

FLUWATCH

March 13 to April 16, 2022
(Weeks 11-15)



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 is now approaching seasonal thresholds.

Virologic

- In weeks 11 to 15, 1,287 laboratory detections (1,283 influenza A and 4 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 visits for influenza-like illness (ILI) was 1.2 % in week 15; an increasing trend in recent weeks.
- The percentage of FluWatchers reporting fever and cough was 1.9% in week 15; an increasing trend in recent weeks.

Outbreaks

- The first 12 laboratory-confirmed influenza outbreaks of the season have been reported in weeks 11 to 15.

Severe Outcomes

- From August 29, 2021 to April 16, 2022 (weeks 35 to 15), 43 influenza-associated hospitalizations have been reported from participating provinces and territories.
- The IMPACT network is reporting an increase in influenza-associated hospitalizations among the pediatric population.

Other Notes

- The next scheduled FluWatch report (weeks 16 to 20) will be published May 27, 2022. Additional reports may be produced if influenza activity continues to increase in Canada.
- Weekly reporting of laboratory detections of influenza and other seasonal respiratory viruses will continue via our [Respiratory Virus Detections Surveillance System](#).

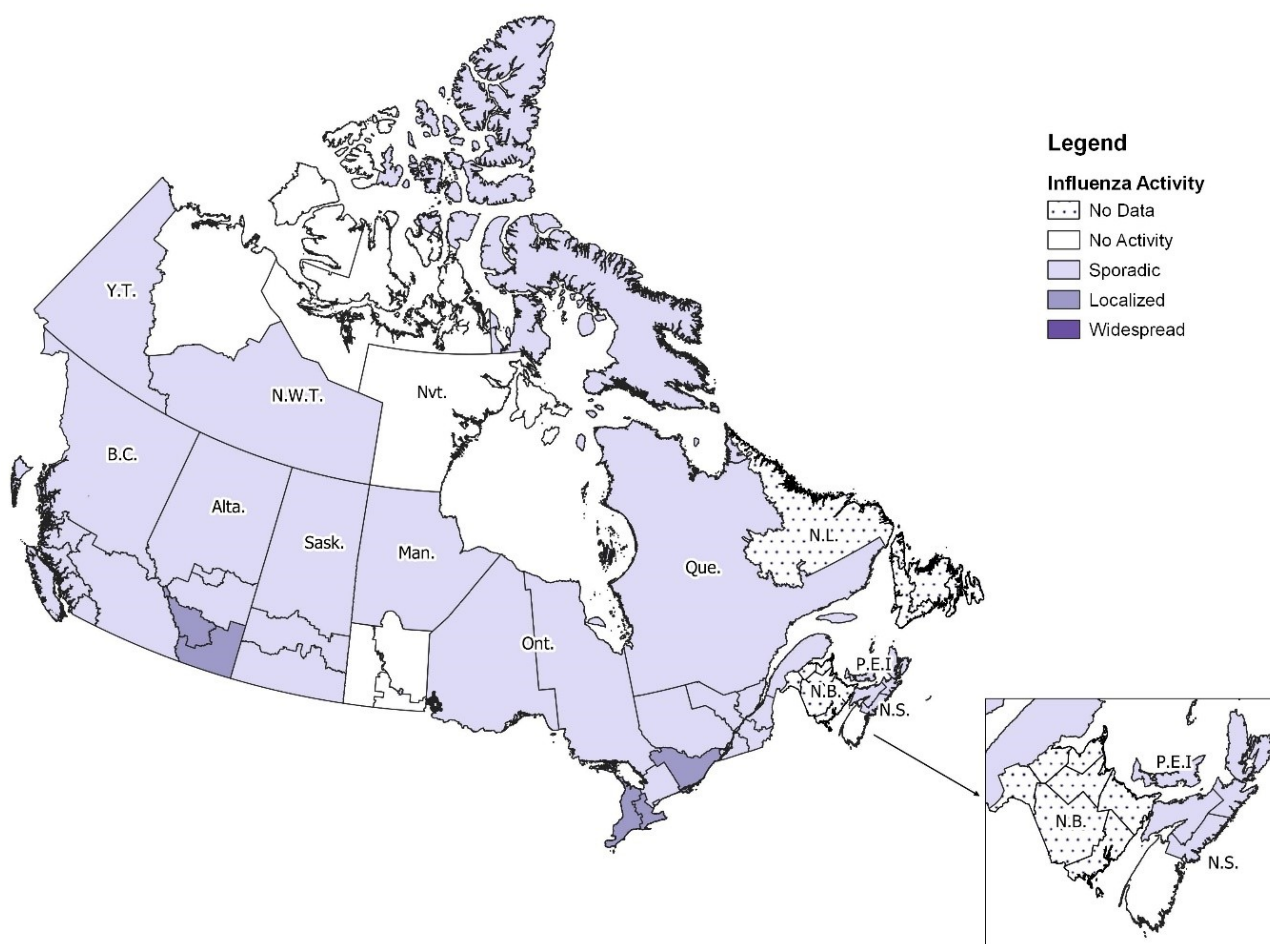


Influenza/Influenza-like Illness Activity – Geographic Spread

In week 15, 30 regions in eleven provinces and territories (B.C., Y.T., N.W.T., Nvt., Alta., Sask., Man., Ont., Que., N.S., P.E.I.) reported sporadic influenza/ILI activity and five regions in two provinces (Alta., Ont.) reported localized influenza/ILI activity. All other surveillance regions reported no influenza/ILI activity (Figure 1).

Figure 1 – Map of influenza/ILI activity by province and territory, Canada, week 2022-15

Number of Regions Reporting in Week 15: 42 out of 53



Laboratory-Confirmed Influenza Detections

In weeks 11 to 15, 1,287 laboratory detections (1,283 influenza A and 4 influenza B) were reported. Detections of influenza have sharply increased, from an average of 40 detections a week in March, to 492 detections in the most recent reporting week.

The threshold for calling the start of a seasonal epidemic in Canada is a 5% positivity rate. With increasing influenza activity, Canada may reach this threshold in the coming weeks and signal the start of a seasonal influenza epidemic.

In weeks 11 to 15, a total of 58,544 tests for influenza were performed at reporting laboratories and the percentage of tests positive for influenza in week 15 was 3.8%. Compared to the past six pre-pandemic seasons (2014-2015 to 2019-2020), an average of 38,685 tests were performed for this time period, with an average of 16% of tests positive for influenza for week 15 (Figure 3).

To date this season (August 29, 2021 to April 16, 2022), 1,842 influenza detections (1,722 influenza A and 120 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 43,627 influenza detections were reported at this point in the season. Among subtyped influenza A detections (564), influenza A(H3N2) accounted for 97% of detections.

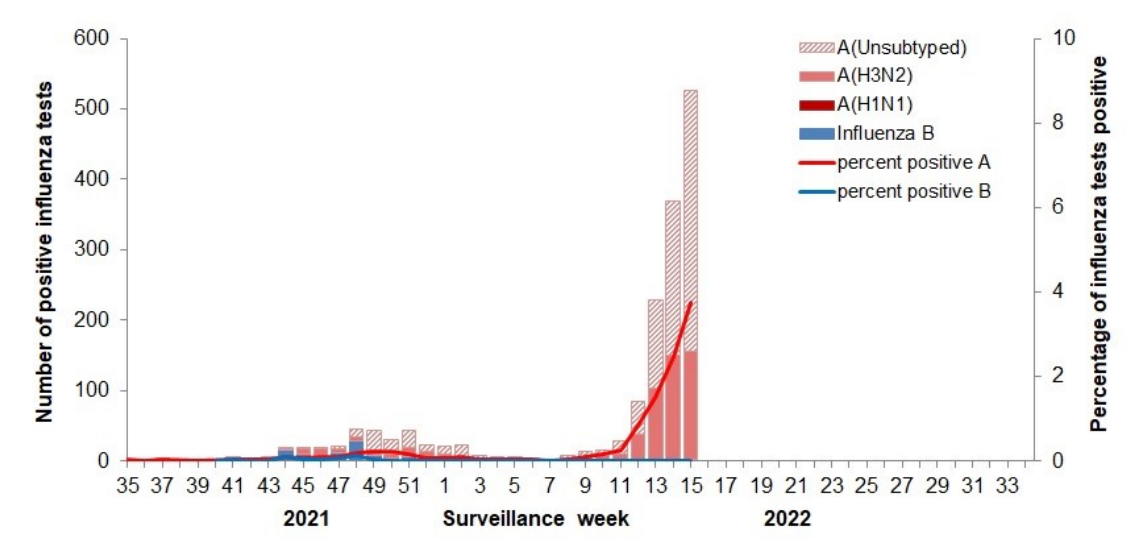
Detailed information on age and type/subtype has been received for 1,566 laboratory-confirmed influenza detections (Figure 4). Among the 1,566 detections, 753 (48%) were in individuals under the 0-19yrs and 468 (30%) were in individuals 20-44yrs.

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](#).

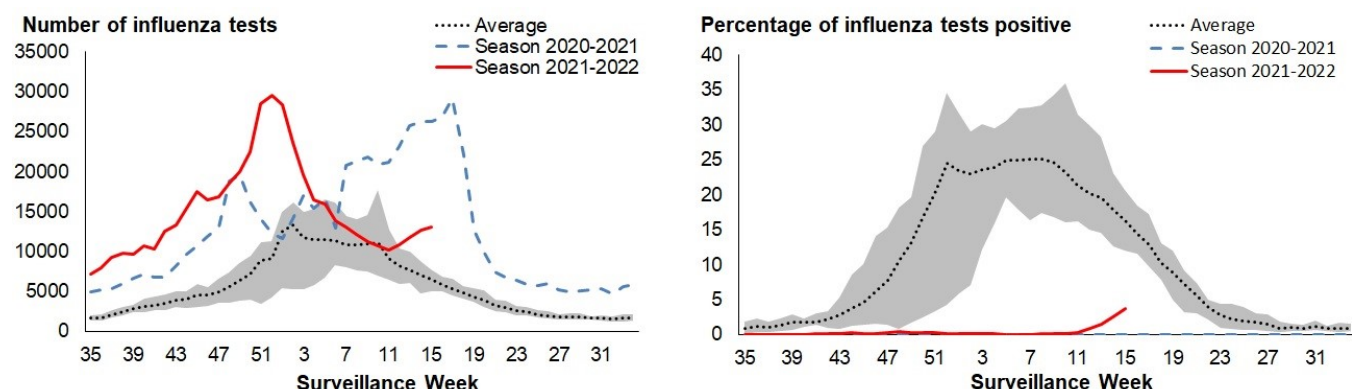
Figure 2 – Number of positive influenza tests and percentage of tests positive, by type, subtype and report week, Canada, week 2021-35 to 2022-15

Number of Laboratories Reporting in Week 15: 32 out of 34



Due to different testing protocols of laboratories across Canada, the number of positive tests reported in Figure 2 may not equal the total number of positive tests in the report body text.

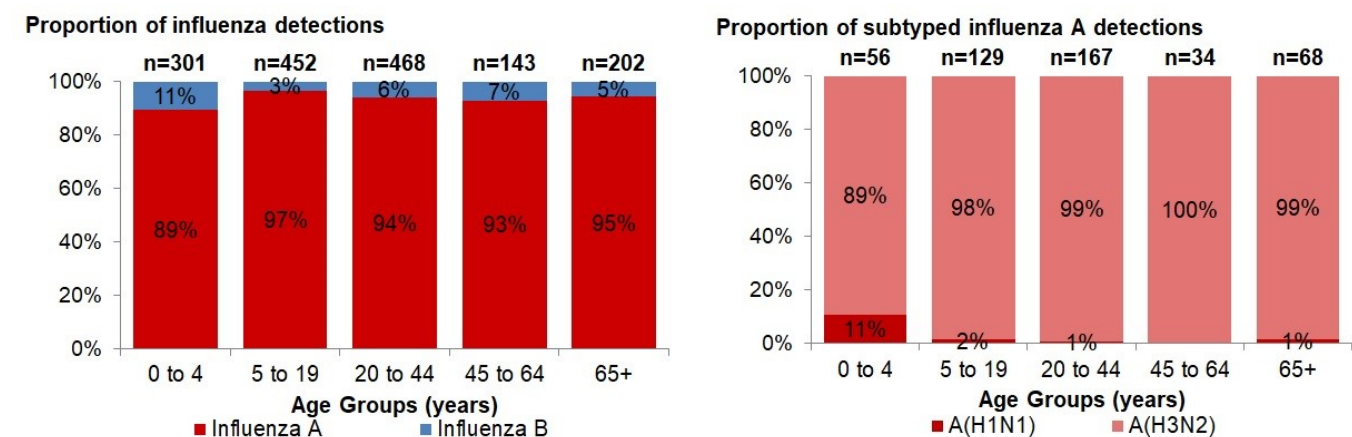
Figure 3 – Number of influenza tests and percentage of tests positive in Canada compared to previous seasons, week 2021-35 to 2022-15



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 2022-15



Syndromic / Influenza-like Illness Surveillance

Healthcare Practitioners Sentinel Surveillance

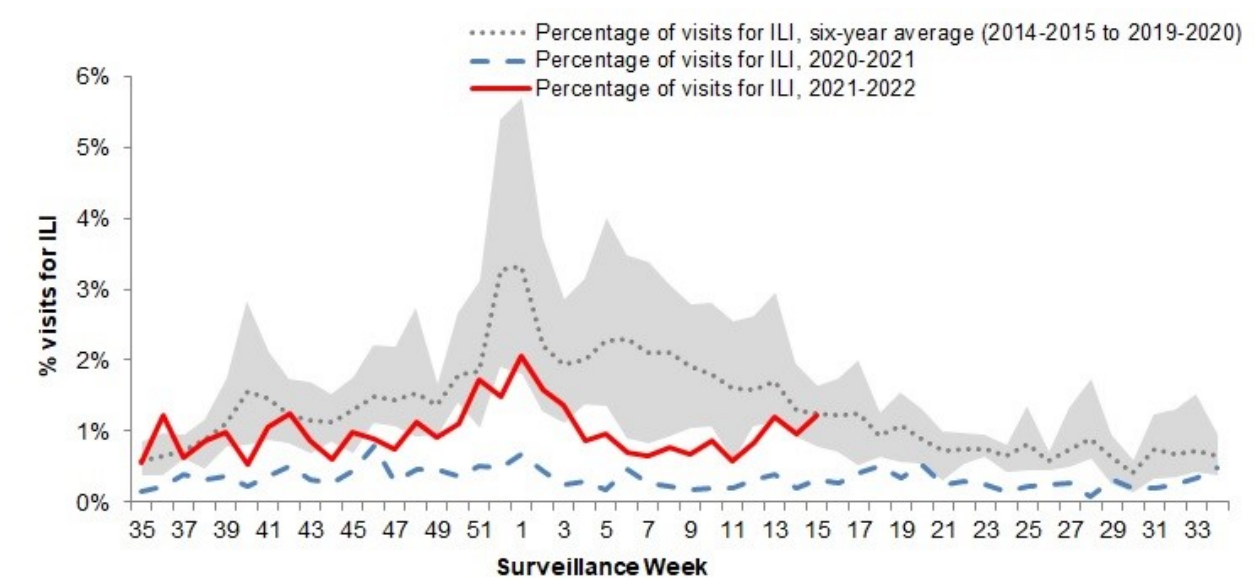
In week 15, 1.2% of visits to healthcare professionals were due to influenza-like illness (ILI). The percentage visits for ILI in weeks 11-15 has increased in recent weeks and are within levels seen pre-pandemic.

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 2022-15

Number of Sentinels Reporting in Week 15: 37



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 15, 11, 623 participants reported to FluWatchers, of which 1.9% reported symptoms of cough and fever (Figure 6). The percentage of FluWatchers who report cough and fever in weeks 11-15 has been at the highest level seen in the past two seasons and are within levels seen pre-pandemic.

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 225 participants who reported cough and fever:

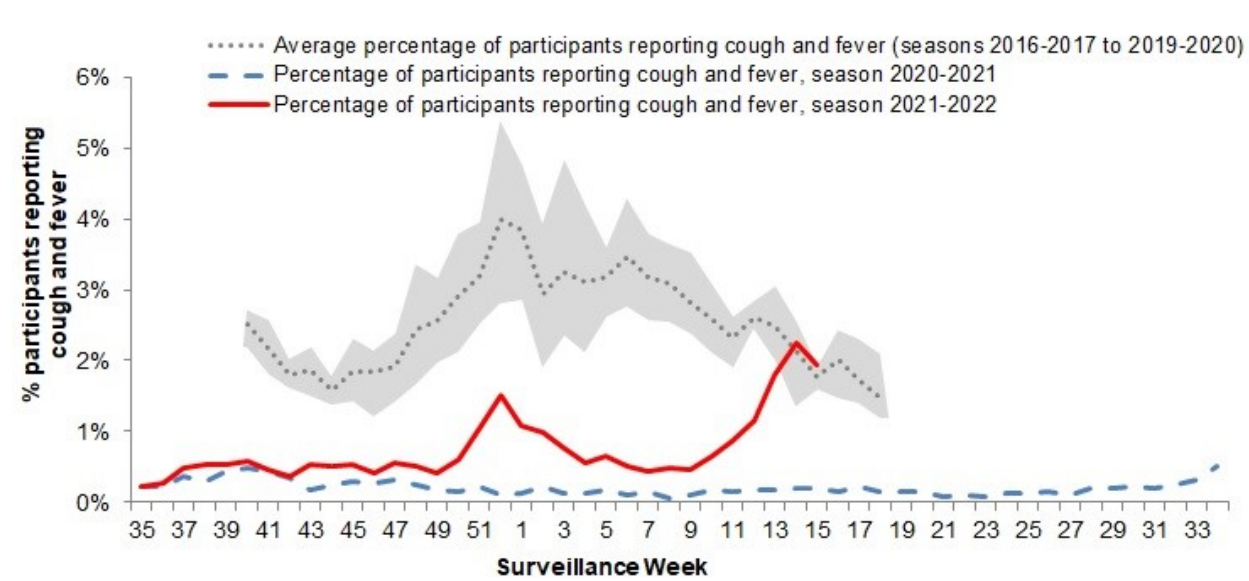
- 64% consulted a healthcare professional;
- 83% reported days missed from work or school, resulting in a combined total of 190 missed days of work or school (average of 3.3 days);

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 (144). 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 2022-15

Number of Participants Reporting in Week 15: 11, 623



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 week 15, two outbreaks were reported (one in a long-term care facility and one in a facility categorized as 'other', which can include facilities such as private personal care homes, correctional facilities, and colleges/universities).

To date this season (August 29, 2021 to April 16, 2022), 12 laboratory-confirmed influenza outbreaks and 55 ILI outbreaks have been reported. Among the 12 laboratory-confirmed influenza outbreaks, six were in long-term care facilities, 5 in facilities categorized as 'other' and one in an acute care facility. All 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 territories¹ reporting in week 15: 11 out of 13

¹All 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 week 15, 14 influenza-associated hospitalizations and less than five ICU admissions were reported by participating provinces and territories².

To date this season (August 29, 2021 to April 16, 2022), 43 influenza-associated hospitalizations and less than five ICU admissions were reported by participating provinces and territories. All but one hospitalization was due to influenza A and 20 (47%) were in adults 65 years of age and older.

Number of provinces and territories reporting in week 15: 7 out of 9

²Influenza-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 15, 19 influenza-associated pediatric (≤ 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 April 16, 2022), 40 pediatric influenza-associated hospitalizations have been reported, of which 25 (63%) were among children under the age of 5 years of age. Less than five intensive care unit (ICU) admissions have been reported.

Adult Influenza Hospitalizations and Deaths

In week 15, less than five influenza-associated adult (≥ 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 April 16, 2022), five influenza-associated adult (≥16 years of age) hospitalizations have been reported by the CIRN SOS network.

Influenza Strain Characterization

To date this season (August 29, 2021 to April 16, 2022), the National Microbiology Laboratory (NML) has characterized 47 influenza viruses (45 A(H3N2), 2 A(H1N1)) received from Canadian laboratories.

Influenza A(H3N2)

Genetic Characterization

Among the 45 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 45 A(H3N2) viruses characterized:

- 8 viruses were antigenically similar to A/Cambodia/e0826360/2020 (H3N2)-like virus
- 37 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

47 influenza viruses (45 A(H3N2) and 2 A(H1N1)) were tested for resistance to oseltamivir:

- All influenza viruses were sensitive to oseltamivir.

Zanamivir

47 influenza viruses (45 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.