





Week 52: December 25 to December 31, 2022

Week in Review:

Virus Activity Indicator	Influenza Assessment*	COVID-19 Assessment*	Interpretation
 <u>Weekly Reported Cases</u>	Higher	Higher	<p>For week 52:</p> <ul style="list-style-type: none"> • Influenza: 21; COVID-19: 275 <p>For the previous week (week 51):</p> <ul style="list-style-type: none"> • Influenza 14; COVID-19: 223
 <u>Percent Positive Specimens</u>	Lower†	Similar	<p>Simcoe Muskoka:</p> <ul style="list-style-type: none"> • Flu A[†] (8.7%); Flu B[†] (0.0%), COVID-19: (15%) <p>Ontario:</p> <ul style="list-style-type: none"> • Flu A[†] (8.8%); Flu B[†] (0.0%), COVID-19: (13%)
 <u>Local Institutional Outbreaks</u>	Similar	Similar	<p>Institutional outbreaks declared in week 52:</p> <ul style="list-style-type: none"> • Influenza: 1 (season to date: 8) • COVID-19: 6 (season to date: 128) • Influenza & COVID-19: 0 (season to date: 5)
Week 52 Assessment December 25 to December 31, 2022	Similar	Similar	<p>Influenza Activity Level: Localized 21 flu A and 0 flu B cases reported this week</p> <p>COVID-19 Community Risk[†]: Moderate COVID-19 case counts are increasing this week</p>
<u>Predominant[^] Circulating Respiratory Viruses:</u> COVID-19 (Omicron), Influenza A, Respiratory Syncytial Virus (RSV)			
 <u>Local Emergency Department Respiratory Visits</u>	Similar		Percentage of visits is similar compared to previous week and higher compared to same week in 2021-22

Notes: Reported influenza activity level is based on activity levels as per [Influenza activity reporting in the Ontario Surveillance Package](#). COVID-19 Risk level is based on the risk level from the [Simcoe Muskoka Community Risk Level](#). Additional definitions are available [here](#).

* Compared to previous [surveillance week](#). Assessment of percent positivity for influenza is based on provincial numbers due to small numbers.

† Reported for week 50

[^] Predominant is defined as any virus where provincial percent positivity is >10% as reported through [PHO's respiratory virus overview in Ontario report – Tables 3A and 3B](#).

Weekly Reported Cases

Influenza: In Simcoe Muskoka, there have been **804 lab-confirmed influenza cases reported** as of 3 January 2023; **21 (3%) of which were reported in week 52** – this was higher when compared to week 51.

Of the 804 reported influenza A cases, 312 have been subtyped:

- 306/312 (98%) are influenza A, H3 strain
- 6/312 (2%) are influenza A, H1N1 pdm09

COVID-19: In Simcoe Muskoka, there have been **275 lab-confirmed COVID-19 cases reported** in week 52 – this was higher when compared to week 51. Omicron is the dominant circulating variant.

Table 1: Summary of Influenza and COVID-19 Cases, 2022-23 Season

Lab-confirmed Cases	Week 52	Season-to-Date
Influenza	21	804
Influenza A	21 (100%)	804 (100%)
Influenza B	0 (0%)	0 (0%)
Influenza A & B	0 (0%)	0 (0%)
COVID-19	275	5,615
Data source: Case and Contact Management (CCM) System and Integrated Public Health Information System (iPHIS), extracted on January 03, 2023. Notes: Season-to-Date includes cases reported from the Sunday of the week in which September 1, 2022 falls (i.e., August 28, 2022 onwards).		

Age Distribution

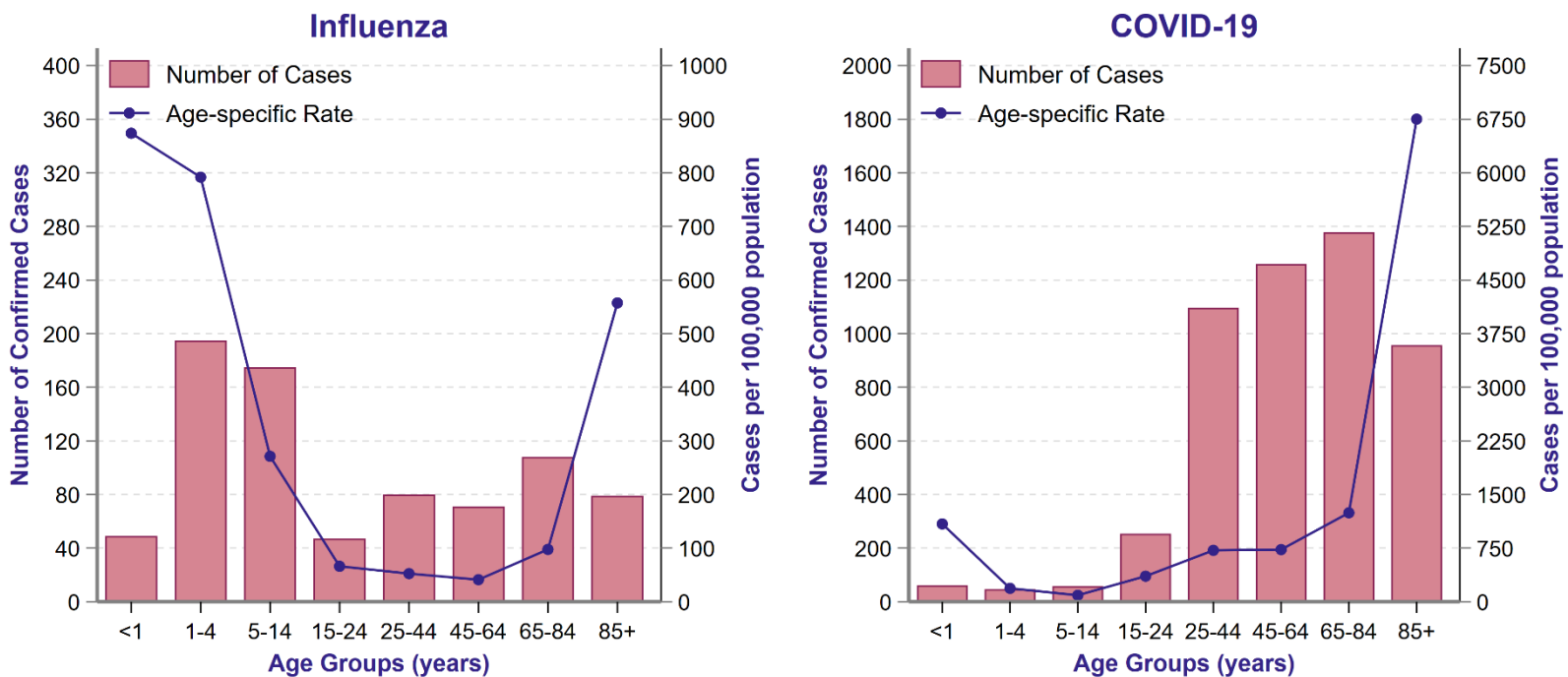
Influenza: For the season-to-date, 23% (n=187) of cases have been reported in individuals aged 65 and older and 6% (n=49) of cases have been reported in the <1 years of age group.

Median age of reported influenza cases: **12.7 years**

COVID-19: For the season-to-date, 46% (n=2595) of cases have been reported in individuals aged 65 and older and 1% (n=64) of cases have been reported in the <1 years of age group.

Median age of reported COVID-19 cases: **62.1 years**

Figure 1: Number and Age-specific Rate for Influenza and COVID-19 by Age Group, Simcoe Muskoka, September 2022 to present



Data Source: Integrated Public Health Information System (iPHIS) & Public Health Case and Contact Management Solution (CCM), extracted by SMDHU on 3 Jan 2023. Population Estimates, Intellihealth, extracted February 2022.

The 2021 population estimates for Simcoe Muskoka were used to calculate age-specific rates.

Percent Positivity

For week 50, the percentage of influenza specimens that are positive (percent positivity) for **Influenza A** is **lower** compared to the previous week provincially. For week 52, local **COVID-19 percent positivity is similar** compared to the previous week.

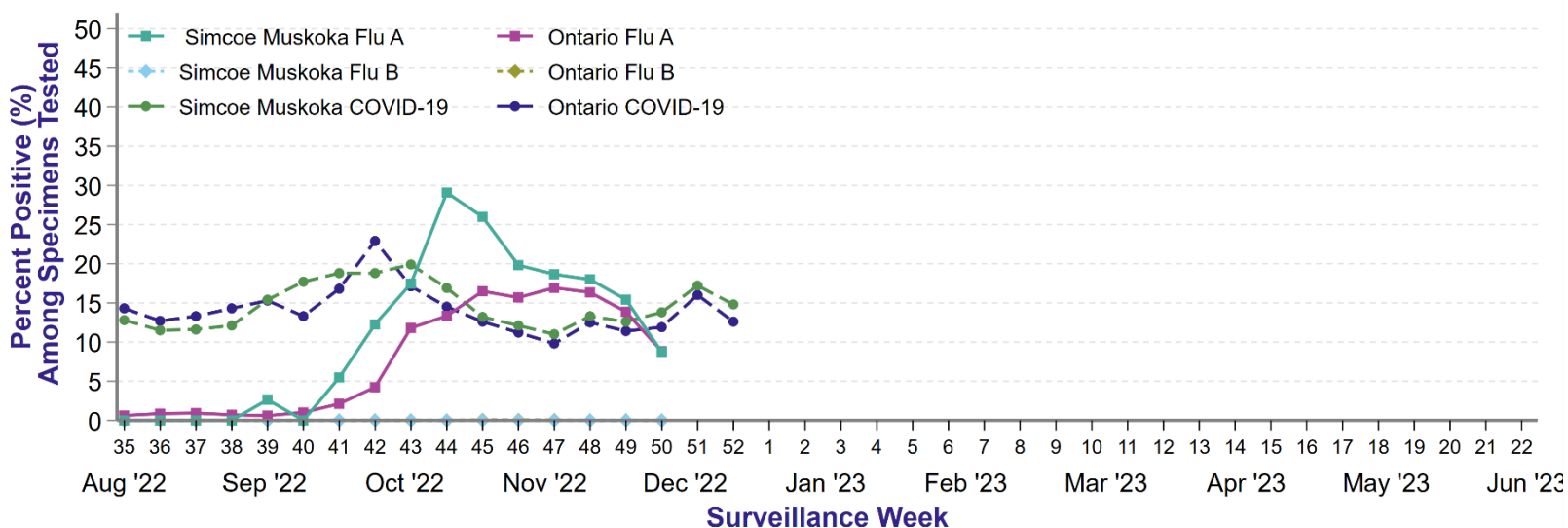
Table 2: Percent Positivity for Influenza (week 50) and COVID-19 (week 52), Simcoe Muskoka and Ontario

Region	Influenza A*	Influenza B*	COVID-19
Simcoe Muskoka	8.7%	0%	14.8%
Ontario	8.8%	0%	12.6%

Data source: Public Health Ontario Respiratory Virus Overview in Ontario, extracted on January 03, 2023. Summarized data from Ontario Lab Information System (OLIS) COVID-19 test data from Ministry of Health SAS Visual Analytics COVID-19 Testing Report, extracted on January 3, 2023

Note: *Influenza percent positivity is reported with a two week lag and does not include weeks 51 and 52. COVID-19 percent positivity is reported for week 52; provincial data is incomplete and should be interpreted with caution.

Figure 2: Percent Positivity, Influenza A & B, COVID-19, Simcoe Muskoka & Ontario, 2022-23 Season



Data Source: Public Health Ontario Respiratory Pathogen Bulletin, extracted on 3 Jan 2023. Government of Ontario. 2020. Status of COVID-19 Cases in Ontario. Ontario Open Data. Ministry of Health. 2020. Ontario Lab Information System (OLIS) COVID-19 test data from Ministry of Health SAS Visual Analytics COVID-19 Testing Report, extracted on 29 Dec 2022.

* Flu A and B specimens only include those tested at public health laboratories in Ontario. COVID-19 specimens are limited to those undergoing PCR testing.

Note: Simcoe Muskoka percent positivity, particularly for influenza, is based on small numbers of positive tests and should be interpreted with caution.

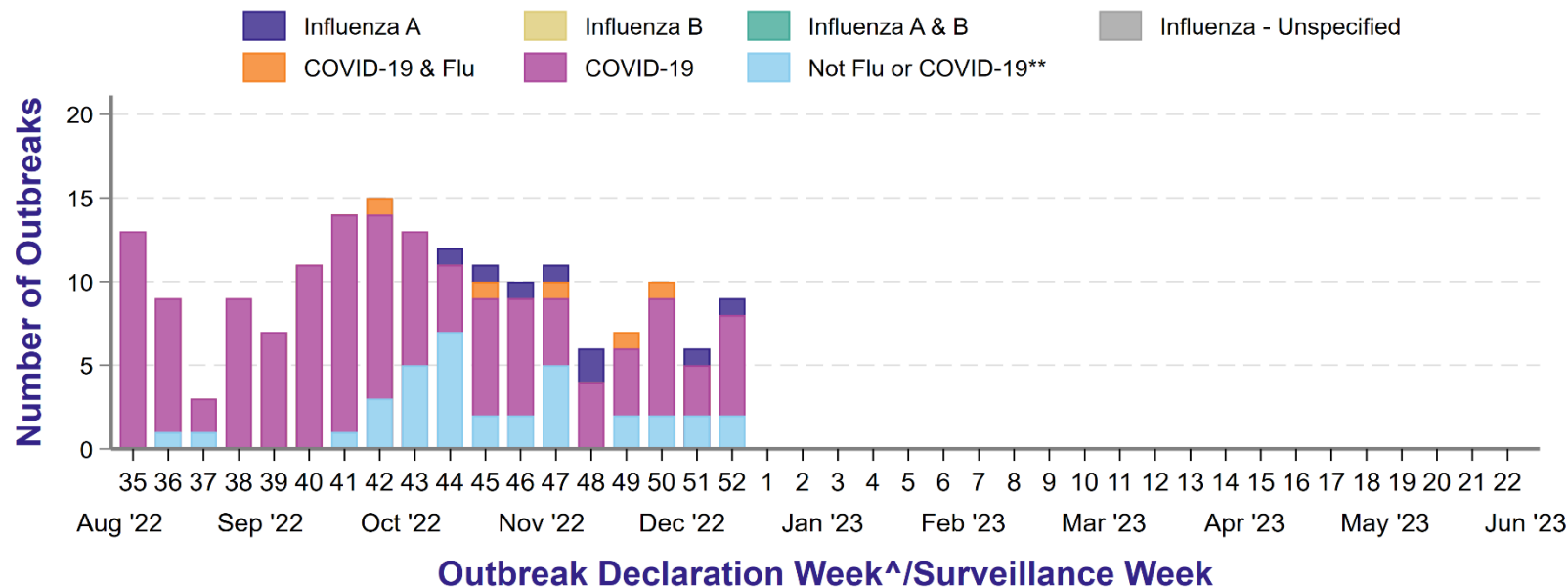
Influenza data in this figure are reported with one week lag and do not include the most recently completed surveillance week. COVID-19 data may be incomplete.

Institutional Respiratory Outbreaks

There have been 8 *lab-confirmed institutional influenza outbreaks*, 128 *lab-confirmed institutional COVID-19 outbreaks* and 5 *COVID-19/influenza outbreak* in Simcoe Muskoka since September 1, 2022:

- Influenza A: 8 outbreaks
- Influenza B: 0 outbreaks
- Influenza A and B: 0 outbreaks
- Influenza & COVID-19: 5 outbreaks

Figure 3: Institutional Outbreaks by Respiratory Pathogen, Simcoe Muskoka, 2022-23 Season



Data Source: Integrated Public Health Information System (iPHIS) & Public Health Case and Contact Management Solution (CCM) extracted by SMDHU on 3 Jan 2023.

* Confirmed outbreaks only. Institutions can include acute care facilities, long-term care homes, retirement homes, corrections facilities and childcare facilities.

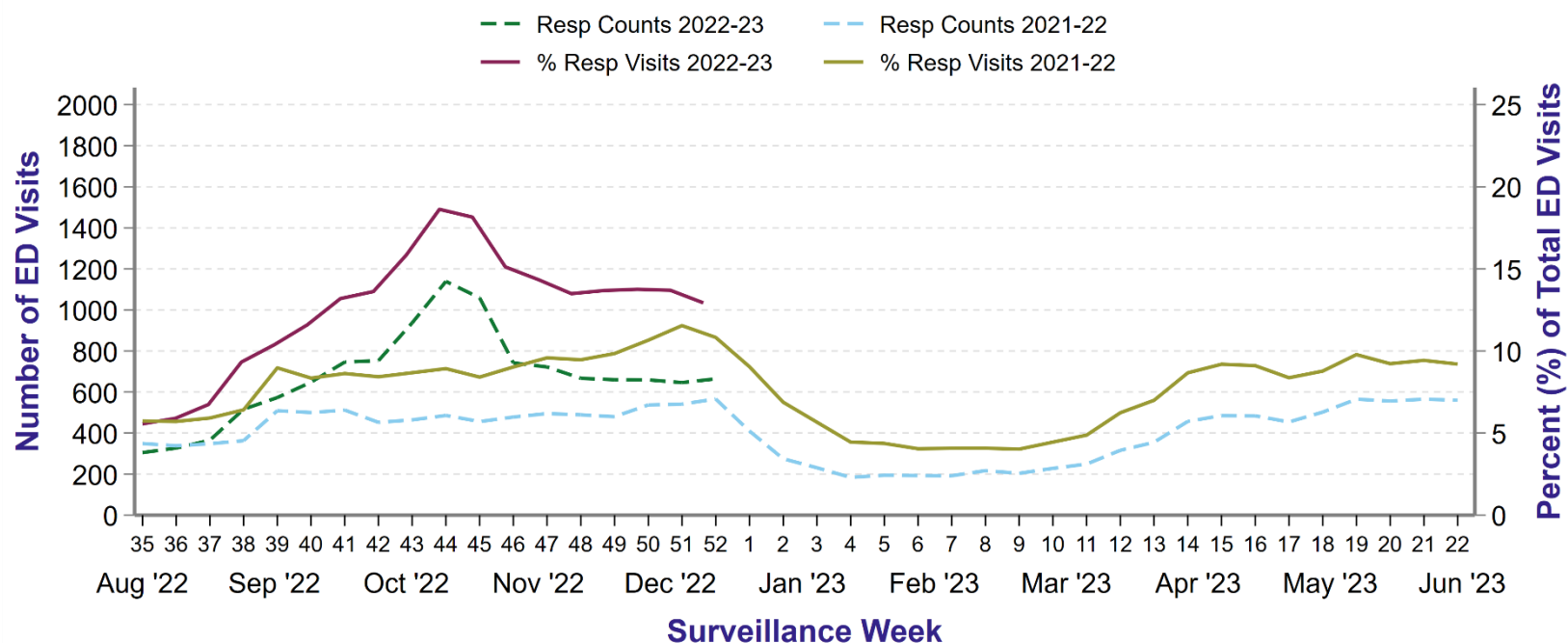
**Includes outbreaks where a respiratory pathogen other than influenza and COVID-19 identified, or no respiratory pathogen was identified.

^Week declared is the week (Sun-Sat) in which the outbreak became a confirmed outbreak.

Local Emergency Department Visits

Emergency department (ED) visits for respiratory syndrome in Simcoe Muskoka accounted for **12.9% of visits in week 52**. This is **similar** when compared to week 51, and higher when compared to the same time in the 2021-22 season.

Figure 4: Emergency Department Visits for Respiratory Syndrome at Participating Simcoe Muskoka Hospitals, 2021-22 and 2022-23 Seasons



Data Source: Acute Care Enhanced Surveillance (ACES) System, extracted on 3 Jan 2023

[^] Respiratory syndrome is defined as 'respiratory infection non-croup, non-bronchiolitis. Includes sore throat, cough, cold, ear infection, blocked ear, earache, etc.' This syndrome does not include influenza-like illness, which is 'fever, myalgia, undifferentiated flu.'

* Participating hospitals are RVH, OSMH, MAH (Bracebridge and Huntsville), GBGH, CGMH and SVMH; includes Simcoe Muskoka residents and visitors.

The above data is provided through Acute Care Enhanced Surveillance (ACES), an emergency department (ED) syndromic surveillance system managed by KFLA Public Health Informatics for participating Ontario hospitals. Seven hospitals participate in Simcoe Muskoka.

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	19	128	91%
Influenza A (H1N1) A/Wisconsin/588/2019 pdm09-like	2	12	9%
Influenza B Vaccine Strains			
B/Austria/1359417/2021 (B/Victoria)-like	NR	0	0%
B/Phuket/3073/2013 (B/Yamagata)-like (Quad vaccine only)	NR	0	0%

Data Source: Government of Canada, [FluWatch Surveillance Report](#) – week **50** and Public Health Ontario. Respiratory Virus Overview in Ontario Report. Influenza Strain Characterization, extracted January 3, 2023.

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. Denominator = 140 (Flu A), 0 (Flu B)

NR = Not Reported

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 50 Provincial Summary:

For the 2022-2023 surveillance season to week 50:

Influenza: 17,624 laboratory-confirmed influenza cases have been reported across Ontario, 1,712 (9.7%) of which were reported in week 50. Among cumulative cases, 99.8% (17,588/17,624) are influenza A. Of the 4,494 reported influenza A cases with subtype information available, 98% (4,872/4,951) were H3 and 2% (79/4,951) were (H1N1)pdm09.

COVID-19: 118,175 laboratory-confirmed COVID-19 cases have been reported across Ontario, 6,022 of which were reported in week 50. Omicron is the dominant variant circulating.

Sources: Public Health Ontario [Respiratory Pathogen Bulletin](#) & [COVID-19 Data Tool](#), Surveillance Week 50, extracted January 3, 2023.

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