

Manitoba Influenza Surveillance Report

2013/2014 Season

Week 21

May 18-24, 2014

- The proportion of patients visiting sentinel physicians for influenza-like-illness was **2.4%** (down from **6.3%** last week)

Outpatient ILI (sentinels)



- This week there were **0** cases of influenza A and **4** cases of influenza B reported
- A total of **706** cases of influenza A and **63** cases of influenza B have been reported since the start of the current influenza season
- Respiratory virus test volume continues to decline

Laboratory



- This season there have been **112** hospitalizations, of which **42** resulted in ICU admission; **9** Manitobans with laboratory-confirmed influenza have died
- This report includes hospitalizations, ICU admissions, and deaths associated with a lab-confirmed influenza report and the outcome does not have to be attributable to the influenza diagnosis to be counted

Severity



- The following regional proportions are observed among cases of influenza to date:
 - Winnipeg (26%)
 - Northern (30%)
 - Prairie Mountain (17%)
 - Southern (14%)
 - Interlake-Eastern (12 %)

Geography



- Between May 18 and May 24, 2014, **11** units of oseltamivir were dispensed from community retail pharmacies.
- The total number of units dispensed since November 1, 2013 was **1371**

Treatment



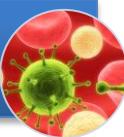
- Manitoba's influenza activity, as estimated by Google search data, is **low**
- There were **10** calls to Health Links - Info Santé this week, which is higher than the previous week (7 calls)

Syndromic Surveillance



- Since September 1, 2013, **5** isolates have tested positive for resistance to Oseltamivir

Antiviral Resistance



- As of May 30, 2014, there have been **7** lab-confirmed outbreaks of influenza reported this season

Institutional Outbreaks



- As of April 4, 2014, **22.3%** of Manitobans had received the seasonal influenza vaccine.

Immunization



In Summary

- There were 0 laboratory-confirmed cases of influenza A and 4 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 is reported to PHS on a weekly basis.

This week, there were:

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

Since the beginning of this season, there have been:

- 706 cases of influenza A reported;
- 63 cases of influenza B reported.

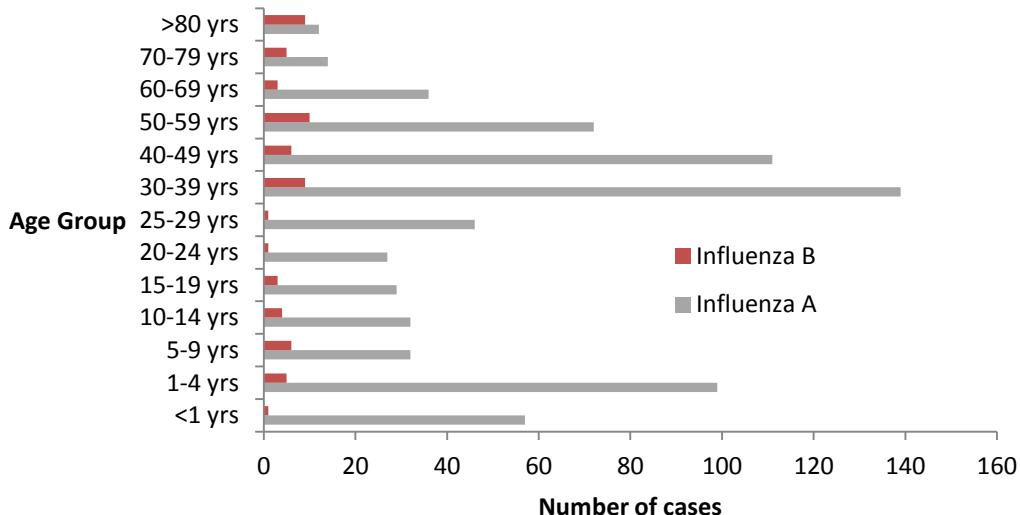


Figure 1 Reported cases of Influenza A and B by age group, Manitoba, 2013/14

The number of Influenza A detections was lower than the previous week. The number of cases detected is comparable to the number of cases observed at the same period last year

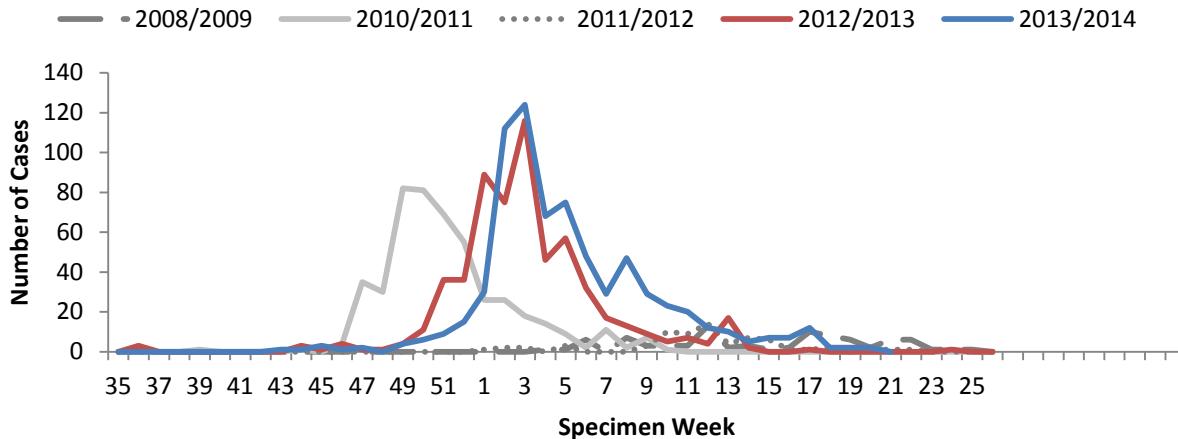


Figure 2 Number of Influenza A cases by specimen week, Manitoba

The number of Influenza B detections was lower this week as compared to the previous week. The number of cases detected is similar to the number of cases observed at the same period last year

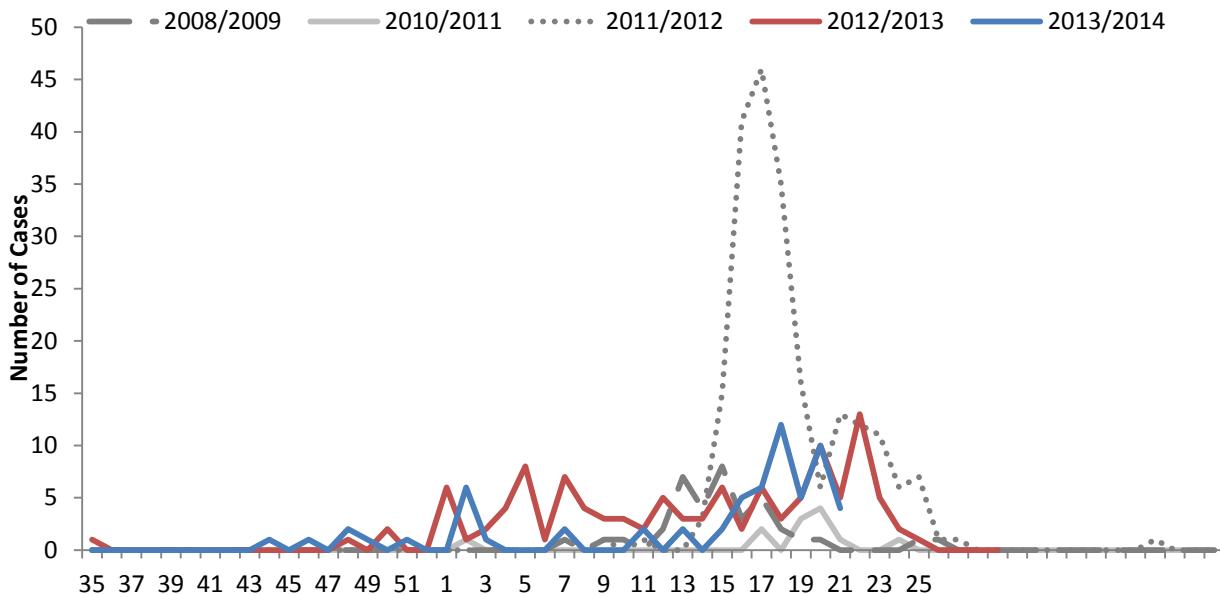


Figure 3 Number of Influenza B cases by specimen week, Manitoba

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 lower than last week (2.4% from 6.3%). The proportion is lower 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.**

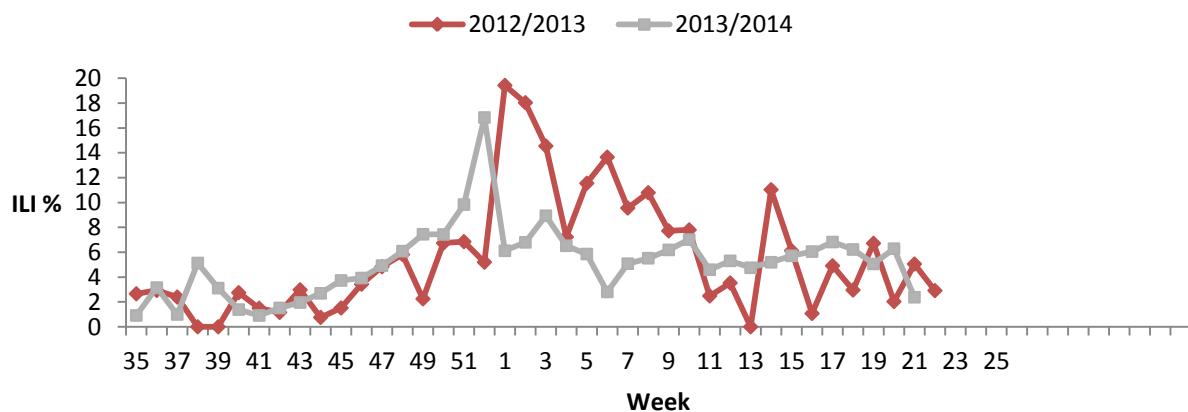


Figure 4 Proportion of patients seen for influenza-like illness as reported by *FluWatch* sentinel physicians by week for the 2012/13 and 2013/14 influenza seasons, Manitoba

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 Seplex 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
Total STRIVE* lab-confirmed influenza cases:	31	6	37

(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 May 3, 2014

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 10 calls, which was higher than the previous week. The weekly total is comparable to the total observed at the same time last season.

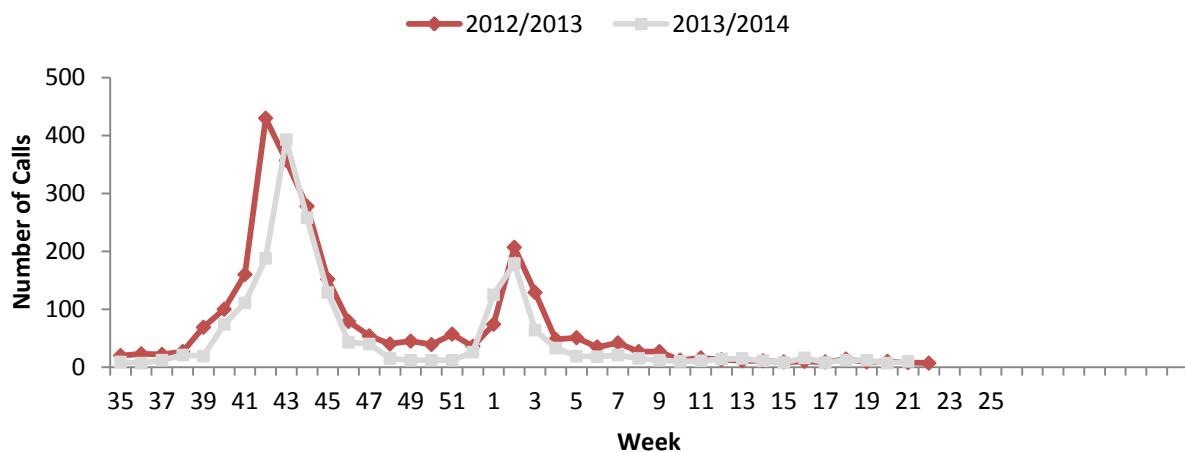


Figure 5 The number of calls to Health Links – Info Santé in the 2012/13 and 2013/14 influenza seasons, Manitoba

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:

- 112 hospitalizations, of which
- 42 resulted in an ICU admission; and
- 9 deaths.¹

*Hospitalized cases are reported based on laboratory report date.

¹The 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:

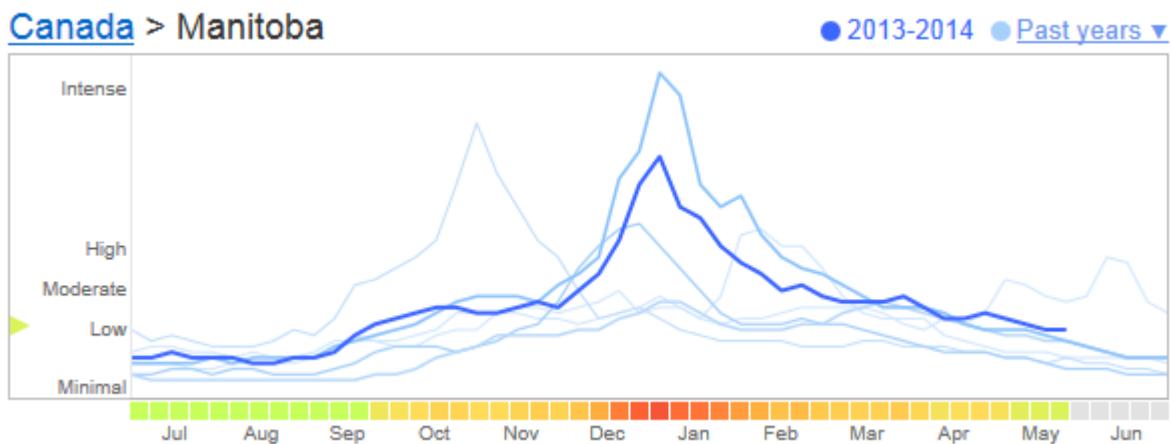
- 0 outbreaks of influenza A;
- 0 outbreaks of influenza B.

From the beginning of the season until May 30, 2014 there have been:

- 4 outbreaks of influenza A;
- 3 outbreaks of influenza B.

Syndromic Surveillance

[Google Flu Trends](#) uses certain influenza-related search terms as indicators of influenza activity. These aggregated search data are used to estimate influenza activity. Google Flu Trends compares current estimates against a historic baseline level of influenza activity for the relevant area or region. Depending on whether the current estimate is higher or lower than the baseline, the general activity is classified as Minimal, Low, Moderate, High, or Intense. As of May 30, 2014 Manitoba's estimated influenza activity was **low**



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
489	16	201	706

Strain Characterization:

Since September 1, 2013, NML has antigenically characterized **2139** influenza viruses (130 H3N2, 1379 H1N1, and 630 B viruses) that were received from Canadian laboratories with the following results:

Strain	Number of viruses	
	Canada	Manitoba
A/Texas/50/2012 (H3N2)-like ²	130	1
A/California/07/09 (H1N1)-like ³	1379	63
B/Brisbane/60/2008-like (B/Victoria/02/87 lineage) ⁴	26	6
B/Massachusetts/02/12-like (B Yamagata lineage) ⁵	604	5

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 (%)
A(H3N2)	0	106 (100)	0	106(100)	150 (100)	0
A(H1N1)	5 (0.4)	1353 (99.6)	0	1357 (100)	1421 (100)	0
B	0	504 (100)	0	505(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	0	0	0	1	0
A(H1N1)	0	62	0	62	71	0
B	0	7	0	7	N/A	N/A

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
NMIL = 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 **May 30, 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:

<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>