 2 | 3.9% | 0 | 0.0% |
| 1-4 yrs | 4 | 7.8% | 0 | 0.0% |
| 5-9 yrs | 8 | 15.7% | 1 | 9.1% |
| 10-14 yrs | 2 | 3.9% | 3 | 27.3% |
| 15-19 yrs | 9 | 17.6% | 2 | 18.2% |
| 20-24 yrs | 1 | 2.0% | 1 | 9.1% |
| 25-29 yrs | 0 | 0.0% | 0 | 0.0% |
| 30-39 yrs | 7 | 13.7% | 1 | 9.1% |
| 40-49 yrs | 0 | 0.0% | 0 | 0.0% |
| 50-59 yrs | 3 | 5.9% | 2 | 18.2% |
| 60-69 yrs | 2 | 3.9% | 0 | 0.0% |
| 70-79 yrs | 4 | 7.8% | 0 | 0.0% |
| >79 yrs | 9 | 17.6% | 1 | 9.1% |
| Missing | 0 | 0.0% | 0 | 0.0% |
| TOTAL | 51 | | 11 | |

Figure 3. Number of lab-confirmed cases of influenza A by specimen collection week and season, Manitoba (Note: 2009/2010 season excluded due to the H1N1 pandemic, making the numbers incomparable with other seasons.)

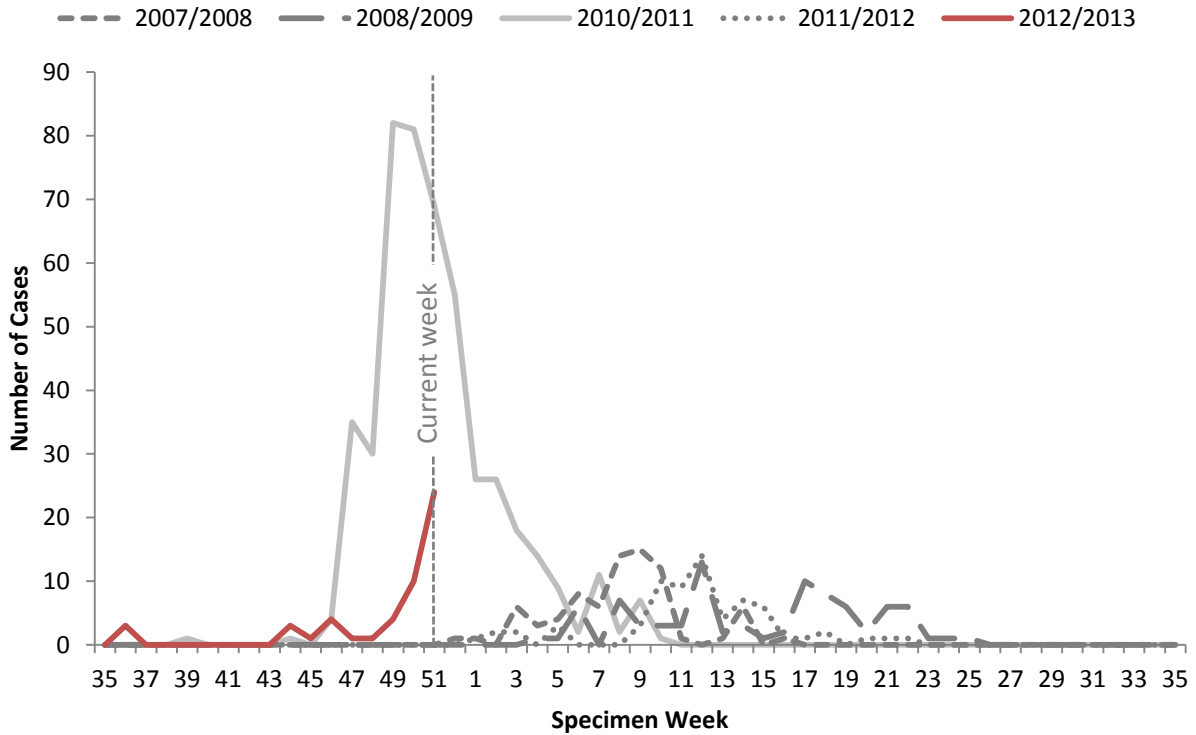
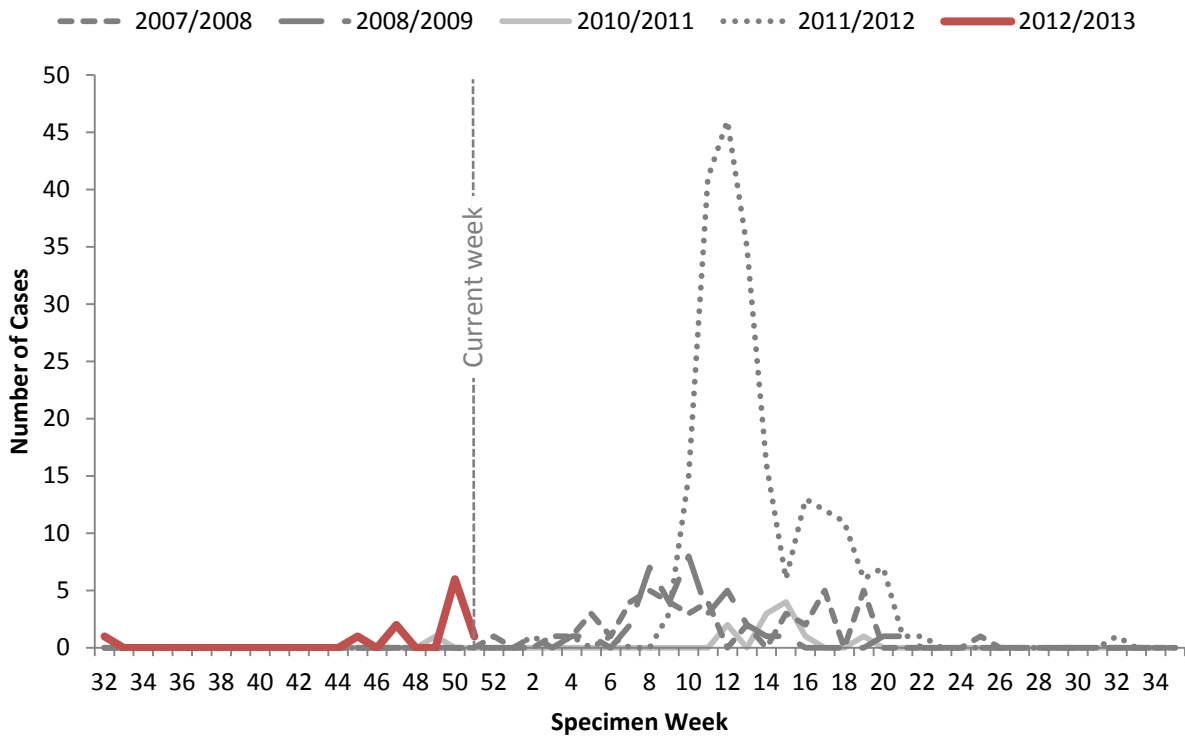


Figure 4. Number of lab-confirmed cases of influenza B by specimen collection week and season, Manitoba



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.

This week there was:

- 2 hospitalizations, of which
- 0 resulted in an ICU admission; and
- 0 deaths.¹

Since the beginning of the season, there have been:

- 10 hospitalizations, of which
- 2 resulted in an ICU admission; and
- 2 deaths.¹

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:

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

Since the beginning of the season, there have been:

- 2 outbreaks of influenza A;
- 1 outbreak of influenza B.

Table 2. Cumulative number of lab-confirmed outbreaks of influenza by RHA and season, Manitoba

| RHA: | Week 51, 2011/2012 (up to Dec 24, 2011) | | | | Week 51, 2012/2013 (up to Dec 22, 2012) | | | |
|-------------------|---|-----------|----------|-----------|---|-----------|----------|-----------|
| | LTCF | Workplace | ACF | Community | LTCF | Workplace | ACF | Community |
| Winnipeg | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Northern | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Southern | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Interlake-Eastern | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Western | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 |

LTCF: long term care facility

ACF: acute care facility

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.

Sub-Typing, Strain Characterization, and Antiviral Resistance

Sub-Typing:

Table 3. Sub-typing of influenza A specimens as reported by CPL, 2012/2013 flu season, Manitoba

| A/H1 | A/H3 | A Unsubtyped | A Total |
|------|------|--------------|---------|
| 0 | 31 | 20 | 51 |

Strain Characterization:

Since September 1, 2012, NML has antigenically characterized 125 influenza viruses (87 H3N2, 16 H1N1, and 22 B viruses) that were received from Canadian laboratories with the following results:

| Strain | Number of viruses | |
|---|-------------------|----------|
| | Canada | Manitoba |
| A/Victoria/361/2011 (H3N2)-like ² | 87 | 3 |
| A/California/07/09 (H1N1)-like ³ | 16 | 0 |
| B/Brisbane/60/2008-like (B/Victoria/02/87 lineage) ⁴ | 4 | 1 |
| B/Wisconsin/01/2010-like (Yamagata lineage) ⁵ | 18 | 0 |

Antiviral Resistance:

Since September 1, 2012, 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 (%) |
| A(H3N2) | 0 | 73 (100) | 0 | 70 (100) | 122 (100) | 0 |
| A(H1N1) | 0 | 13 (100) | 0 | 13 (100) | 10 (100) | 0 |
| B | 0 | 18 (100) | 0 | 18 (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 |
| A(H3N2) | 0 | 2 | 0 | 2 | 4 | 0 |
| A(H1N1) | 0 | 0 | 0 | 0 | 0 | 0 |
| B | 0 | 1 | 0 | 1 | N/A | N/A |

² Strain match to recommended H3N2 component for the 2012/2013 northern hemisphere influenza vaccine.

³ Strain match to recommended H1N1 component for the 2012/2013 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 2012/2013 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 **December 28, 2012**, 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.

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>