

FLUWATCH

December 5 to 11, 2021
(Week 49)



Weekly Highlights

- In week 49, influenza activity across Canada remains low for this time of year. There are sporadic detections of influenza being reported; however, there remains no evidence of community circulation of influenza.

Virologic

- In week 49, a total of 55 influenza detections (46 influenza A and 9 influenza B) were reported.

Syndromic

- The percentage visits for influenza-like illness (ILI) was 0.9% in week 49 and is within expected levels.
- The percentage of FluWatchers reporting fever and cough was 0.38% in week 49; it remains below expected levels and is stable.

Outbreaks

- In week 49, no outbreaks were reported.
- From August 29 to December 11, 2021 (weeks 35 to 49), 14 ILI outbreaks and no laboratory-confirmed influenza outbreaks have been reported.

Severe Outcomes

- From August 29 to December 11, 2021 (weeks 35 to 49), less than five influenza-associated hospitalizations have been reported from participating provinces and territories.

Other Notes

- This is the last FluWatch report of the 2021 calendar year. The next FluWatch report will be published on January 7, 2022 and will include data for weeks 50-52.
- The [Respiratory Virus Detection Report](https://www.canada.ca/en/public-health/services/surveillance/respiratory-virus-detections-canada.html) for week 50 will be available December 23, 2021 at: <https://www.canada.ca/en/public-health/services/surveillance/respiratory-virus-detections-canada.html>

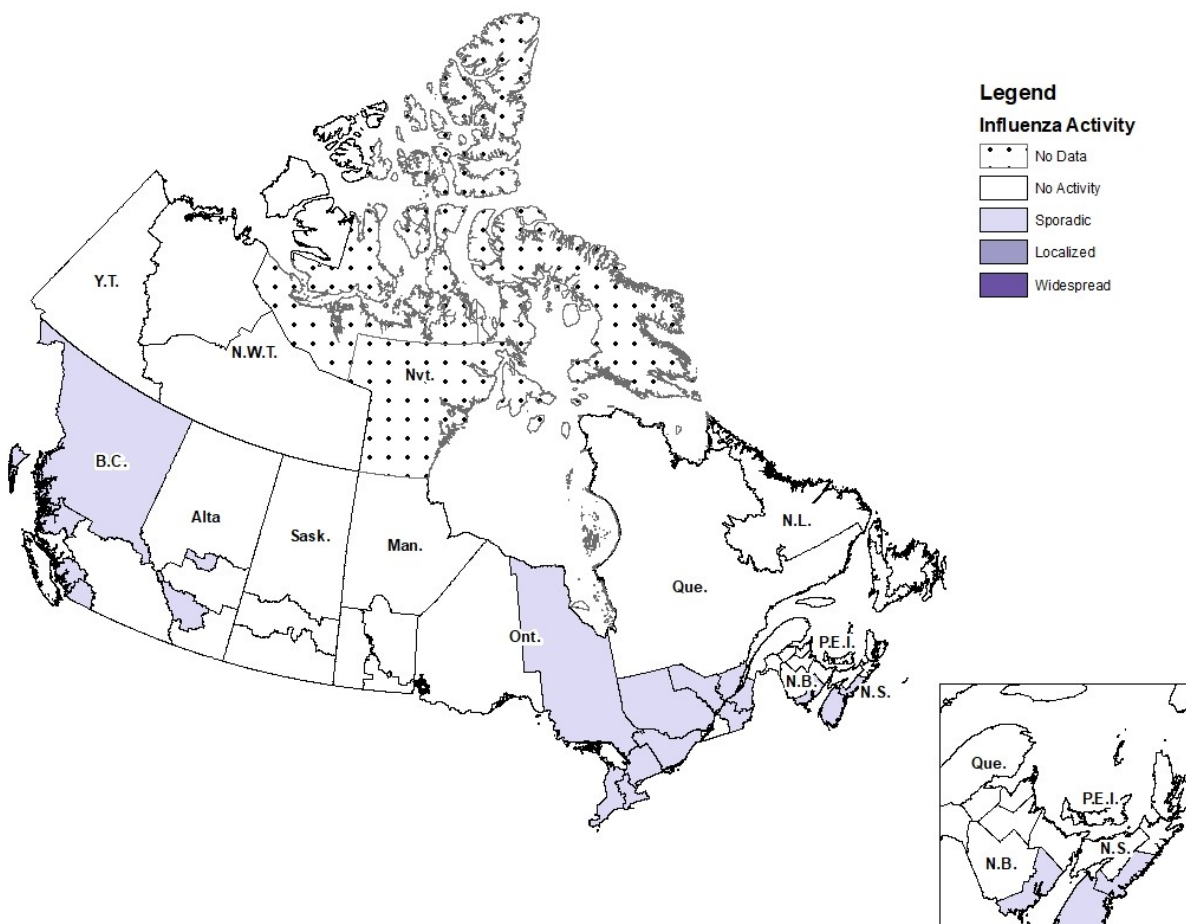


Influenza/Influenza-like Illness Activity – Geographic Spread

In week 49, eighteen regions in six provinces (B.C., Alta., Ont., Que., N.B., and N.S.) reported sporadic 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 2021-49

Number of Regions Reporting in Week 49: 50 out of 53



Laboratory-Confirmed Influenza Detections

In week 49, 55 laboratory detections of influenza were reported (46 influenza A and 9 influenza B).

Overall, the percentage of laboratory tests positive for influenza remains at exceptionally low levels, despite the elevated levels of testing. In week 49, 19,331 tests for influenza were performed at reporting laboratories and the percentage of tests positive for influenza was 0.34%. Compared to the past six pre-pandemic seasons (2014-2015 to 2019-2020), an average of 6,377 tests were performed for this time period, with an average of 13.0% of tests positive for influenza (Figure 3).

To date this season (August 28 to December 11, 2021), 269 influenza detections (175 influenza A and 94 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 3,054 influenza detections were reported at this point in the season. Among subtyped influenza A detections (53), influenza A(H3N2) accounted for 96% of detections.

Detailed information on age and type/subtype has been received for 215 laboratory-confirmed influenza detections (Figure 4). Among the 215 detections, 182 (85%) were in individuals under the age of 45.

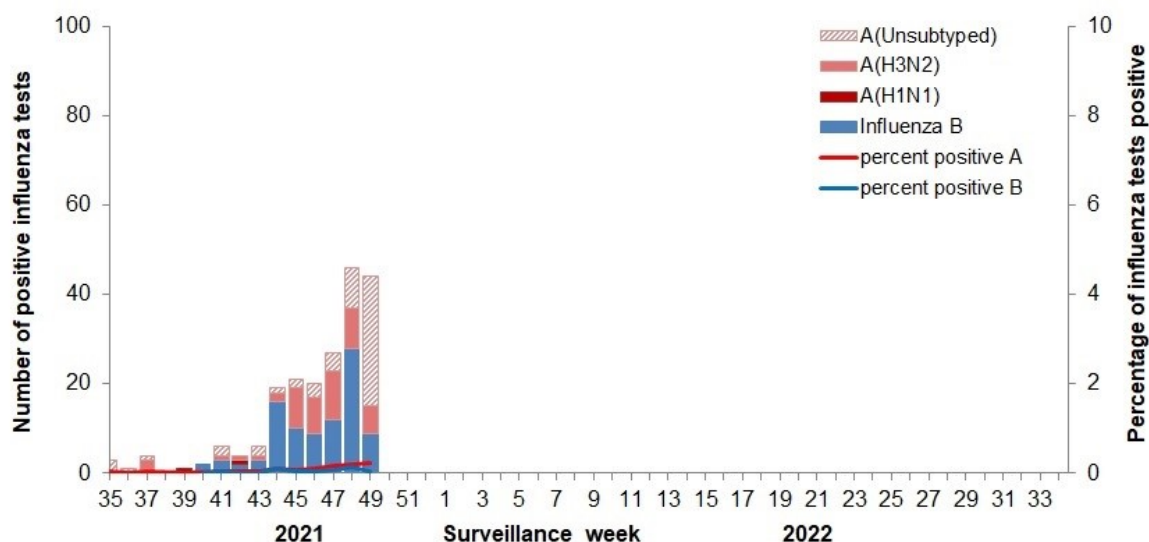
Included in the cumulative detections this season are 11 co-infections of influenza A and B (total of 22 detections) that are suspected to be associated with recent [live attenuated influenza vaccine \(LAIV\)](#) receipt. Co-infections known or reported to be associated with recent LAIV have been removed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

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](#).

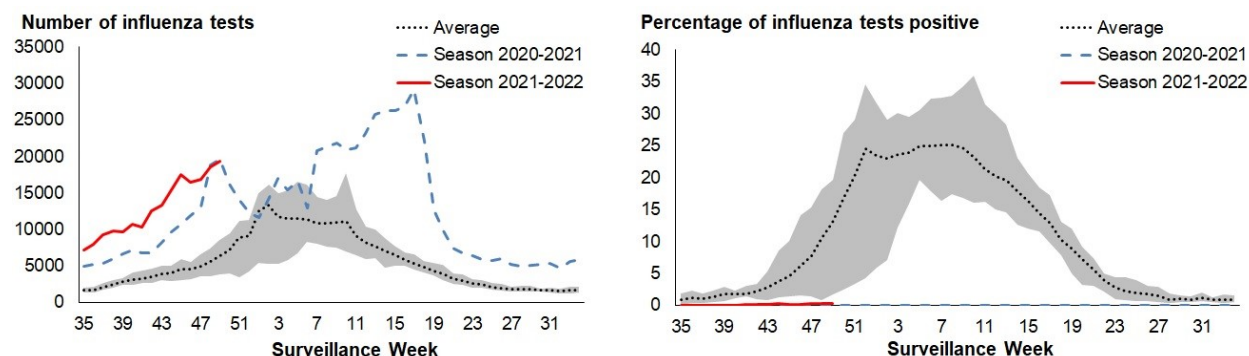
Figure 2 – Number of positive influenza tests and percentage of tests positive, by type, subtype and report week, Canada, week 2021-49

Number of Laboratories Reporting in Week 49: 31 out of 34



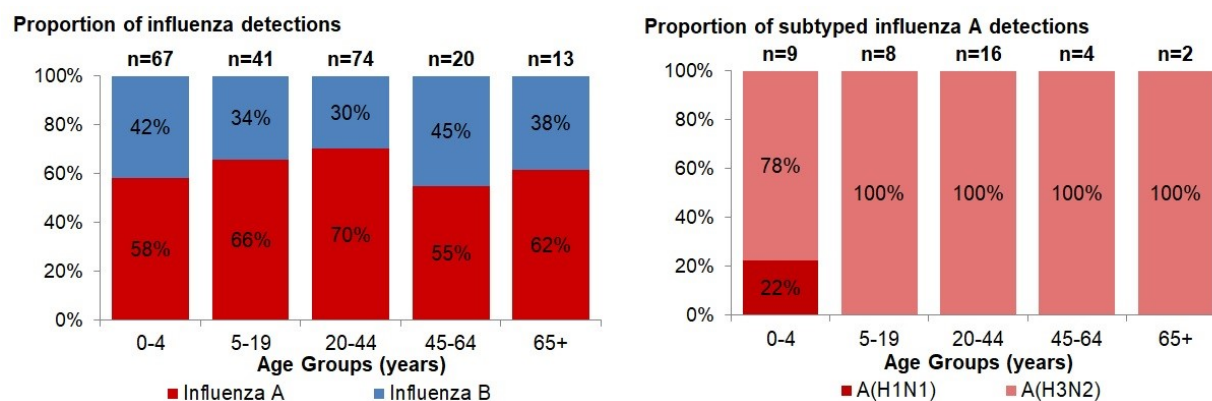
For one province, only data from subtyped influenza A specimens are included in the weekly number of positive influenza tests in Figure 2. The number of positive tests reported in Figure 2 may not equal the total number of positive tests in the report body text.

Figure 3 – Number of influenza tests and percentage of tests positive in Canada compared to previous seasons, week 2021-49



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.

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 2021-49



Syndromic / Influenza-like Illness Surveillance

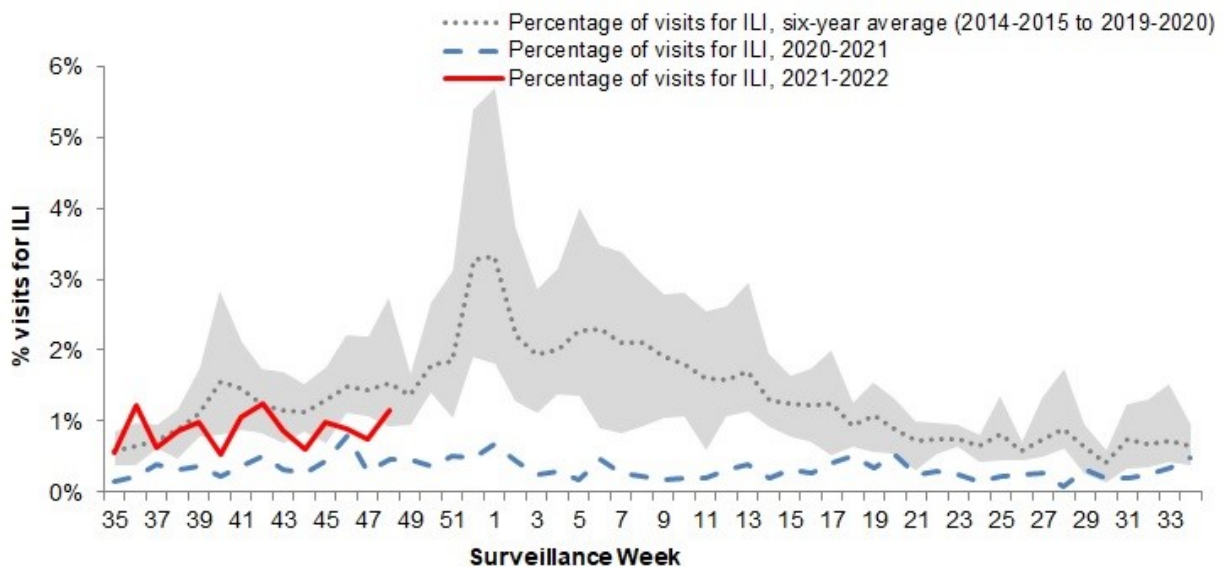
Healthcare Practitioners Sentinel Surveillance

In week 49, 1.2% of visits to healthcare professionals were due to influenza-like illness (ILI). Since the beginning of the surveillance season, the percentage of visits for ILI has been within or near expected pre-pandemic levels (Figure 5).

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 2021-48

Number of Sentinels Reporting in Week 48: 46



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 49, 12,579 participants reported to FluWatchers, of which 0.38% reported symptoms of cough and fever (Figure 6). 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.

The percentage of participants reporting cough and fever has been stable this season, and remains at lower than expected levels. This may be a direct effect of individual and public health measures taken to reduce the spread of COVID-19. FluWatchers reporting is not impacted by changes in health services or health seeking behaviours.

Among the 48 participants who reported cough and fever:

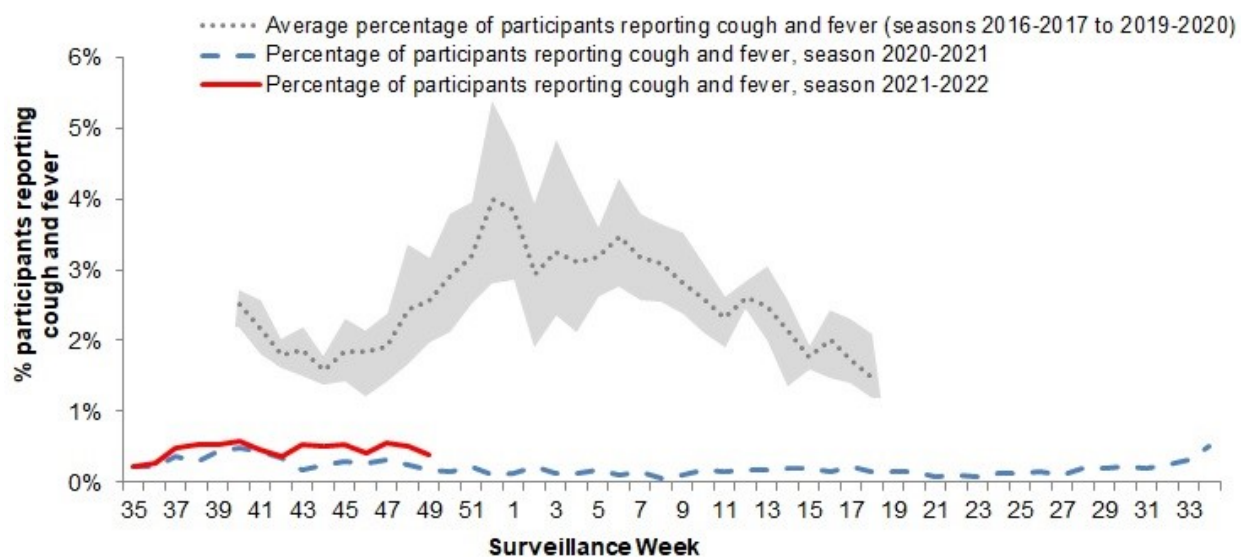
- 70% consulted a healthcare professional;
- 77% reported days missed from work or school, resulting in a combined total of 124 missed days of work or school (average of 2.6 days).

Manitoba had the highest participation rate this week (48 participants per 100,000 population) and the neighbourhood of KOA had the highest number of participants (152). 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 2021-49

Number of Participants Reporting in Week 49: 12,579



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 49, no outbreaks were reported.

To date this season (August 28 to December 11, 2021), 14 ILI outbreaks and no laboratory-confirmed influenza outbreaks have been reported. The most recent laboratory-confirmed influenza outbreak occurred in week 24 (week ending June 13, 2020) of the 2019-2020 season.

All ILI outbreaks have been reported in schools and/or daycares. The number of ILI outbreaks reported to date this season is lower than the 2020-2021 season but higher than in pre-pandemic seasons. This is not unexpected given changes to outbreak surveillance, specifically increased vigilance in schools to monitor and report absenteeism due to ILI, and the increased restrictions on attendance for children with symptoms of viral respiratory illness.

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 49: 12 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 49, no influenza-associated hospitalizations were reported by participating provinces and territories².

To date this season (August 28 to December 11, 2021), less than five influenza-associated hospitalizations were reported by participating provinces and territories with the most recent influenza-associated hospitalization reported in week 48 (week ending December 4, 2021).

Number of provinces and territories reporting in week 49: 9 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 care are reported by Saskatchewan.

Pediatric Influenza Hospitalizations and Deaths

In week 49, no pediatric (≤ 16 years of age) influenza-associated hospitalizations were reported by the Immunization Monitoring Program Active (IMPACT) network.

To date this season (August 28 to December 11, 2021), less than five pediatric influenza-associated hospitalizations and less than five intensive care unit (ICU) admissions were reported by the IMPACT network with the most recent influenza-associated hospitalization reported in week 48 (week ending December 4, 2021).

Adult Influenza Hospitalizations and Deaths

In week 49, 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 28 to December 11, 2021), less than 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 28 to December 11, 2021), the National Microbiology Laboratory (NML) has characterized 10 influenza viruses (8 A(H3N2), 2 A(H1N1)) received from Canadian laboratories.

Influenza A(H3N2)

Genetic Characterization

Sequence analysis of the HA gene of these viruses showed that the eight A(H3N2) viruses 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.

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

Ten influenza viruses (8 A(H3N2) and 2 A(H1N1)) were tested for resistance to oseltamivir:

- All influenza viruses were sensitive to oseltamivir.

Zanamivir

Ten influenza viruses (8 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

Influenza vaccine coverage estimates for the 2021-2022 season are anticipated to be available in February or March 2022.

Vaccine Effectiveness

Influenza vaccine effectiveness estimates for the 2021-2022 season are anticipated to be available in February or March 2022, pending the resumption of community transmission of seasonal influenza.

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.