

Influenza Surveillance 2015–2016

Week 43 (Oct. 25–31, 2015)

Data extracted Nov. 6, 2015 at 11:00 am

Laboratory-confirmed influenza cases this week:

- 0 cases of influenza A
- 0 cases of influenza B

Since Sept. 1, 2015:

- 2 cases of influenza A
- 1 case of influenza B

Laboratory

Cases and cumulative incidence rates (cases per 10,000 population) since Sept. 1, 2015:

- Winnipeg: 1 (*)
- Southern: 1 (*)
- Interlake-Eastern: 0 (*)
- Prairie Mountain: 1 (*)
- Northern: 0 (*)

* Rates were not calculated due to small numbers.

Regional Health Authority

Severe outcomes associated with a laboratory-confirmed diagnosis of influenza this week:

- 0 hospitalizations
- 0 ICU admissions
- 0 deaths

Since Sept. 1, 2015:

- 1 hospitalization
- 0 ICU admissions
- 0 deaths

Severity

Calls to Influenza Service at Health Links–Info Santé this week: 72

Percent of visits to sentinel physicians due to ILI this week: 2.8%

In Emergency Department this week:

- 111–140 ILI cases per day
- 16%–18% of visits due to ILI

Influenza-Like-Illness (ILI)

Laboratory-confirmed outbreaks this week:

- 0 outbreaks of influenza A
- 0 outbreaks of influenza B

Since Sept. 1, 2015:

- 0 outbreaks of influenza A
- 0 outbreaks of influenza B

Outbreak

As of Oct. 31, 2015:

Percent of total influenza vaccine doses ordered from manufacturers received by MHLS: 85.7%

Percent of total doses ordered by immunization service providers shipped from MHLS across Manitoba: 86.4%

Immunization

Units of Oseltamivir dispensed from community retail pharmacies:

- This week: 11 units
- Since Oct. 1, 2015: 65 units

Isolates resistant to antiviral since Sept. 1, 2015 in Manitoba:

- 0 isolates resistant to Oseltamivir
- 0 isolates resistant to Zanamivir

Antiviral

The current influenza activity level in Manitoba is low according to a number of surveillance indicators. In week 43 there was near zero activity reported.

Influenza activity in Canada overall is low. So far this season, influenza A(H3N2) has been the most common subtype affecting Canadians. Laboratory confirmed influenza cases in Week 42 were mostly reported from British Columbia and Ontario.

Summary: Low activity

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

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 Epidemiology and Surveillance (E&S) within 24 hours of confirmation. CPL also performs testing for other respiratory viruses including parainfluenza, RSV, adenovirus, rhinovirus, coronavirus, enterovirus, and bocavirus, which are reported to E&S on a weekly basis.

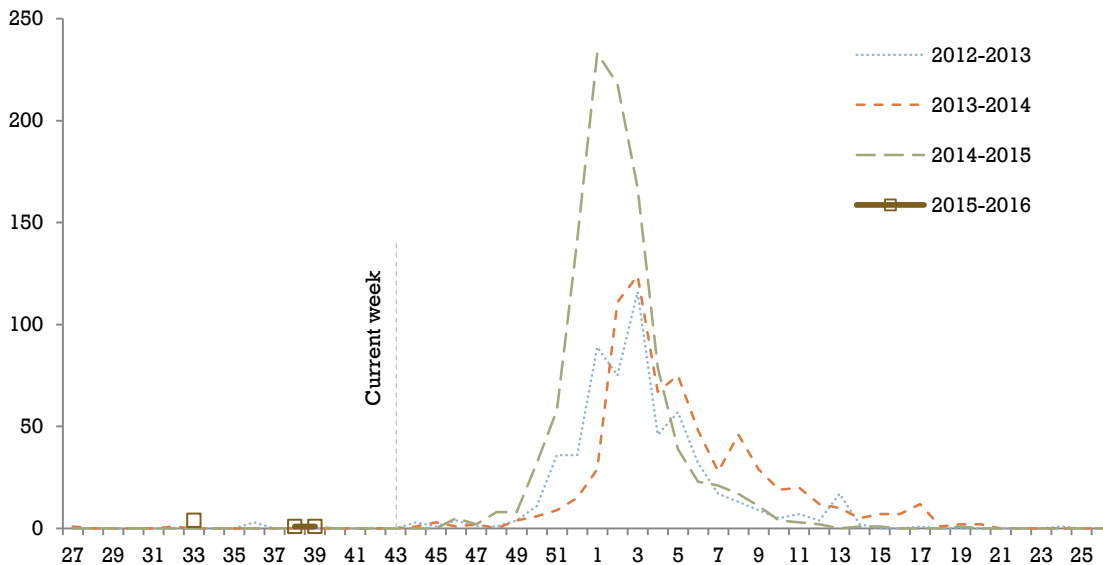


Figure 1. Laboratory-confirmed influenza A cases by week, Manitoba, 2015–2016

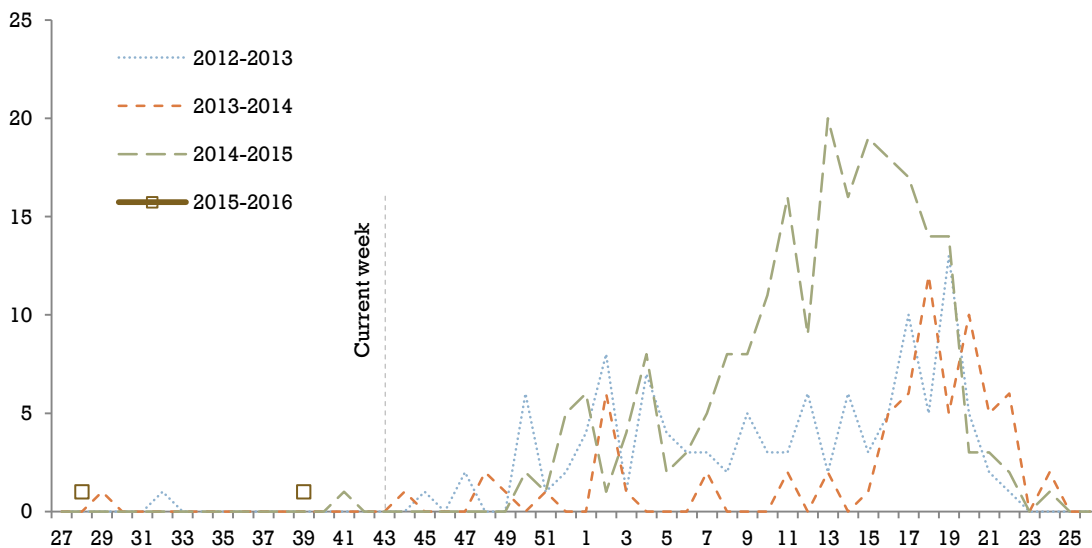


Figure 2. Laboratory-confirmed influenza B cases by week, Manitoba, 2015–2016

Health Links – Info Santé

Health Links–Info Santé is a 24-hour, 7-days a week telephone information service. It is staffed by registered nurses with the knowledge to provide answers to health care questions and guidance to appropriate care over the phone. When a caller phones Health Links–Info Santé and selects 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 an influenza vaccine, (3) the annual influenza immunization campaign, or (4) the management of influenza and its potential complications.

The number of calls to Health Links – Info Santé in Week 43 was low compared to previous seasons.

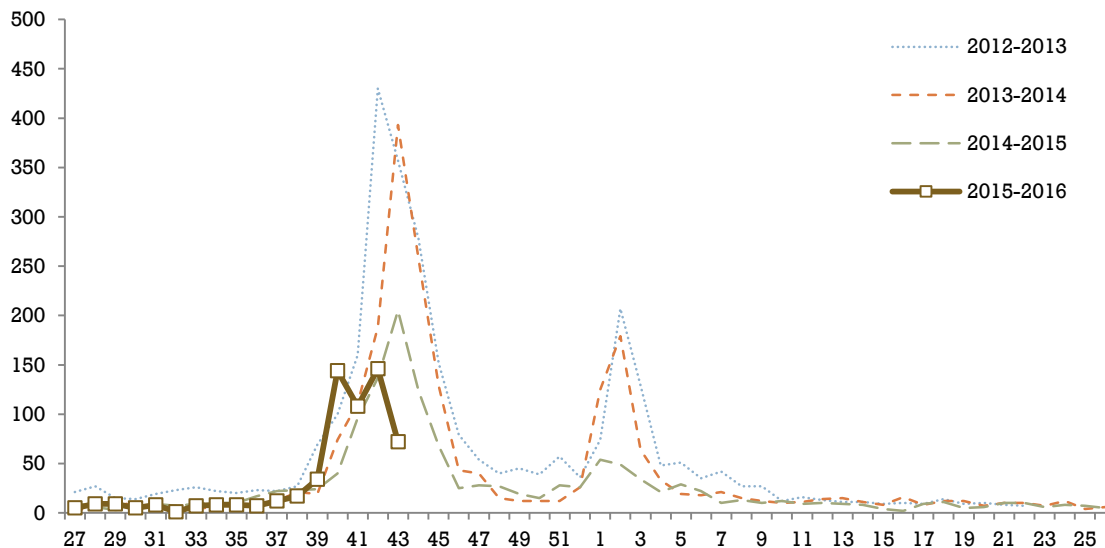


Figure 3. Calls to Health Links – Info Santé, Manitoba, 2015-2016

ILI

ILI visits to sentinel physicians

Manitoba participates in *FluWatch*, the Canada’s national surveillance system co-ordinated by Public Health Agency of Canada (PHAC), which monitors the spread of influenza and ILI on a year-round basis. *FluWatch* consists of a network of laboratories, hospitals, doctor’s offices and provincial and territorial ministries of health. In 2015–2016, there were 19 sentinel physicians recruited throughout Manitoba reporting to *FluWatch* weekly. E&S receives weekly reports from *FluWatch* which present the ILI rate for Manitoba and for each of the participating sentinel physicians. Note that the reporting sentinel physicians are different by week and their reports may not be representative of ILI activity across the province.

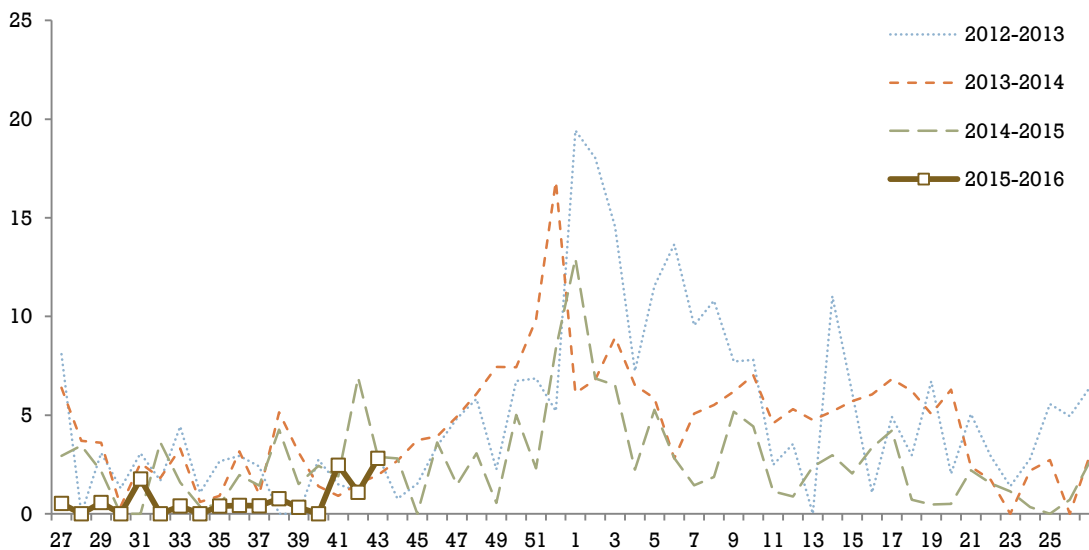


Figure 4 Percent of patient visits to sentinel physicians due to ILI by week, Manitoba, 2015–2016

ILI visits to Emergency Rooms

Daily ILI related visits to Emergency Department (ED) at Winnipeg Regional Health Authority (WRHA) are submitted to E&S weekly. ILI cases are defined as patients whose triage chief complaints contain either of these symptoms: weakness, shortness of breath, cough, headache, fever, cardiac/respiratory arrest, sore throat, and upper respiratory tract infection complaints.

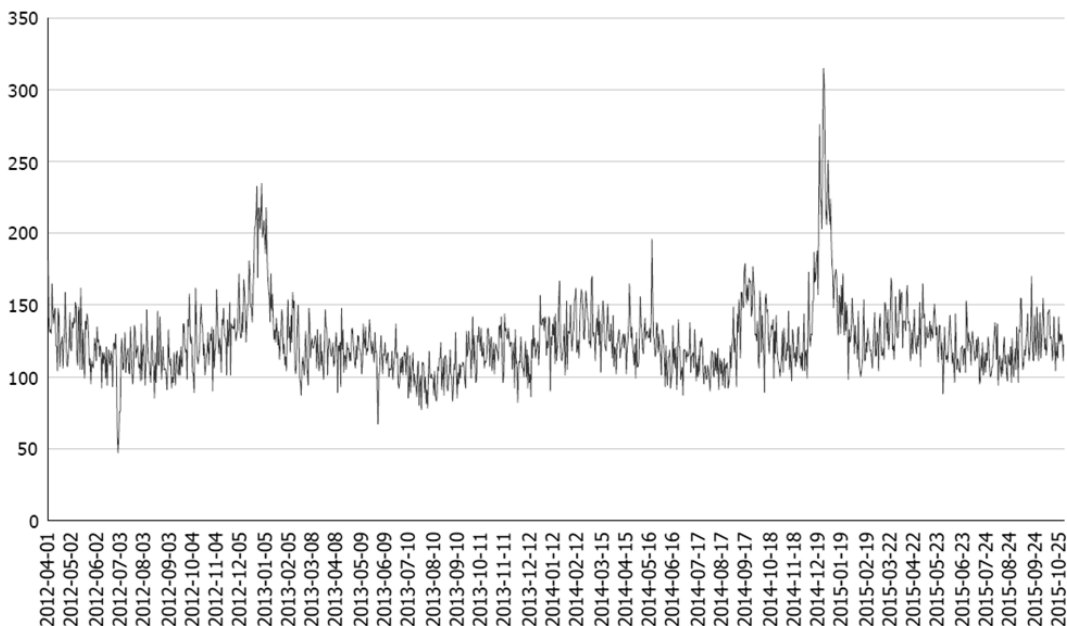


Figure 5 Time trend of total ED cases due to ILI, Manitoba

Antiviral dispensing

The units of antiviral drug, Oseltamivir (Tamiflu®), dispensed since October, 1, 2015 to Manitoba residents during the influenza season are reported to E&S from Drug Programs Information Network (DPIN) on a weekly

basis. Only drugs dispensed from community retail pharmacies were included in this report. Antiviral drugs dispensed to in-patients or through nursing stations could not be included due to lack of data.

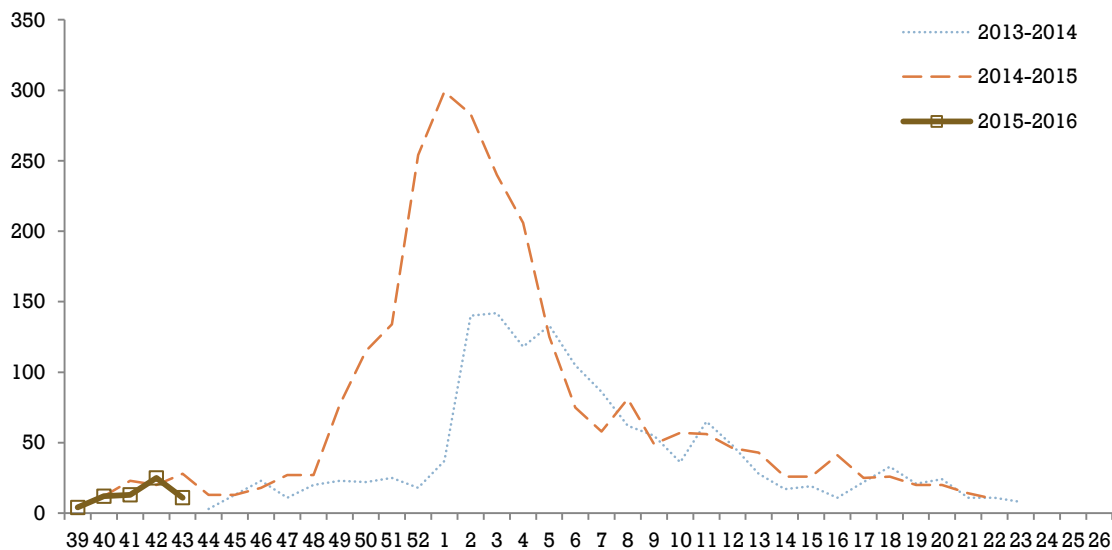


Figure 6 Units of Oseltamivir dispensed by week, Manitoba, 2015–2016

Antiviral Resistance

Influenza and Respiratory Viruses Section of National Microbiology Laboratory (NML) undertakes enhanced surveillance, investigations, and research on influenza and other respiratory pathogens. A random sample of positive influenza specimens isolated by culture is referred from each provincial laboratory to NML for strain characterization and antiviral resistance testing. The aggregate level information is then shared with provinces and territories on a weekly basis.

Table 1. Antiviral resistance of isolates by influenza type and subtype since September 1, 2015 in Canada and Manitoba, 2015–2016

		Oseltamivir		Zanamivir		Amantadine	
		# Resistant	# Sensitive	# Resistant	# Sensitive	# Resistant	# Sensitive
Canada	A(H3N2)	0	18	0	18	21	0
	A(H1N1)	0	1	0	1	1	0
	B	0	5	0	5	N/A	N/A
Manitoba	A(H3N2)	0	0	0	0	0	0
	A(H1N1)	0	0	0	0	0	0
	B	0	0	0	0	N/A	N/A

N/A = Not applicable

Immunization

As per World Health Organization (WHO), all seasonal quadrivalent influenza vaccines for 2015–2016 in the northern hemisphere contain:

- A/Switzerland/9715293/2013(H3N2)-like virus;
- A/California/7/2009(H1N1)pdm09-like virus;
- B/Phuket/3073/2013-like virus.
- B/Brisbane/60/2008-like virus.

For the 2015–2016 influenza season, MHLS is allotted quadrivalent inactivated vaccine (QIV), Fluzone® Quadrivalent (Sanofi Pasteur), and quadrivalent live attenuated influenza vaccine (QLAIV)

FluMist® Quadrivalent (AstraZeneca), as part of the province's Publicly-Funded Seasonal Influenza Immunization Program.

Circulating Strain

NML antigenically characterizes influenza viruses received from Canadian laboratories year-round. In Manitoba, a random sample of positive influenza specimens isolated by culture is referred from CPL to NML for strain characterization.

Since September 1, 2015, NML has characterized 22 influenza viruses (15 H3N2, 1 H1N1 and 6 B viruses). One influenza A(H3N2) virus was antigenically characterized as A/Switzerland/9715293/2013, the influenza A(H3N2) component recommended for the 2015–2016 influenza vaccine. One influenza A(H1N1) virus characterized was antigenically similar to A/California/7/2009, the influenza A(H1N1) component recommended for the vaccine. The six influenza B viruses characterized were antigenically similar to the vaccine strain B/Phuket/3073/2013.

14 influenza A(H3N2) viruses did not grow sufficiently for antigenic characterization. Therefore, NML performed genetic characterization to these viruses. Sequence analyses showed that those influenza A(H3N2) viruses belonged to a genetic group in which most viruses were antigenically related to A/Switzerland/9715293/2013.

Table 2 Influenza Strain Characterization reported by NML since September 1, 2015, Canada, 2015–2016

Strain	Number of viruses	
	Canada	Manitoba
A/Switzerland/9715293/2013(H3N2)-like	1	0
A/California/7/2009(H1N1)-like	1	0
B/Phuket/3073/2013-like	6	0

Abbreviations

- CPL = Cadham Provincial Laboratory
- E&S = Epidemiology and Surveillance
- ICU = Intensive Care Unit
- ILI = Influenza-Like-Illness
- LTCF = Long Term Care Facility
- MHLS = Manitoba Health, Healthy Living and Seniors
- NML = National Microbiology Laboratory
- PHAC = Public Health Agency of Canada
- RHA = Regional Health Authority
- 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.

Epidemiology week

Time trends in this report were analyzed by [epidemiology week](#), a schedule used by the national FluWatch program coordinated by the Public Health Agency of Canada (PHAC).

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.

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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>