

Influenza Vaccine Match and Influenza Strains

The quadrivalent 2022-2023 cell culture-based or recombinant-based influenza vaccine for the northern hemisphere contains the following strains:

- A/Darwin/6/2021 (H3N2)-like virus;
- A/Wisconsin/588/2019 (H1N1)pdm09-like virus;
- B/Austria/1359417/2021 (B/Victoria lineage)-like virus; and
- B/Phuket/3073/2013 (B/Yamagata lineage)-like virus.

Table 3: Local, Provincial and National Matched and Mismatched Influenza Specimens and National Match Percent, 2022-23 Season

Influenza Strains	Number of Specimens with Strain Characterization Results		National Match Percent [†]
	Ontario	Canada	
Influenza A Vaccine Strains			
Influenza A (H3N2) A/Darwin/6/2021-like	0	0	0%
Influenza A (H1N1) A/Wisconsin/588/2019 pdm09-like	0	0	0%
Influenza B Vaccine Strains			
B/Austria/1359417/2021 (B/Victoria)-like	0	0	0%
B/Phuket/3073/2013 (B/Yamagata)-like (Quad vaccine only)	0	0	0%

Data Source: Government of Canada, [FluWatch Surveillance Report](#) – week 41, Influenza Strain Characterization, extracted October 2, 2022.

Provincial and national counts are reported with one week lag and do not include the most recently completed surveillance week. Surveillance weeks can be found [here](#).

[†] Non-vaccine match strains are not reported. Percent match is based on antigenically similar strains. As of week 41, an additional 0 specimens did not grow to sufficient hemagglutination titers for antigenic characterization, but were found to be of the same genetic group as A/Singapore/INFIMH-16-0019/2016-like virus through sequence analysis.

Technical Notes

Definitions

Percent positivity: The number of positive influenza or COVID-19 cases divided by the number of specimens tested. For influenza this is limited to specimens tested at Public Health Ontario Labs. For COVID-19, it is limited to PCR testing.

Reported activity level: The level of influenza activity that is reported to Public Health Ontario by Simcoe Muskoka, based on influenza cases and outbreaks. Definitions available [here](#).

Reported community risk level: The level of COVID-19 risk based on the Simcoe Muskoka [COVID-19 Community Risk Level](#).

Surveillance week: The week number corresponding to the week of year, running Sunday to Saturday, inclusive, for reporting influenza activity. January 1 always falls within week 1. A list of the current season's surveillance weeks can be found [here](#).

Limitations

Timeliness: The provincial data are lagged by one week compared to all other data presented in this update due to data availability. The emergency department data, local counts of influenza and COVID-19, and outbreaks are current to date.

The number of cases and/or outbreaks and percent positivity reported for a given surveillance week may change as more information becomes available.

Case Reporting: Sporadic cases do not accurately describe all cases of influenza and/or COVID-19 as those cases reported are skewed towards individuals more likely to seek medical care and be tested (e.g., young, elderly and immunocompromised) as well as healthcare workers.

Cases are reported based on where the individual normally lives which may not match where they acquired the illness.

Data Comparison: The indicators used in this report are different from those presented in the [COVID-19 Community Risk Level](#) and cannot be directly compared. Differences may be due to data reporting lag and/or indicator definitions.

Week 41 Provincial Summary:

For the 2022-2023 surveillance season to week 41:

Influenza: 357 laboratory-confirmed influenza cases have been reported across Ontario, 158 (44.2%) of which were reported in week 41. Among cumulative cases, 97.2% (347/357) were influenza A. Of the 347 reported influenza A cases with subtype information available, 88% (115/131) were H3N2 and 12% (16/131) were (H1N1)pdm09.

COVID-19: 57,711 laboratory-confirmed COVID-19 cases have been reported across Ontario, 9,332 of which were reported in week 41. Omicron is the dominant variant circulating.

Sources: Public Health Ontario [Respiratory Pathogen Bulletin](#) & [Respiratory Virus Overview in Ontario](#), Surveillance Week 41, extracted October 25, 2022.

Additional Resources

Simcoe Muskoka

- Influenza – [Fact Sheet](#) and [HealthSTATS page](#)
- COVID-19 – [General Information](#), [Community Risk Level](#) and [HealthSTATS pages](#)

Provincial

- [Ontario Respiratory Pathogen Bulletin](#)
- [Public Health Ontario Laboratory Respiratory Pathogen Surveillance Reports](#)
- [COVID Data Tool](#)
- [Ontario Respiratory Virus Overview](#)

National

- Public Health Agency of Canada – [FluWatch](#), [Respiratory Virus Report](#), [COVID-19: Outbreak Update](#)

International Resources

- WHO – [Influenza \(Seasonal\)](#) and [COVID-19](#) Fact Sheets