

# FLUWATCH

April 17 to May 7, 2022  
(Weeks 16-18)



## Weekly Highlights

- Since the beginning of April, detections of influenza have sharply increased. All indicators of influenza activity have increased in recent weeks. Influenza activity has reached seasonal thresholds.

### Virologic

- In weeks 16 to 18, 4,816 laboratory detections (4,810 influenza A and 6 influenza B) were reported.
- Among detections with detailed age information, the majority of detections were in individuals under the age of 45 years.

### Syndromic

- The percentage of visits for influenza-like illness (ILI) was 2.1% in week 18. The percentage visits for ILI has now exceeded the pre-pandemic levels typical of this time of year.
- The percentage of FluWatchers reporting fever and cough was 1.4% in week 18. The percentage of FluWatchers who reported cough and fever in weeks 16-18 is within levels seen pre-pandemic.

### Outbreaks

- In weeks 16 to 18, 15 laboratory-confirmed influenza outbreaks were reported.
- From August 29, 2021 to May 7, 2022 (weeks 35 to 18), 30 laboratory-confirmed influenza outbreaks have been reported to date this season.

### Severe Outcomes

- From August 29, 2021 to May 7, 2022 (weeks 35 to 18), 249 influenza-associated hospitalizations have been reported from participating provinces and territories.
- The IMPACT network is reporting a sharp increase in influenza-associated hospitalizations among the pediatric population.

### Other Notes

- The next scheduled FluWatch report (week 19) will be published May 20, 2022.
- Weekly reporting of laboratory detections of influenza and other seasonal respiratory viruses will continue via our [Respiratory Virus Detections Surveillance System](#)

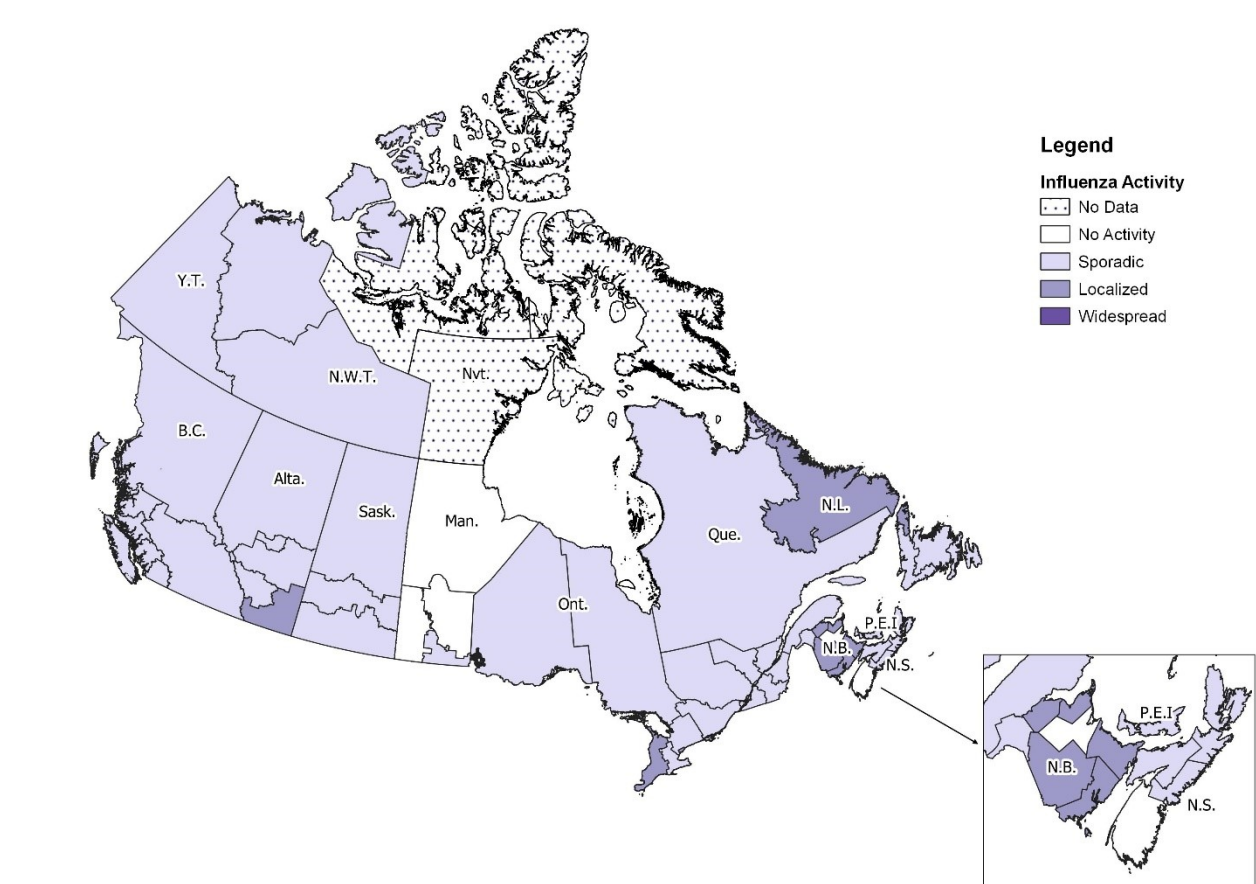


# Influenza/Influenza-like Illness Activity – Geographic Spread

In week 18, 35 regions in twelve provinces and territories (B.C., Y.T., N.W.T., Alta., Sask., Man., Ont., Que., N.S., N.B., P.E.I., N.L.) reported sporadic influenza/ILI activity and nine regions in four provinces (Alta., Ont., N.B., N.L.) reported localized influenza/ILI activity (Figure 1).

**Figure 1 – Map of influenza/ILI activity by province and territory, Canada, week 2022-18**

Number of Regions Reporting in Week 18: 50 out of 53



## Laboratory-Confirmed Influenza Detections

In weeks 16 to 18, 4,816 laboratory detections (4,810 influenza A and 6 influenza B) were reported. Detections of influenza have sharply increased since the beginning of April.

The weekly percentage of tests positive for influenza continues to increase and is now within pre-pandemic levels (11.6%). The percentage of tests positive for influenza recently exceeded the seasonal epidemic threshold of 5%, signaling the start of an influenza season. This increasing trend in laboratory detections is unusual because laboratory detections are typically decreasing at this time of year.

In weeks 16 to 18, a total of 49,532 tests for influenza were performed at reporting laboratories and the percentage of tests positive for influenza in week 18 was 11.6%. Compared to the past six pre-pandemic seasons (2014-2015 to 2019-2020), an average of 15,975 tests were performed for this time period, with an average of 10.3% of tests positive for influenza for week 18 (Figure 3).

To date this season (August 29, 2021 to May 7, 2022), 6,677 influenza detections (6,551 influenza A and 126 influenza B) have been reported, which is lower than what we have seen historically in the past six pre-pandemic seasons, where an average of 45,671 influenza detections were reported at this point in the season. Among subtyped influenza A detections (1,463), influenza A(H3N2) accounted for 98% of detections.

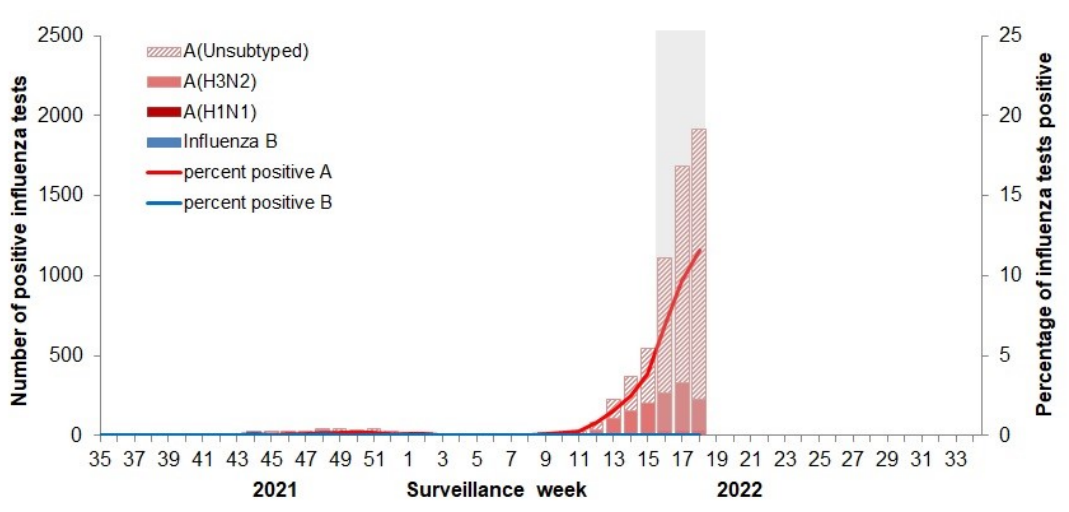
Detailed information on age and type/subtype has been received for 5,966 laboratory-confirmed influenza detections (Figure 4). Among the 5,966 detections, 2,919 (49%) were in individuals under 0-19 years old and 1,601 (27%) were in individuals 20-44 years old.

Testing for influenza and other respiratory viruses has been influenced by the current COVID-19 pandemic. Changes in laboratory testing practices may affect the comparability of data to previous weeks or previous seasons.

For more detailed weekly and cumulative influenza data, see the text descriptions for [Figures 2 and 3](#) or the [Respiratory Virus Detections in Canada Report](#).

**Figure 2 – Number of positive influenza tests and percentage of tests positive, by type, subtype and report week, Canada, week 2021-35 to 2022-18**

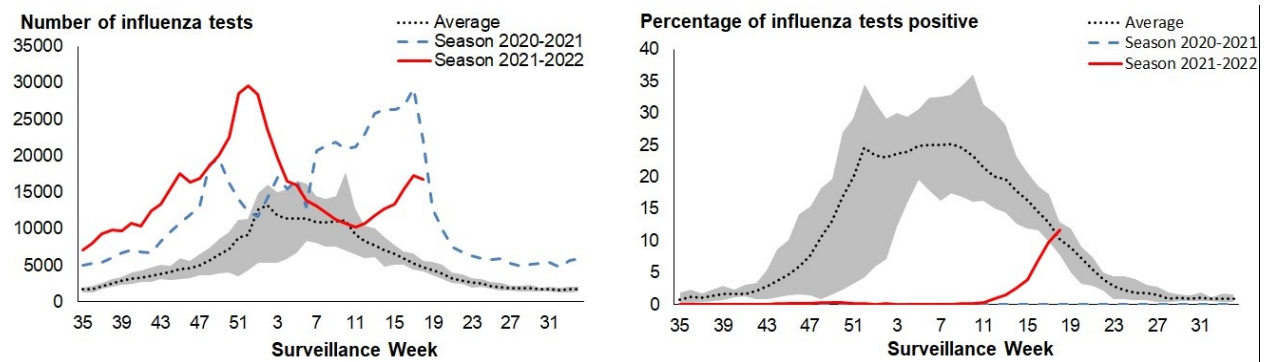
Number of Laboratories Reporting in Week 18: 32 out of 34



Due to different testing protocols of laboratories across Canada, differences exist in the number of detections included in various calculations, tables, and figures across products.

The shaded area indicates weeks where the positivity rate was at least 5% and a minimum of 15 positive tests were observed, signalling the period of seasonal influenza activity.

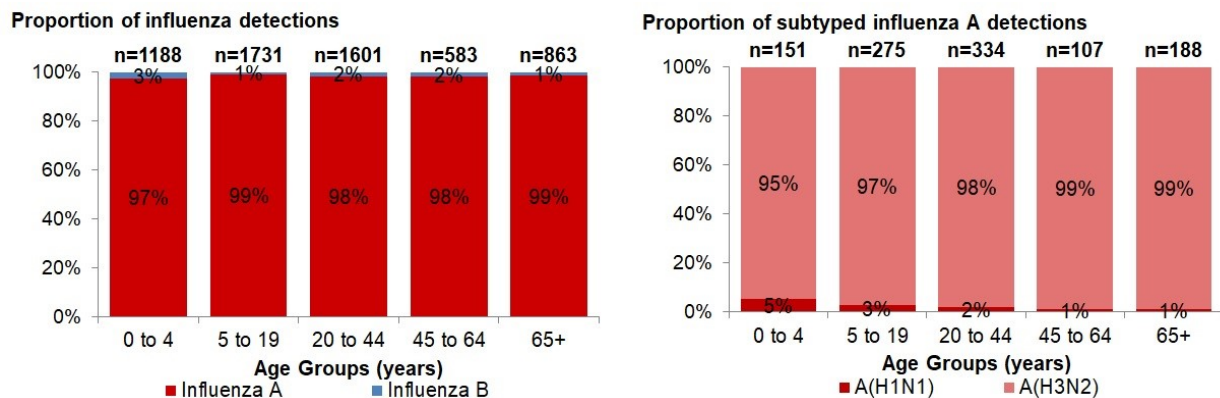
**Figure 3 – Number of influenza tests and percentage of tests positive in Canada compared to previous seasons, week 2021-35 to 2022-18**



The shaded area represents the maximum and minimum number of influenza tests or percentage of tests positive reported by week from seasons 2014-2015 to 2019-2020. Data from week 11 of the 2019-2020 season onwards are excluded from the historical comparison due to the COVID-19 pandemic.

Included in the cumulative detections this season are 11 co-infections of influenza A and B (total of 22 detections) that were suspected to be associated with [live attenuated influenza vaccine \(LAIV\)](#) receipt. Beginning in week 44 co-infections known or reported to be associated with recent LAIV were removed by the submitting laboratory or by the Public Health Agency of Canada as they do not represent community transmission of seasonal influenza viruses.

**Figure 4 – Proportion of positive influenza specimens by type or subtype and age-group reported through case-based laboratory reporting, Canada, weeks 2021-35 to 2022-18**



# Syndromic / Influenza-like Illness Surveillance

## Healthcare Practitioners Sentinel Surveillance

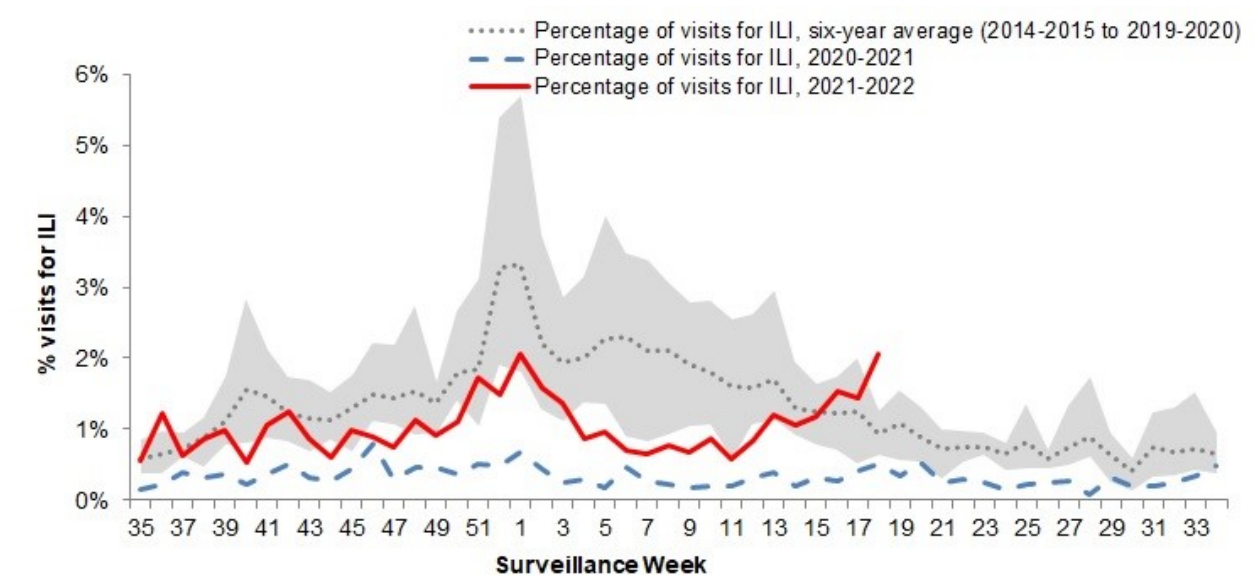
In week 18, 2.1% of visits to healthcare professionals were due to influenza-like illness (ILI). The percentage visits for ILI in weeks 16-18 has been increasing since week 11 and has now exceeded pre-pandemic levels typical of this time of year.

Since the beginning of the surveillance season, the percentage of visits for ILI has been within or near expected pre-pandemic levels (Figure 5). ILI symptoms are not specific to any one respiratory pathogen and can be due to influenza, or other respiratory viruses, including respiratory syncytial virus and even SARS-CoV-2, the virus that causes COVID-19.

This indicator should be interpreted with caution as there have been changes in healthcare seeking behavior of individuals and a smaller number of sentinels reporting compared to previous seasons.

**Figure 5 – Percentage of visits for ILI reported by sentinels by report week, Canada, weeks 2021-35 to 2022-18**

Number of Sentinels Reporting in Week 18: 47



The shaded area represents the maximum and minimum percentage of visits for ILI reported by week from seasons 2014-2015 to 2019-2020. Data from week 11 of the 2019-2020 season onwards are excluded from the historical comparison due to the COVID-19 pandemic.

## FluWatchers

In week 18, 11,420 participants reported to FluWatchers, of which 1.4% reported symptoms of cough and fever (Figure 6). The percentage of FluWatchers who report cough and fever in weeks 16-18 has been at the highest level seen in the past two seasons and is within typical levels seen pre-pandemic for this time of year.

The reports of cough and fever are not specific to any one respiratory pathogen and can be due to influenza, or other respiratory viruses, including respiratory syncytial virus, rhinovirus, and even SARS-CoV-2, the virus that causes COVID-19. FluWatchers reporting is not impacted by changes in health services or health seeking behaviours.

Among the 160 participants who reported cough and fever:

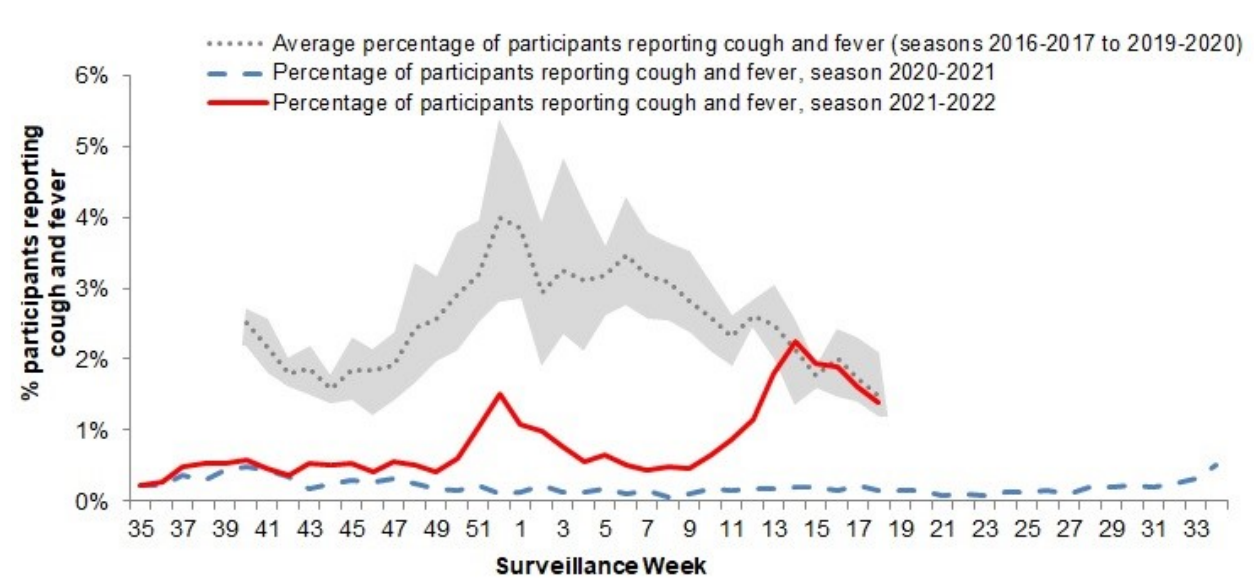
- 56% consulted a healthcare professional;
- 81% reported days missed from work or school, resulting in a combined total of 129 missed days of work or school (average of 3.7 days);

The Northwest Territories had the highest participation rate this week (53 participants per 100,000 population) and the neighbourhood of KOA had the highest number of participants (142). See what is happening in your [neighbourhood!](#) Downloadable datasets are also available on [Open Maps](#).

If you are interested in becoming a [FluWatcher](#), [sign up today](#).

**Figure 6 – Percentage of FluWatchers reporting cough and fever, Canada, week 2021-35 to 2022-18**

Number of Participants Reporting in Week 18: 11,420



The shaded area represents the maximum and minimum percentage of percentage of participants reporting cough and fever by week, from seasons 2014-2015 to 2019-2020. Data from week 11 of the 2019-2020 season onwards are excluded from the historical comparison due to the COVID-19 pandemic

## Influenza Outbreak Surveillance

In weeks 16-18, 15 outbreaks were reported (seven in a long-term care facility, five in a facility categorized as 'other', which can include facilities such as private personal care homes, correctional facilities, and colleges/universities and three in remote or isolated communities).

To date this season (August 29, 2021 to May 7, 2022), 30 laboratory-confirmed influenza outbreaks and 83 ILI outbreaks have been reported. Among the 30 laboratory-confirmed influenza outbreaks, 13 were in long-term care facilities, 12 in facilities categorized as 'other', 3 in remote or isolated communities and 2 in an acute care facility. All but one ILI outbreaks have been reported in schools and/or daycares.

Outbreaks of ILI are not specific to any one respiratory pathogen and can be due influenza, or other respiratory viruses, including respiratory syncytial virus, rhinovirus, and even COVID-19. Many respiratory viruses in addition to the flu commonly circulate during the fall and winter, and can cause clusters of cases with respiratory illness which could be captured as ILI. For more information on the respiratory viruses currently circulating in Canada, please refer to the [Respiratory Virus Detections in Canada](#).

Number of provinces and territories<sup>1</sup> reporting in week 18: 12 out of 13

<sup>1</sup>All Provinces and Territories (PTs) participate in the FluWatch outbreak surveillance system. This outbreak system monitors influenza and ILI outbreaks in long-term care facilities (LTCF), acute care facilities, schools and daycares, remote and/or isolated communities, and facilities categorized as 'other'. Not all reporting PTs report outbreaks in all these settings. All PTs report laboratory confirmed outbreaks in LTCF. Four PTs (NB, NL, NS and YK) report ILI outbreaks in schools and/or daycares and other facilities.

## Influenza Severe Outcomes Surveillance

### Provincial/Territorial Influenza Hospitalizations and Deaths

In weeks 16-18, 187 influenza-associated hospitalizations and 20 ICU admissions were reported by participating provinces and territories<sup>2</sup>.

To date this season (August 29, 2021 to May 7, 2022), 249 influenza-associated hospitalizations were reported by participating provinces and territories.

- All but one hospitalization was due to influenza A.
- Of the cases for which subtype was reported (90), 100% were associated with influenza A(H3N2).
- The greatest proportion of hospitalizations (41%) were in adults 65 years of age and older.

22 influenza-associated ICU admissions were reported by participating provinces and territories.

Number of provinces and territories reporting in week 18: 9 out of 9

<sup>2</sup>Influenza-associated hospitalizations are reported by Alberta, Manitoba, New Brunswick, Newfoundland and Labrador, Northwest Territories, Nova Scotia, Prince Edward Island and Yukon. Only hospitalizations that require intensive medical are reported by Saskatchewan.

### Pediatric Influenza Hospitalizations and Deaths

In week 18, 47 influenza-associated pediatric ( $\leq 16$  years of age) hospitalizations were reported by the Immunization Monitoring Program Active (IMPACT) network. There has been a sharp increase in influenza-associated pediatric hospitalizations in recent weeks.

To date this season (August 29, 2021 to May 7, 2022), 125 pediatric influenza-associated hospitalizations have been reported, of which 79 (63%) were among children under the age of 5 years of age. Nine pediatric influenza-associated intensive care unit (ICU) admissions have been reported.

## Adult Influenza Hospitalizations and Deaths

In week 18, less than five influenza-associated adult ( $\geq 16$  years of age) hospitalizations were reported by the Canadian Immunization Research Network (CIRN) Serious Outcomes Surveillance (SOS) network.

To date this season (August 29, 2021 to May 7, 2022), 16 influenza-associated adult ( $\geq 16$  years of age) hospitalizations have been reported by the CIRN SOS network.

## Influenza Strain Characterization

To date this season (August 29, 2021 to May 7, 2022), the National Microbiology Laboratory (NML) has characterized 78 influenza viruses (76 A(H3N2), 2 A(H1N1)) received from Canadian laboratories.

### Influenza A(H3N2)

#### Genetic Characterization

Among the 76 influenza A(H3N2) viruses genetically characterized, sequence analysis of the HA gene of these viruses showed that they all belonged to genetic group 3C.2a1b.2a2.

A/Cambodia/e0826360/2020 (H3N2)-like virus is the influenza A(H3N2) component of the 2021-2022 Northern Hemisphere seasonal influenza vaccine and belongs to genetic group 3C.2a1b.2a1.

A/Darwin/6/2021 (H3N2)-like virus is the influenza A(H3N2) component of the 2022 Southern Hemisphere seasonal influenza vaccine and belongs to the genetic group 3C.2a1b.2a2.

#### Antigenic Characterization

Among the 75 A(H3N2) viruses characterized:

- 13 viruses were antigenically similar to A/Cambodia/e0826360/2020 (H3N2)-like virus
- 62 showed reduced titers with antisera raised against egg-grown A/Cambodia/e0826360/2020 (H3N2)-like virus.

### Influenza A(H1N1)

#### Antigenic Characterization

Among the two A(H1N1) viruses characterized:

- One H1N1 virus characterized was antigenically similar to A/Wisconsin/588/2019.
- One H1N1 showed reduced titer with ferret antisera raised against cell culture-propagated A/Wisconsin/588/2019

A/Wisconsin/588/2019 is the influenza A(H1N1) component of the 2021-2022 Northern Hemisphere seasonal influenza vaccine.

## Antiviral Resistance

The NML also tests influenza viruses received from Canadian laboratories for antiviral resistance.

### Oseltamivir

77 influenza viruses (75 A(H3N2) and 2 A(H1N1)) were tested for resistance to oseltamivir:

- All influenza viruses were sensitive to oseltamivir.



## Zanamivir

77 influenza viruses (75 A(H3N2) and 2 A(H1N1)) were tested for resistance to zanamivir:

- All influenza viruses were sensitive to zanamivir.

## Influenza Vaccine Monitoring

Vaccine monitoring refers to activities related to the monitoring of influenza vaccine coverage and effectiveness.

### Vaccine Coverage

The Seasonal Influenza Immunization Coverage Survey is an annual telephone survey conducted between January and February that collects information from Canadians on whether they received the annual seasonal influenza vaccine that season. Vaccine coverage is measured as the percentage of people who reported receiving the influenza vaccine in a specific influenza season.

In the 2021-22 influenza season, coverage was similar to the 2020-21 season at:

- 30% among adults aged 18 to 64 years.
  - 27% among adults aged 18-64 without chronic medical conditions.
  - 38% among adults aged 18-64 with chronic medical conditions.
- 71% among seniors (aged 65 years and older).

**Table 1 – Influenza vaccine coverage among adults (n=3,502)\* by risk group† and gender‡, Seasonal Influenza Vaccination Coverage Survey, Canada, September 2021 – February 2022**

Age group (years)	All		Male		Female	
	N	Vaccine Coverage % (95% CI)	N	Vaccine Coverage % (95% CI)	N	Vaccine Coverage % (95% CI)
All adults (≥18)	3487	38.7 (36.9-40.6)	1548	33.4 (30.8-36.0)	1914	43.9 (41.3-46.5)
18-64	2389	30.1 (28.0-32.2)	1079	24.9 (22.1-27.8)	1286	35.0 (31.9-38.1)
with chronic medical conditions	713	37.6 (33.6-41.7)	298	37.0 (31.0-43.1)	407	38.3 (32.9-43.8)
without chronic medical conditions	1658	26.8 (24.4-29.2)	769	19.9 (16.9-23.0)	873	33.7 (29.9-37.4)
≥65	1098	71.0 (68.1-74.0)	469	67.0 (62.2-71.8)	628	74.6 (70.9-78.3)

\*18 people did not recall whether they had received the influenza vaccine and were excluded from coverage estimates.

†11 people who were 18-64 years old did not disclose whether they had any chronic medical conditions (CMC) and were excluded from stratified analysis.

‡11 people did not disclose their gender and 9 people did not identify as male or female. They were excluded from stratified analysis.

### Vaccine Effectiveness

Within season influenza vaccine effectiveness (VE) estimates are typically available in February or March of each year. Given the low influenza circulation this season to date, VE estimates for Canada will not be available for the 2021-2022 season.

## Provincial and International Surveillance Links

- British Columbia – [Influenza Surveillance; Vaccine Effectiveness Monitoring](#)
- Alberta – [Respiratory Virus Surveillance](#)
- Saskatchewan – [Influenza Reports](#)
- Manitoba – [Seasonal Influenza Reports](#)
- Ontario – [Ontario Respiratory Pathogen Bulletin](#)
- Québec – [Système de surveillance de la grippe \(available in French only\)](#)
- New Brunswick – [Influenza Surveillance Reports](#)
- Prince Edward Island – [Influenza Summary](#)
- Nova Scotia – [Respiratory Watch Report](#)
- Newfoundland and Labrador – [Surveillance and Disease Reports](#)
- Yukon – [Influenza \(the Flu\)](#)
- Northwest Territories – [Influenza/ Flu Information](#)
- Nunavut – [Influenza Information](#)
- World Health Organization – [Global Influenza Programme](#)
- Pan American Health Organization – [Influenza situation report](#)
- U.S. Centers for Disease Prevention & Control (CDC) - [Weekly Influenza Summary Update](#)
- European Centre for Disease Prevention and Control – [Surveillance reports and disease data on seasonal influenza](#)
- United Kingdom – [National influenza surveillance reports](#)
- Hong Kong Centre for Health Protection - [Flu Express](#)
- Australia – [Influenza Surveillance Report and Activity Updates](#)
- New Zealand – [Influenza Dashboard](#)

## Notes

The data in the FluWatch report represent surveillance data available at the time of writing. All data are preliminary and may change as updates are received.

To learn more about the FluWatch program, see the [Overview of influenza monitoring in Canada](#) page.

For more information on the flu, see our [Flu \(influenza\)](#) web page.

***We would like to thank all the FluWatch surveillance partners participating in this year's influenza surveillance program.***

This [report](#) is available on the Government of Canada Influenza webpage.

Ce [rapport](#) est disponible dans les deux langues officielles.