FLUWATCH

June 12 to June 18, 2022
(Week 24)

Weekly Highlights

- At the national level, influenza activity continued to decline to an influenza positivity rate of 4.8% indicating that Canada is nearing the end of its 2021-2022 late onset seasonal influenza epidemic. Despite the decline, sporadic and some limited localized influenza activity continues to be reported in most regions across the country.

Virologic

- In week 24, 596 laboratory detections (588 influenza A and 8 influenza B) were reported.
- Influenza A(H3N2) is the dominant subtype, representing 99% of sub-typed influenza A detections this season to date (August 29, 2021 to June 18, 2022).
- From August 29, 2021 to June 18, 2022 (weeks 35 to 24), among detections with detailed age information, nearly half (49%) were in children and teenagers (ages 0 to 19 years).

Syndromic

- The percentage of visits for influenza-like illness (ILI) was 1.4% in week 24. The percentage visits for ILI remains above levels typical of this time of year.
- The percentage of FluWatchers reporting fever and cough was 1.3% in week 24. The percentage of FluWatchers who reported cough and fever has remained steady in recent weeks.

Outbreaks

- From August 29, 2021 to June 18, 2022 (weeks 35 to 24), 86 laboratory-confirmed influenza outbreaks have been reported. All laboratory-confirmed influenza outbreaks have occurred from week 11 (week of March 13 to 19, 2022) onwards.

Severe Outcomes

- From August 29, 2021 to June 18, 2022 (weeks 35 to 24), 699 influenza-associated hospitalizations have been reported from participating provinces and territories.
- The weekly number of influenza-associated pediatric hospitalizations reported by the IMPACT network has remained steady in recent weeks, but remains above levels typical of this time of year.

Other Notes

- The next scheduled FluWatch report (weeks 25-29) will be published July 29, 2022.
- Weekly reporting of laboratory detections of influenza and other seasonal respiratory viruses will continue via our Respiratory Virus Detections Surveillance System.

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ISSN: 2370-957X | Cat.: HP58-1E-PDF | Pub.: 210278

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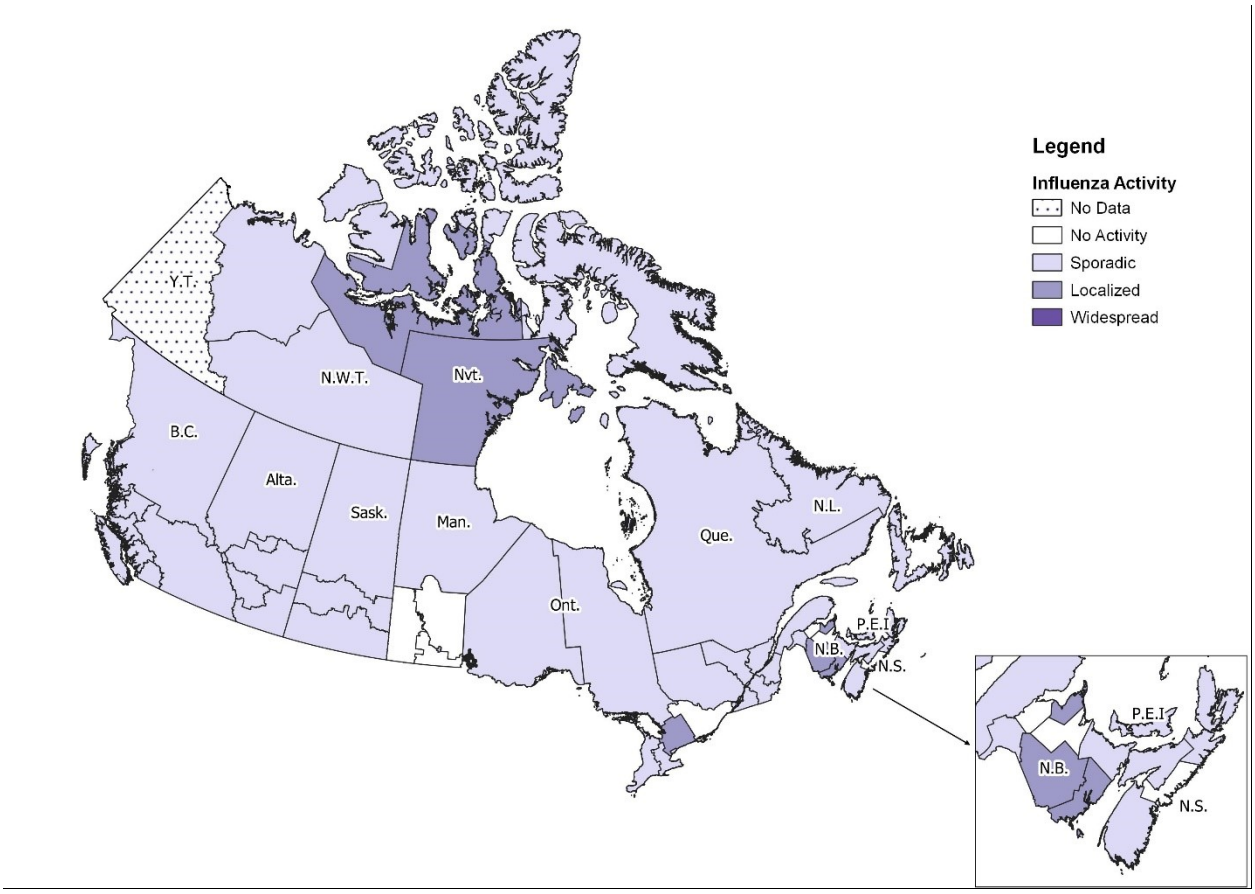
Canada

Influenza/Influenza-like Illness Activity – Geographic Spread

In week 24, influenza activity was reported in almost all provinces and territories. Among the 44 regions reporting influenza activity, 86% reported sporadic activity and 14% reported localized activity (Figure 1).

Figure 1 – Map of influenza/ILI activity by province and territory, Canada, week 2022-24

Number of Regions Reporting in Week 24: 52 out of 53



Laboratory-Confirmed Influenza Detections

In week 24, 596 laboratory detections (588 influenza A and 8 influenza B) were reported. The number of detections and the weekly percentage of tests positive for influenza continued to decrease this week, dropping below the epidemic threshold, but remain slightly above the interseasonal levels typically seen at this time of year. The following results were reported from sentinel laboratories across Canada in week 24 (Figures 2 and 3):

- The weekly percentage of tests positive for influenza was 4.8% and is above expected pre-pandemic levels (0.8 to 4.4%).
- A total of 12,346 tests for influenza were performed. The number of weekly tests performed is above the weekly pre-pandemic average of weekly 2,449 tests.
- Among subtyped influenza A detections, 100% (190) were influenza A(H3N2).

To date this season (August 29, 2021 to June 18, 2022), 14,763 influenza detections were reported:

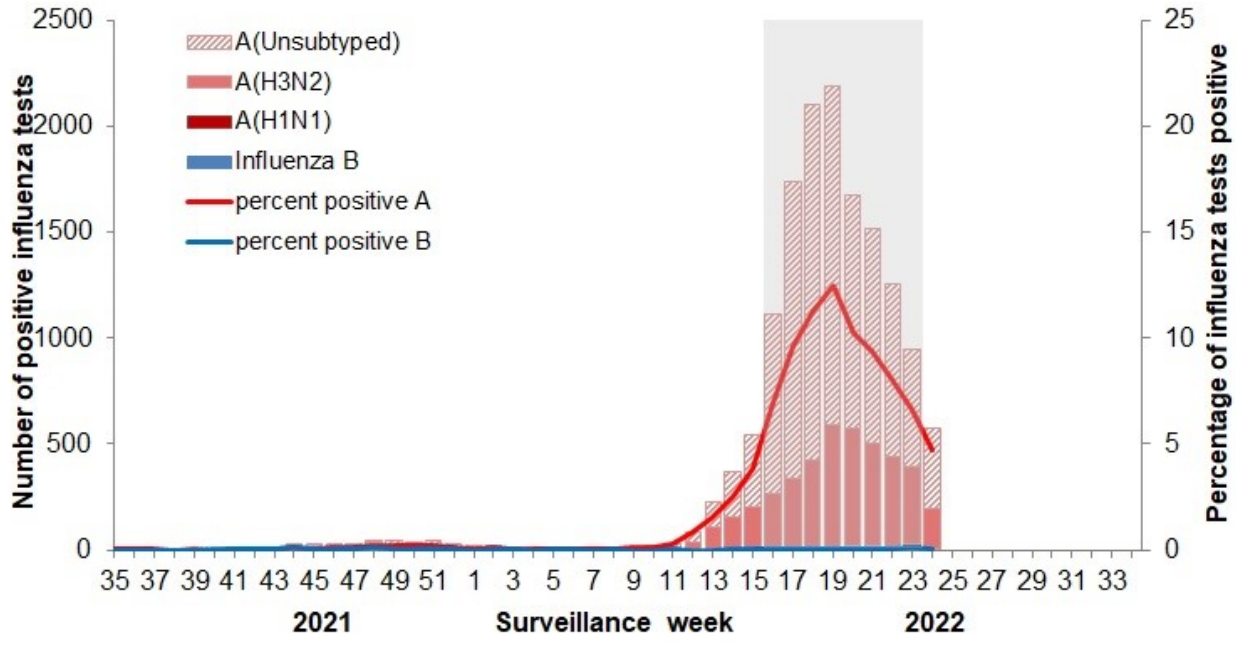
- 99% (14,575), were influenza A.
- Among subtyped influenza A detections (4,302), influenza A(H3N2) accounted for 98% of detections.
- The total number of influenza detections is lower than what we have seen historically pre-pandemic, where an average of 49,116 influenza detections were reported at this point in the season.

Detailed information on age and type/subtype has been received for 13,223 laboratory-confirmed influenza detections (Figure 4). Among the 13,223 detections, 6,500 (49%) were in individuals under 0-19 years old and 3,305 (25%) were in individuals 20-44 years old.

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.

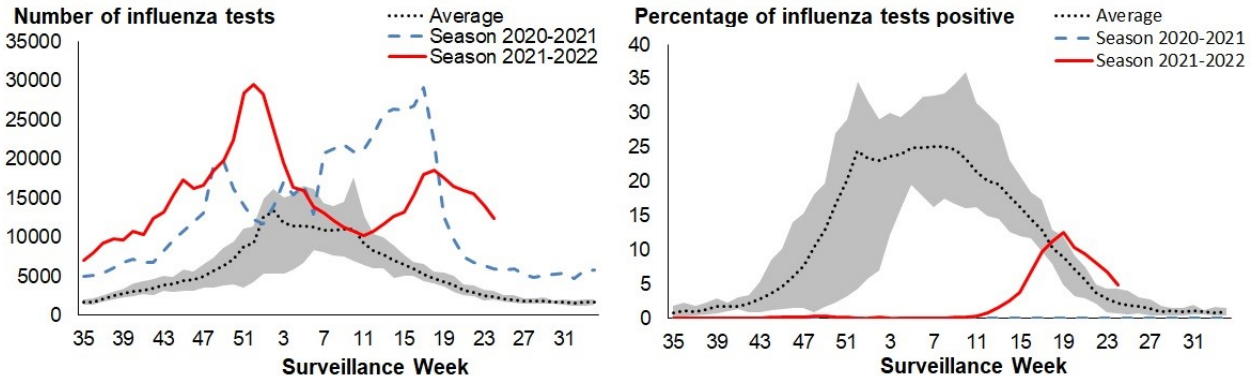
Figure 2 – Number of positive influenza tests and percentage of tests positive, by type, subtype and report week, Canada, week 2021-35 to 2022-24

Number of Laboratories Reporting in Week 24: 30 out of 34



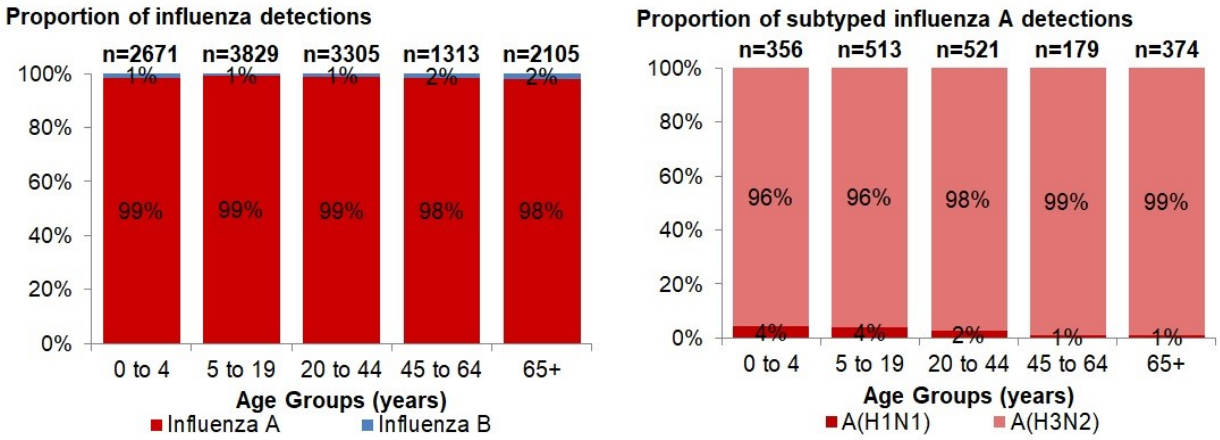
The shaded area indicates weeks where the positivity rate was at least 5% and a minimum of 15 positive tests were observed, signalling the period of seasonal influenza activity.

Figure 3 – Number of influenza tests and percentage of tests positive in Canada compared to previous seasons, week 2021-35 to 2022-24



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 2022-24



Laboratory data notes:

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.

Due to different testing protocols of laboratories across Canada, influenza A subtype detection counts may not be included in total influenza A detection counts, as some subtype detections are not available through routine testing but are subsequently reported if further subtype testing is conducted. In these instances, subtype counts do not reflect influenza A detections intended to be captured by routine surveillance, and are excluded from total detections and percent positivity.

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.

Syndromic / Influenza-like Illness Surveillance

Healthcare Practitioners Sentinel Surveillance

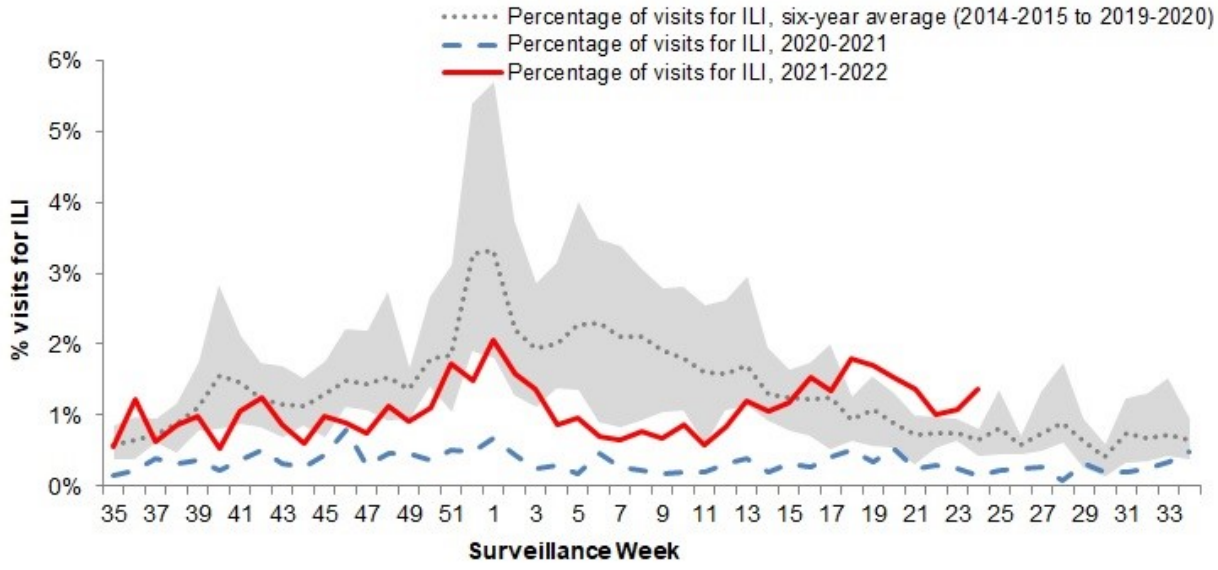
In week 24, 1.4% of visits to healthcare professionals were due to influenza-like illness (ILI). The percentage of visits for ILI remains above levels typical of this time of year.

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 2022-24

Number of Sentinels Reporting in Week 24: 42



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 24, 10,917 participants reported to FluWatchers, of which 1.3% reported symptoms of cough and fever (Figure 6). The percentage of FluWatchers who report cough and fever has remained steady in recent weeks.

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 142 participants who reported cough and fever:

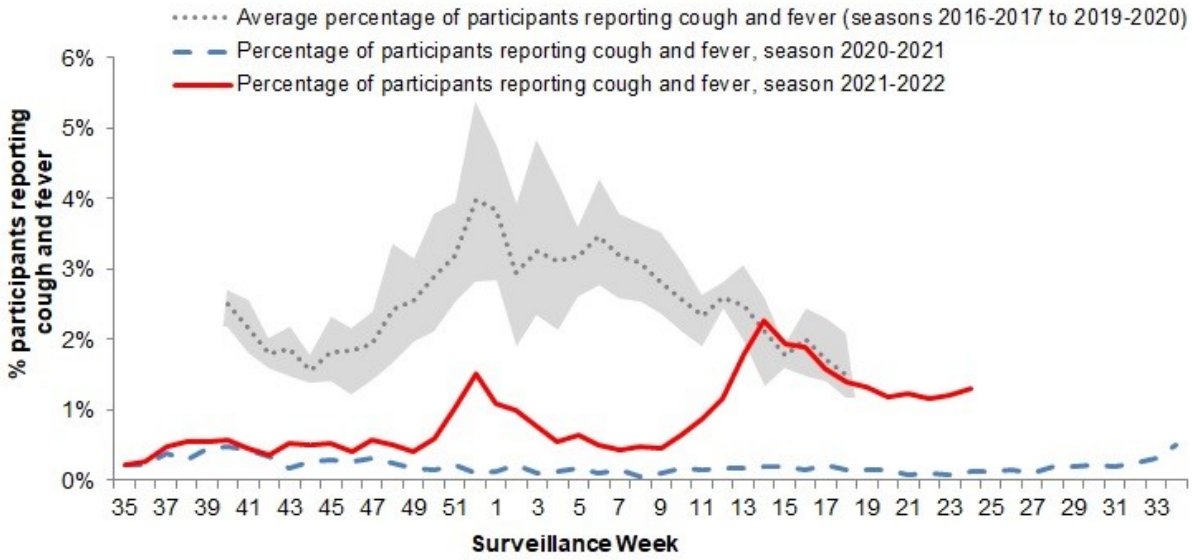
- 18% consulted a healthcare professional;
- 71% reported days missed from work or school, resulting in a combined total of 353 missed days of work or school (average of 3.5 days);

The Northwest Territories had the highest participation rate this week (58 participants per 100,000 population) and the neighbourhood with postal code, K0A had the highest number of participants (147). 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 2022-24

Number of Participants Reporting in Week 24: 10,917



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 24, there were 4 ILI outbreaks in schools reported in Canada.

To date this season (August 29, 2021 to June 18, 2022):

- 86 laboratory-confirmed influenza outbreaks have been reported
    - 38 were in long-term care facilities
    - 39 were in facilities categorized as 'other'
    - 1 was in a school/day care
    - 3 were in remote or isolated communities
    - 5 were in acute care facilities
    - All outbreaks were due to influenza A, of which 47 were due to influenza A(H3N2), 2 were due to influenza A(H1N1), and the remaining were influenza A unsubtyped
- 97 ILI outbreaks have been reported
    - All but two 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.

Number of provinces and territories[1] reporting in week 24: 12 out of 13

[1]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 week 24, 45 influenza-associated hospitalizations and 7 ICU admissions were reported by participating provinces and territories[2].

To date this season (August 29, 2021 to June 18, 2022) among participating provinces and territories:

- 699 influenza-associated hospitalizations were reported
    - All but three hospitalizations were due to influenza A.
    - Of the hospitalizations for which subtype was reported (362), 99.9% were associated with influenza A(H3N2).
    - The greatest proportion of hospitalizations (38.8%) were in adults 65 years of age and older.
- 64 influenza-associated ICU admissions and 21 influenza-associated deaths were reported.

Number of provinces and territories reporting in week 24: 8 out of 9

[2]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 24, 13 influenza-associated pediatric (≤16 years of age) hospitalizations were reported by the Immunization Monitoring Program Active (IMPACT) network (Figure 7). Following a sharp increase in week 18 (week ending May 7, 2022), the number of influenza-associated pediatric hospitalizations reported by the IMPACT network has decreased, but remains above levels typical of this time of year.

To date this season (August 29, 2021 to June 18, 2022):

- 265 pediatric influenza-associated hospitalizations have been reported
    - 159 (60%) were among children under the age of 5 years of age (Figure 8).
    - 260 (99%) were associated with influenza A
- 22 pediatric influenza-associated intensive care unit (ICU) admissions have been reported.

Figure 7 – Number of pediatric (≤16 years of age) hospitalizations reported by the IMPACT network, by week, Canada, weeks 2021-35 to 2022-24

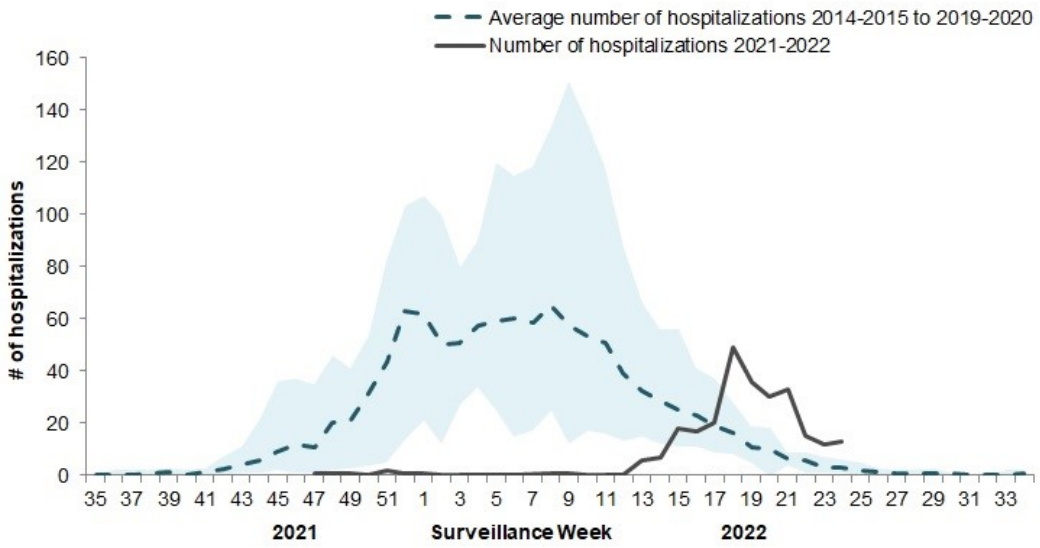
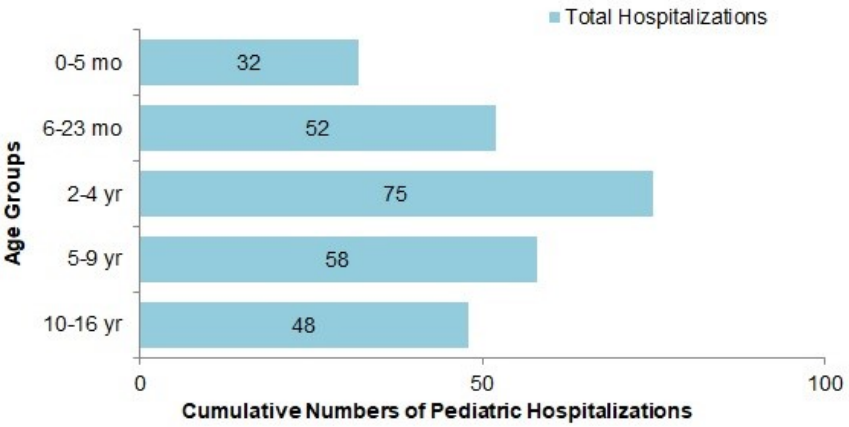


Figure 8 – Cumulative number of pediatric hospitalizations (≤16 years of age) with influenza by age-group reported by the IMPACT network, Canada, weeks 2021-35 to 2022-24



Adult Influenza Hospitalizations and Deaths

In week 24, less than five influenza-associated adult (≥16 years of age) hospitalization was reported by the Canadian Immunization Research Network (CIRN) Serious Outcomes Surveillance (SOS) network.

To date this season (August 29, 2021 to June 18, 2022), 28 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 June 18, 2022), the National Microbiology Laboratory (NML) has characterized 176 influenza viruses (171 A(H3N2), 5 A(H1N1)) received from Canadian laboratories.

Influenza A(H3N2)

Genetic Characterization

Among the 166 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 171 A(H3N2) viruses characterized:

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

Influenza A(H1N1)

Antigenic Characterization

Among the five A(H1N1) viruses characterized:

- Four H1N1 viruses characterized were antigenically similar to A/Wisconsin/588/2019.
- One H1N1 showed reduced titre 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

158 influenza viruses (153 A(H3N2) and 5 A(H1N1)) were tested for resistance to oseltamivir:

- All influenza viruses were sensitive to oseltamivir.

Zanamivir

158 influenza viruses (153 A(H3N2) and 5 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 and late onset of community circulation of influenza this season, 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.