

Manitoba Health, Healthy Living and Seniors Influenza Surveillance Weekly Report

- This week, there were **3** new cases of influenza A and **11** cases of influenza B
- A total of **1068** cases of influenza A and **65** cases of influenza B have been reported since the start of the current influenza season
- The weekly total of respiratory virus tests and the percentage of positive influenza A tests continue to decline

Laboratory



- Since the start of the current influenza season, **323** hospitalizations, **53** ICU admissions, and **44** deaths *associated* with a laboratory-confirmed diagnosis of influenza have been reported

**Numbers are subject to change as more data become available*

**The reason for the reported hospitalizations, ICU admissions, and deaths does not have to be attributable to the influenza diagnosis*

Severity



The following regional proportions and cumulative incidence rates (number of cases per 10,000 population) have been observed this season:

- Winnipeg: **40%** (6.20/10,000)
- Northern: **12%** (17.93/10,000)
- Prairie Mountain: **23%** (15.50/10,000)
- Southern: **15%** (8.91/10,000)
- Interlake-Eastern: **10%** (9.38/10,000)

Geography



- This week, the proportion of patients visiting sentinel physicians for influenza-like-illness was **1.13%** (*4.44% last week*)

Outpatient ILI (sentinels)



- Manitoba's influenza activity was **Moderate** as estimated by Google Flu
- This week, there were **9** calls to Health Links - Info Santé (*12 last week*)

Syndromic Surveillance



- This week, **57** units of oseltamivir were dispensed from community retail pharmacies
- Since October 1, 2014, **2239** units have been dispensed

Treatment



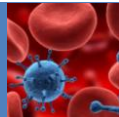
- Since the start of the current influenza season, **93** lab-confirmed outbreaks of influenza A and **2** of influenza B have been reported

Institutional Outbreaks



- Since September 1, 2014, **1** isolate has tested positive for resistance to oseltamivir and **none** to zanamivir

Antiviral Resistance



- As of March 6, 2015, **21.6%** of Manitobans had received the seasonal influenza vaccine

**The next update will be provided early April*

Immunization



In Summary

The influenza activity in Manitoba peaked in Week 53 between December 28, 2014 and January 3, 2015. It has been declining since Week 1. However, the lab confirmed influenza B cases seem to increase slowly.

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. These reports are forwarded to the Surveillance Information Systems (SIS) within 24 hours of confirmation.

This week, there were:

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

Since the beginning of this season, there have been:

- 1068 cases of influenza A reported;
- 65 cases of influenza B reported.

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 SIS on a weekly basis.

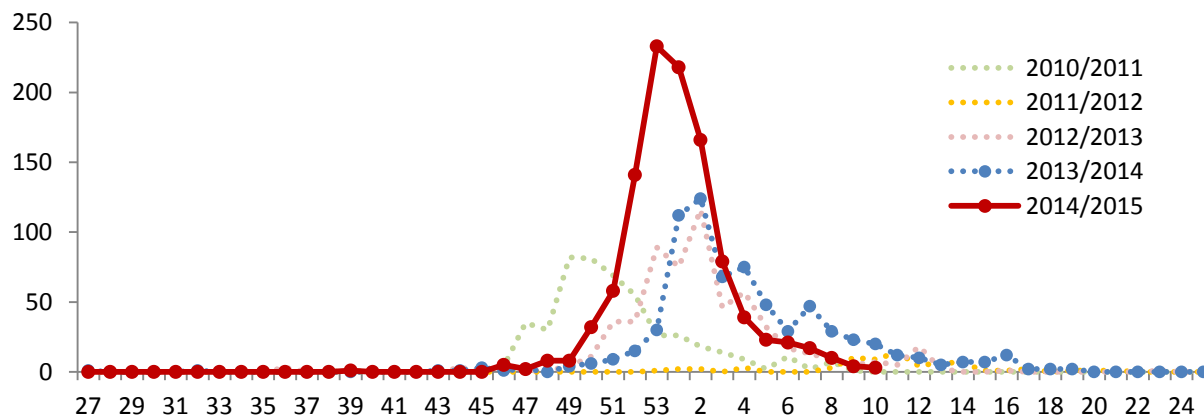


Figure 1. Cases of laboratory-confirmed influenza A by week

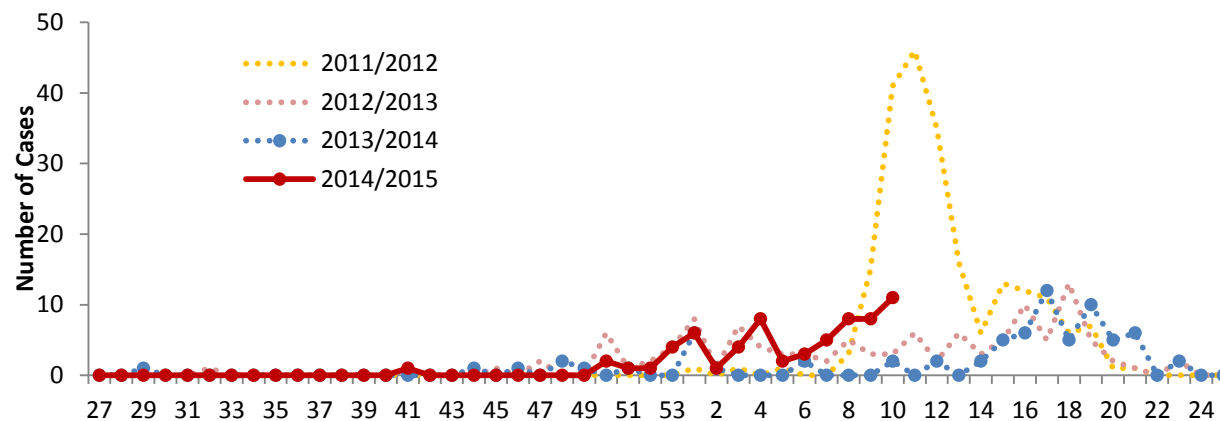


Figure 2. Cases of laboratory-confirmed influenza B by week

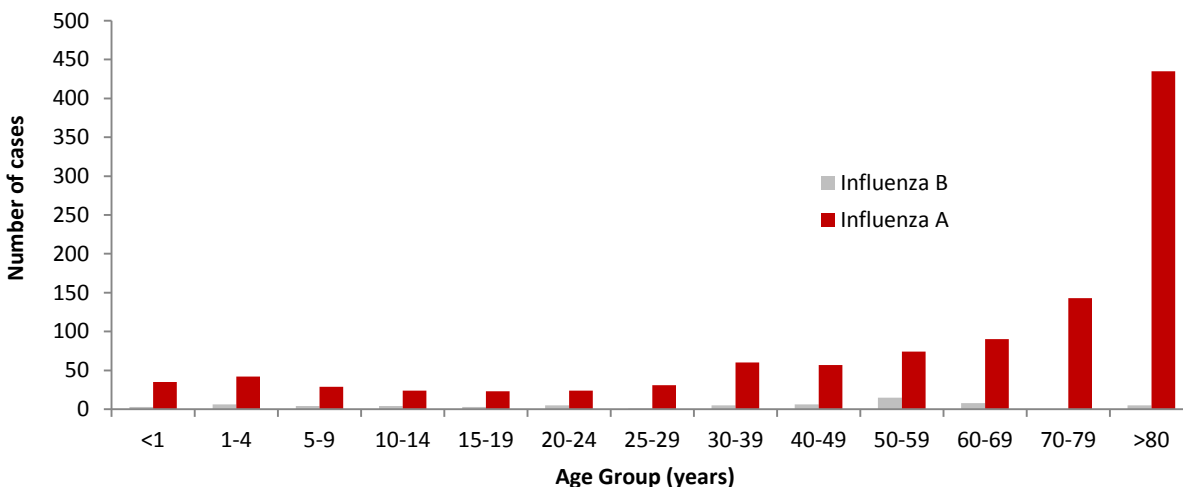


Figure 3. Cases of laboratory-confirmed influenza A and B by age group in the 2014/15 influenza season, Manitoba

2. Outpatient Influenza-Like-Illness (ILI) – Sentinel Physicians

The proportion of patients seen for ILI this week: **1.13%**.

The proportion was lower than the total observed around the same time last season.

Manitoba Health, Healthy Living and Seniors (MHHLS) participates in the National *FluWatch* Program coordinated by Public Health Agency of Canada (PHAC). In addition to laboratory-confirmation of influenza, this program relies on weekly reports of ILI as reported by 27 current Manitoban sentinel physicians in all five Regional Health Authorities (RHAs) including Northern, Southern, Prairie Mountain, Interlake-Eastern, and Winnipeg.

MHHLS 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.**

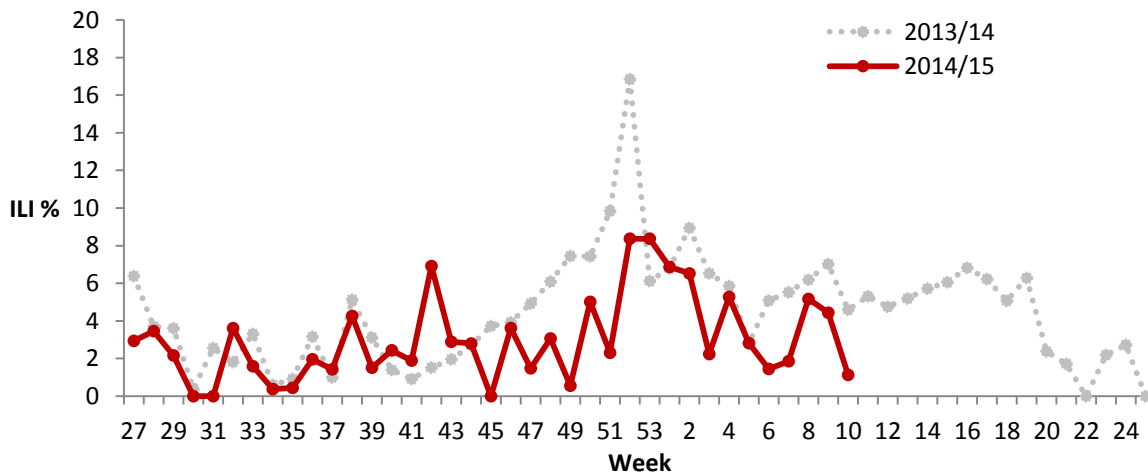


Figure 4. Proportion of patients seen for ILI by *FluWatch* sentinel physicians by week in the 2013/14 and 2014/15 influenza seasons, Manitoba

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.

There were **9** calls to HL-IS this week. This number was comparable to the total observed around the same time last season.

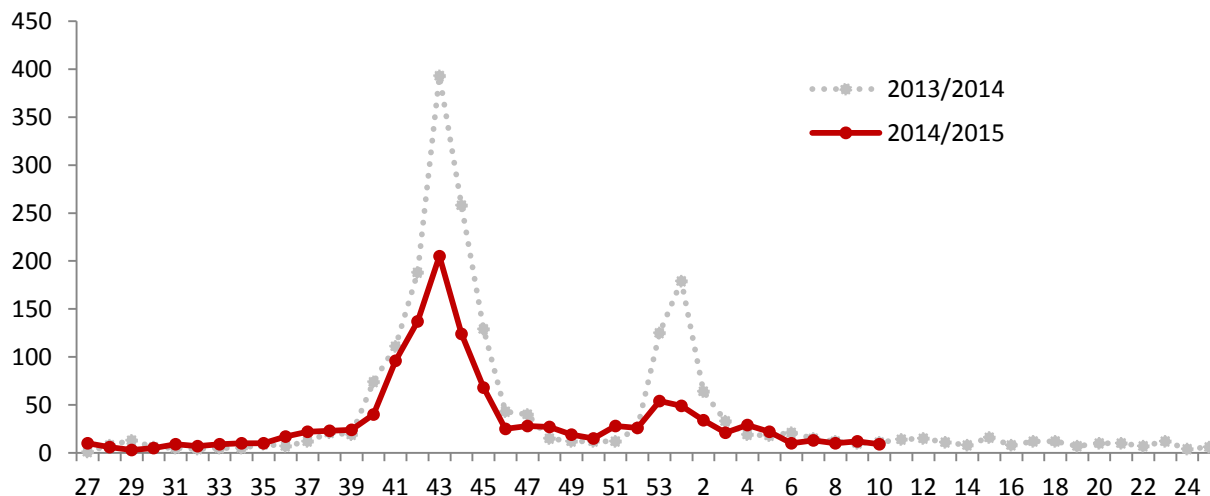


Figure 5. Number of calls to HL-IS in the 2013/14 and 2014/15 influenza seasons, Manitoba

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 were:</p> <ul style="list-style-type: none"> • 4 hospitalizations, of which • 0 resulted in an ICU admission; and • 0 deaths¹ 	<p>Since the beginning of the season, there have been:</p> <ul style="list-style-type: none"> • 323 hospitalizations, of which • 53 resulted in an ICU admission; and • 44 deaths¹
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*Hospitalized cases are reported based on laboratory report date.

*Numbers are subject to change. Missed events in current weekly report due to a delay of submission to MHLS will be reported in the following weekly reports when data become available.

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.

Institutional Outbreaks

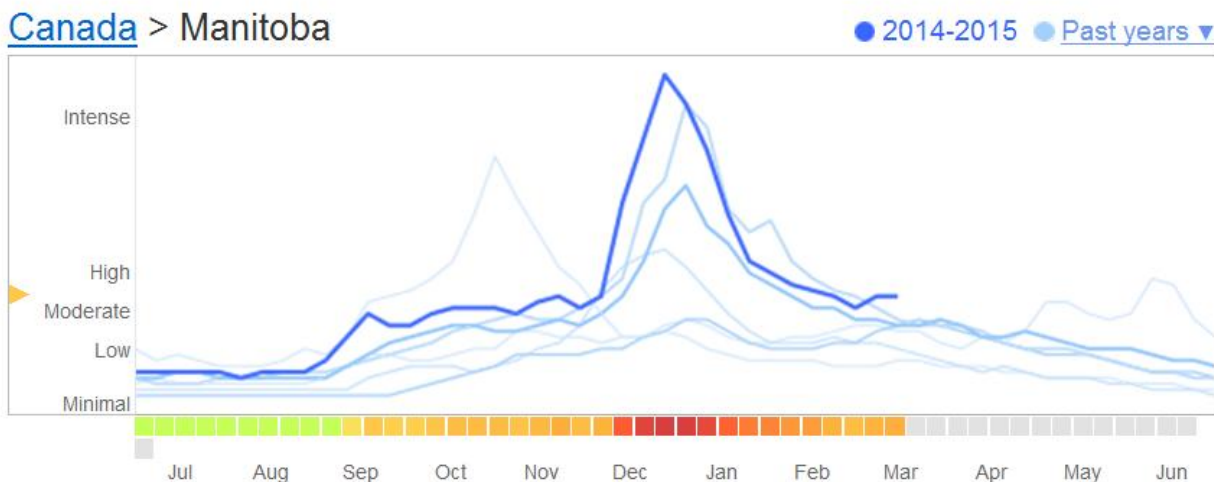
Outbreaks of influenza must be accompanied by a positive influenza lab report to be counted. The outbreak-related cases reflected on tables and figures within this report are lab-confirmed. Note that most outbreak-related cases will not be lab-confirmed.

<p>This week there were:</p> <ul style="list-style-type: none"> • 0 outbreaks of influenza A; • 0 outbreaks of influenza B. 	<p>Since the beginning of the season, there have been:</p> <ul style="list-style-type: none"> • 93 outbreaks of influenza A; • 2 outbreaks of influenza B.
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* Numbers are subject to change. Missed events in current weekly report due to a delay of submission to MHLS will be reported in the following weekly reports when data become available.

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 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 March 20, 2015, Manitoba's influenza activity level was **Moderate**.



Sub-Typing, Strain Characterization, and Antiviral Resistance

Sub-Typing:

Sub-typing of influenza A specimens reported by CPL for the 2014/2015 influenza season, Manitoba

A/H1	A/H3	A Unsubtyped	A Total
0	438	676	1114

Strain Characterization:

Since September 1, 2014, National Microbiology Laboratory (NML) has antigenically characterized **373** influenza viruses (152 H3N2, 5 H1N1, and 216 B viruses) that were received from Canadian laboratories including CPL with the following results:

Strain	Number of viruses	
	Canada	Manitoba
A/Switzerland/9715293/2013(H3N2)-like ¹	146	9
A/Texas/50/2012 (H3N2)-like ²	6	0
A/California/07/09 (H1N1)-like ³	5	0
B/Massachusetts/02/12-like ⁴	210	7
B/Brisbane/60/2008-like ⁵	6	0

Antiviral Resistance:

Since September 1, 2014, 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, 2014/2015						
Virus type/subtype	Oseltamivir		Zanamivir		Amantadine	
	# Resistant	# Sensitive	# Resistant	# Sensitive	# Resistant	# Sensitive
A(H3N2)	1	772	0	770	1140	1
A(H1N1)	0	4	0	4	4	0
B	0	169	0	169	N/A	N/A

N/A = Not applicable

The isolates received from CPL had the following results:

Antiviral resistance by influenza virus type and subtype, Manitoba, 2014/2015						
Virus type/subtype	Oseltamivir		Zanamivir		Amantadine	
	# Resistant	# Sensitive	# Resistant	# Sensitive	# Resistant	# Sensitive
A(H3N2)	0	72	0	71	116	0
A(H1N1)	0	0	0	0	0	0
B	0	7	0	7	N/A	N/A

¹ A/Switzerland/9715293/2013 is the H3N2 virus selected for the 2015 Southern Hemisphere influenza vaccine. It is related to, but antigenically and genetically distinguishable from the A/Texas/50/2012 vaccine virus.

² A/Texas/50/2012 is the recommended H3N2 component for the 2014-2015 influenza vaccine.

³ A/California/07/2009 is the recommended H1N1 component for the 2014-2015 Northern hemisphere influenza vaccine.

⁴ B/Massachusetts/02/12, which belongs to the B Yamagata lineage, is the recommended influenza B component for the 2014-2015 Northern hemisphere influenza vaccine.

⁵ B/Brisbane/60/2008, which belongs to the B/Victoria/02/87 lineage, was the recommended influenza B component for the 2011-2012 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
MHLS = Manitoba Health, Healthy Living and Seniors
NML = National Microbiology Laboratory
RHA = Regional Health Authority
SIS = Surveillance Information Systems
WRHA = Winnipeg Regional Health Authority

Explanatory Notes and Definitions

Cumulative data:

Cumulative data include 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 SIS databases at 11:00 am on the date of data extraction.

Incidence rate:

Incidence rate measures the frequency with which influenza occurs in a region. It is calculated as the total number of new cases this influenza season multiplied by 10,000 and divided by the total population in each region. Regional populations are based on the Manitoba Health Population Report 2013.

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 was 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>