COVID-19 in Ontario: Focus on September 18, 2022 to September 24, 2022 (Week 38)

Published: September 30, 2022

Figures and tables in this report present the most recent 52 weeks of data for Ontario, ranging from **September 26, 2021 to September 24, 2022**. This report includes the most current information available from the Public Health Case and Contact Management Solution (CCM), unless otherwise specified**.**

Interpretation notes:

- Testing and case, contact, and outbreak management in Ontario was restricted to high-risk populations and settings in January 2022. Counts in this report are an underestimate of the extent of COVID-19 activity in Ontario.

- Observed trends over time should be interpreted with caution for the most recent period due to reporting and/or data entry lags.

- Severe outcomes are a lagging indicator, meaning that severe outcomes often occur after (e.g. days or weeks) cases are initially reported to public health. As such, counts for severe outcomes in more recent reporting periods may increase as more outcomes are reported.

Please visit the interactive Ontario COVID-19 Data Tool to explore data from the entire COVID-19 pandemic (i.e. February 2020 onward) by public health unit, age group, sex, and trends over time.

Highlights

Case Trends and Percent Positivity

- **Weekly case numbers similar (+/- 10%) compared to last week among those eligible for testing**: The number of reported cases in Ontario was 8,050 this week, similar when compared to 7,673 last week. However, a gradual increase in case numbers is observed when looking back over the past 2 weeks, with current projections suggesting weekly case numbers may continue to rise over the next two weeks.

  - Case rates were similar or increased this week in 6 of Ontario's 7 regions, and were similar or increased in 28 of 34 public health units, compared to last week.

  - Case rates were similar or increased this week in all 7 age groups, compared to last week.

- **Percent positivity and testing volumes are similar (+/- 10%) compared to last week:** Percent positivity was 12.3% this week, similar when compared to 11.9% last week. However, a gradual increase in percent positivity is observed when looking back over the past 2 weeks. Testing volume this week was 60,311 tests, compared to 60,707 tests last week.

Severity

- **Hospital admissions similar (+/- 10%) and deaths down 31% compared to last week:** There were 359 hospital admissions reported this week, compared to 347 last week. There were 45 deaths reported this week, compared to 65 last week. Hospital admission and death counts, particularly for more recent weeks, may increase, as these outcomes are lagging indicators.

Outbreaks

- **Outbreaks in high-risk settings up 15% compared to last week:** The total number of outbreaks in high-risk settings was 159 this week, up from 138 last week. This week there was a notable decrease in correctional facility outbreaks (from 6 to 0 outbreaks) and a notable increase in Group Home/Supportive Housing outbreaks (from 18 to 30 outbreaks).

- **Outbreak-associated cases in high-risk settings down 16% compared to last week**: There were 1,632 outbreak-associated cases reported this week compared to 1,935 last week. Cases decreased in all settings except for hospitals (16% increase) and Group Home/Supportive Housing (10% increase).
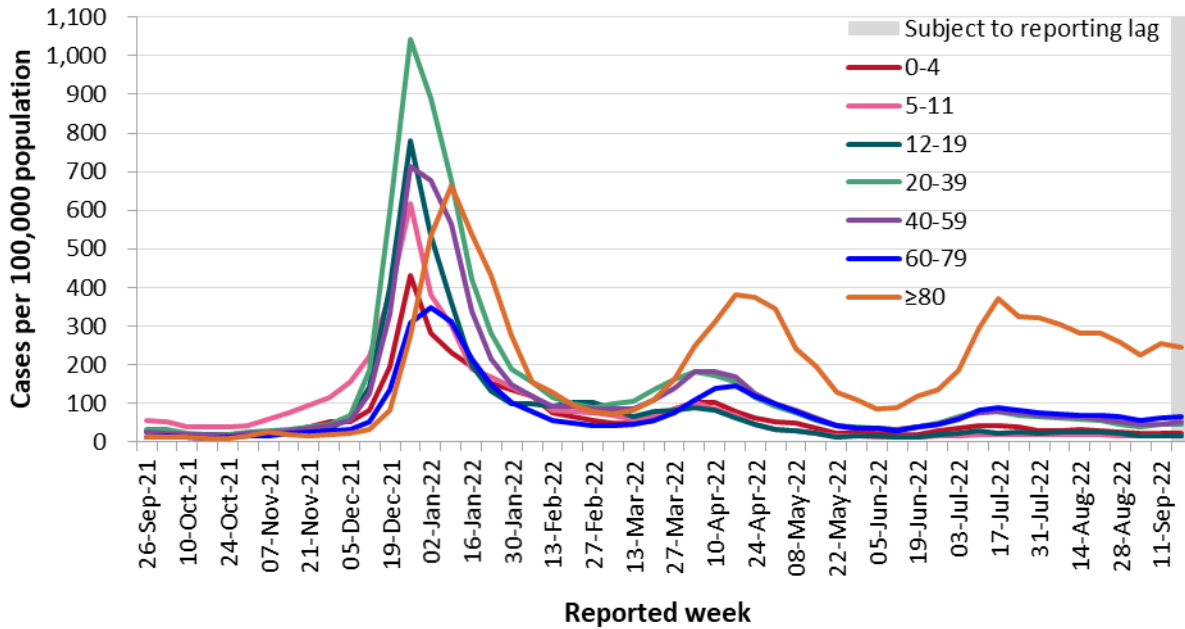
Cases

Figure 1a. Confirmed and projected cases of COVID-19 by reported week
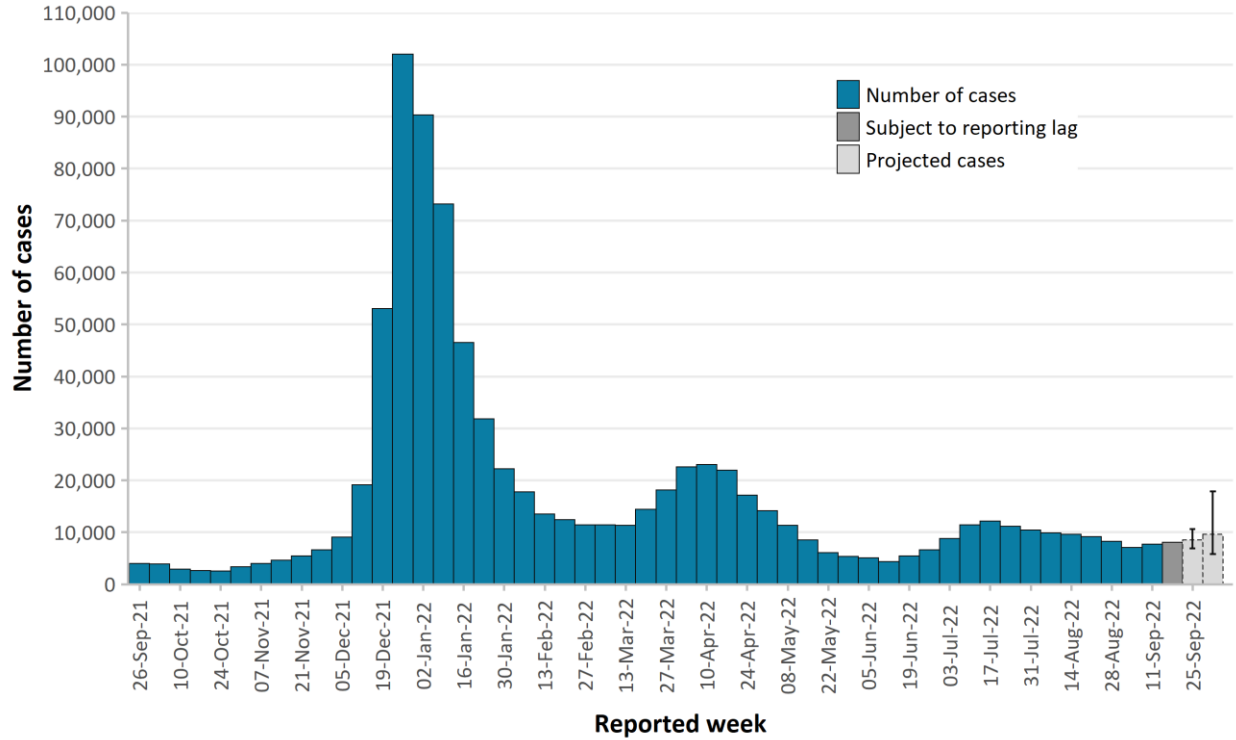
Note: Projections were estimated using the daily distribution of SARS-CoV-2 lineages and COVID-19 cases over time to forecast COVID-19 cases into the future by 14 days. The error bars on the projected cases represent the 75% credible interval. For more information refer to Appendix E. Projections are made based on our current knowledge of COVID-19, and thus cannot predict introductions of new lineages, which may impact model accuracy.
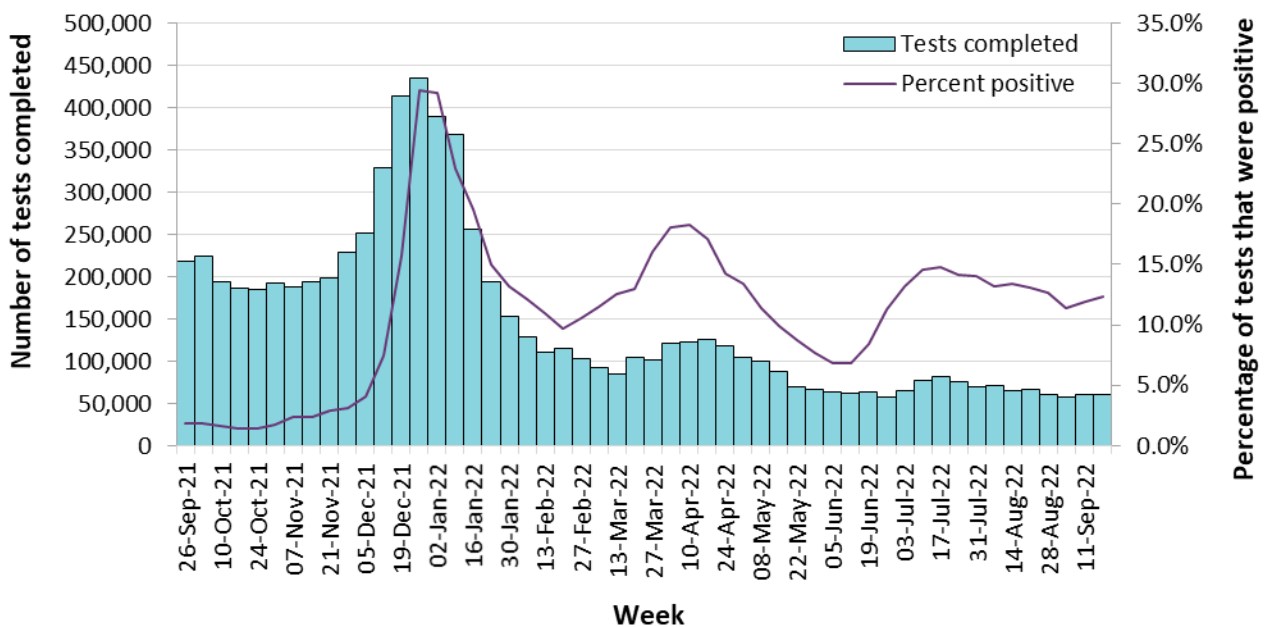
Figure 1b. Confirmed cases of COVID-19 (per 100,000 population), by age group and reported week

Note: Not all cases have an age reported.
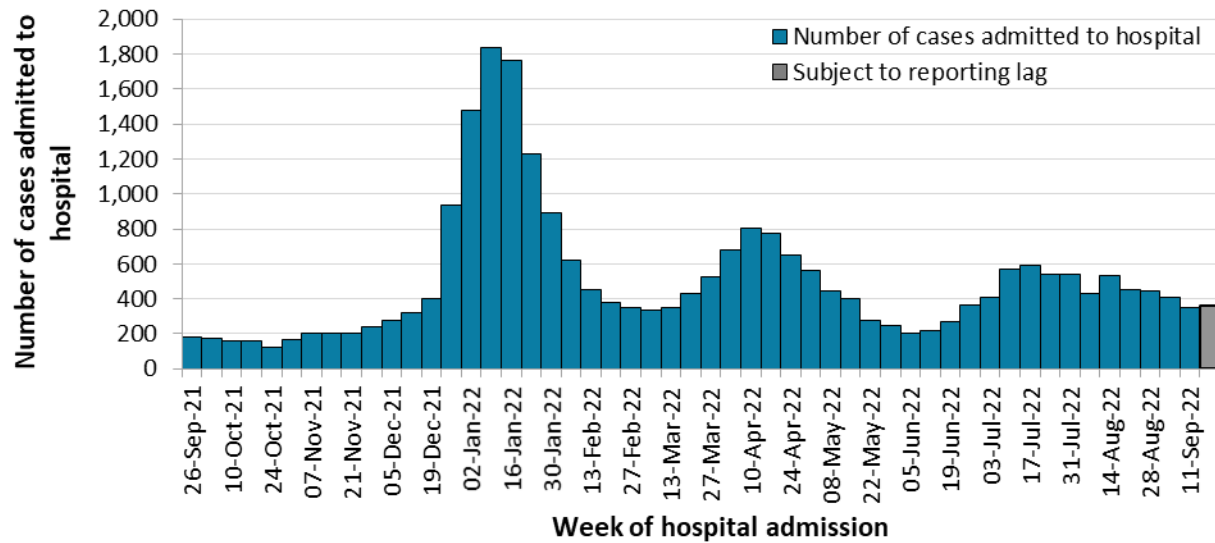
Testing

Figure 2. Weekly COVID-19 tests completed and percent positivity

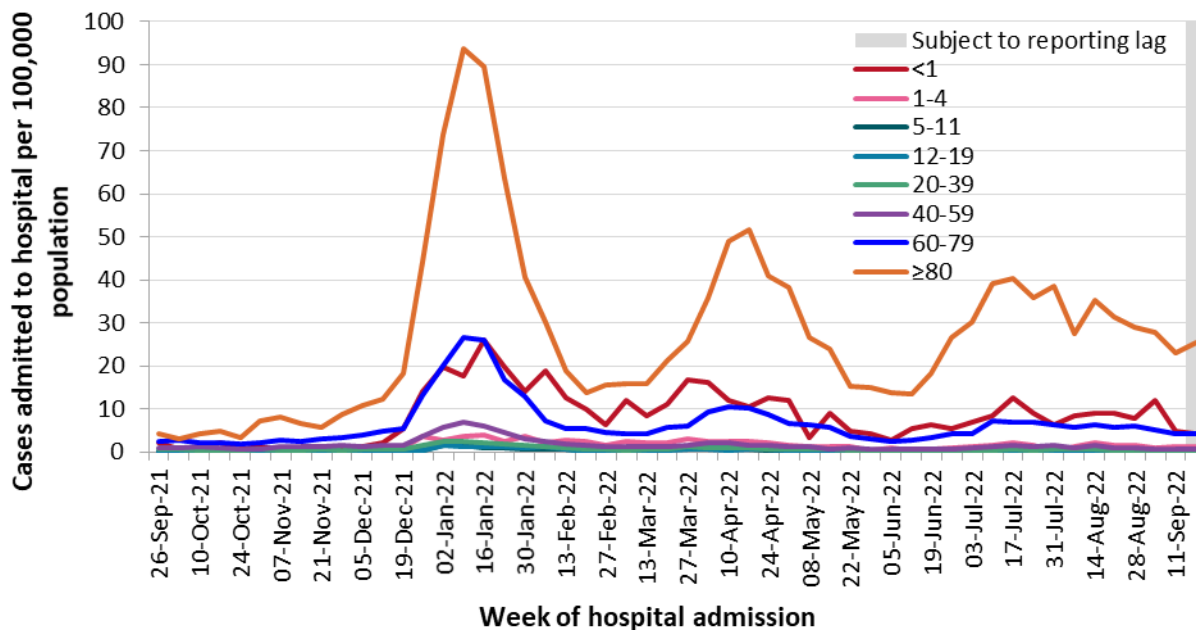**Data Source:** The Provincial COVID-19 Diagnostics Network, data reported by member microbiology laboratories.

Hospital Admissions

Figure 3a. Confirmed COVID-19 cases that were admitted to hospital, by hospital admission week

Figure 3b. Confirmed COVID-19 cases that were admitted to hospital (per 100,000 population), by age group and hospital admission date

Note: Not all cases have an age reported.

Deaths

Figure 4a. Confirmed COVID-19 deaths, by cause and week of death
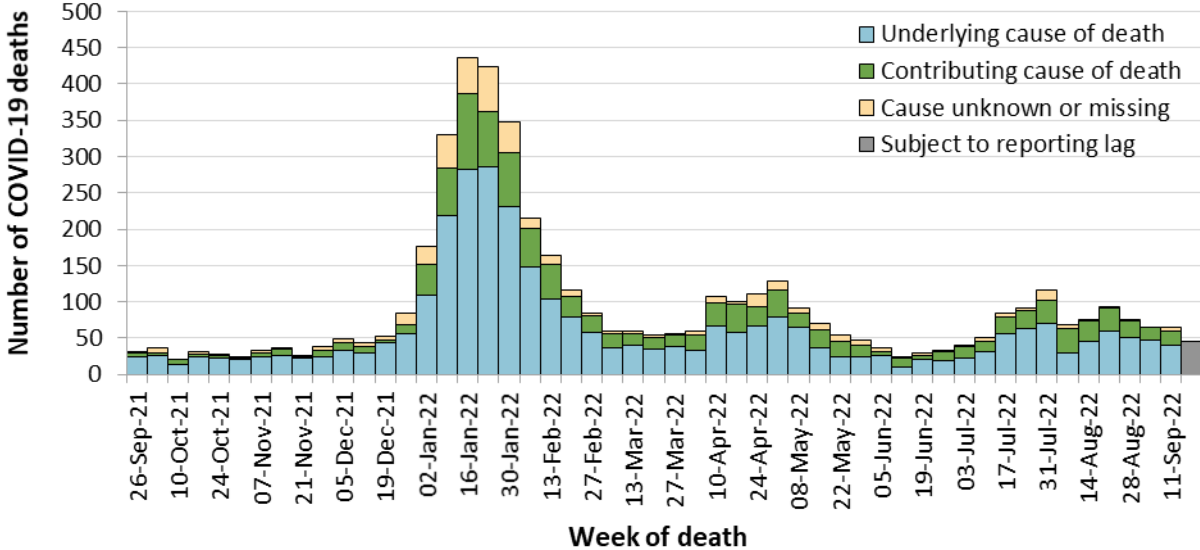
Figure 4b. Confirmed COVID-19 deaths (per 100,000 population), by age group and week of death
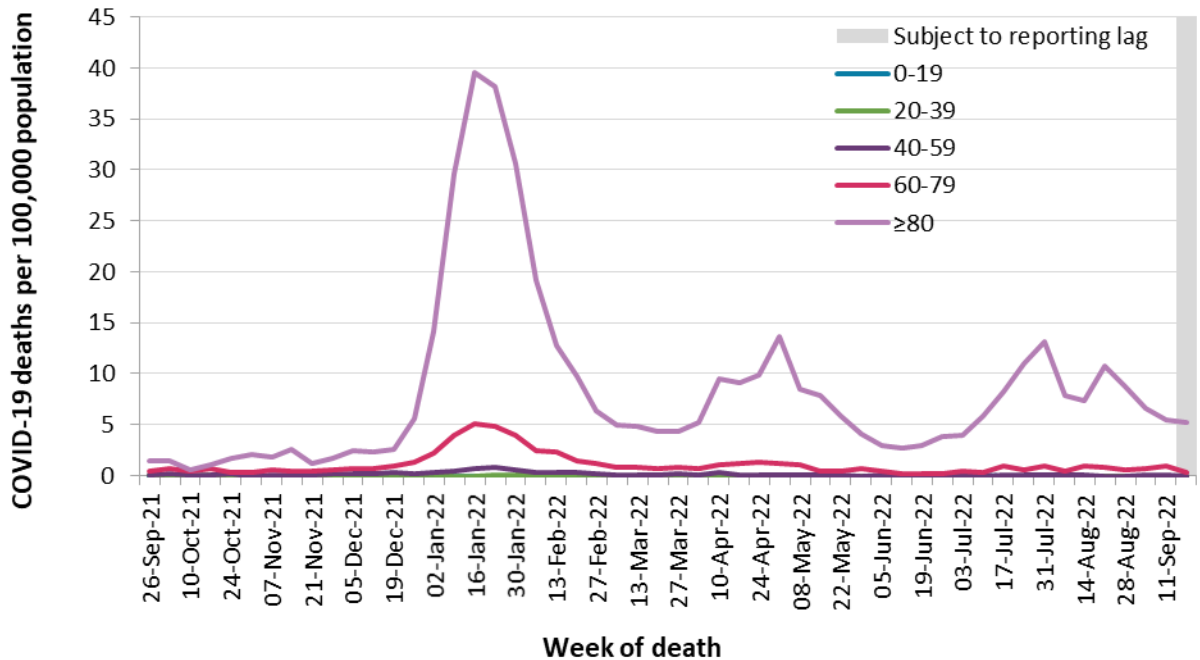
Severity by Neighbourhood Material Deprivation

Figure 5a. Confirmed COVID-19 cases that were admitted to hospital (per 100,000 population), by quintile of neighbourhood material deprivation and hospital admission week
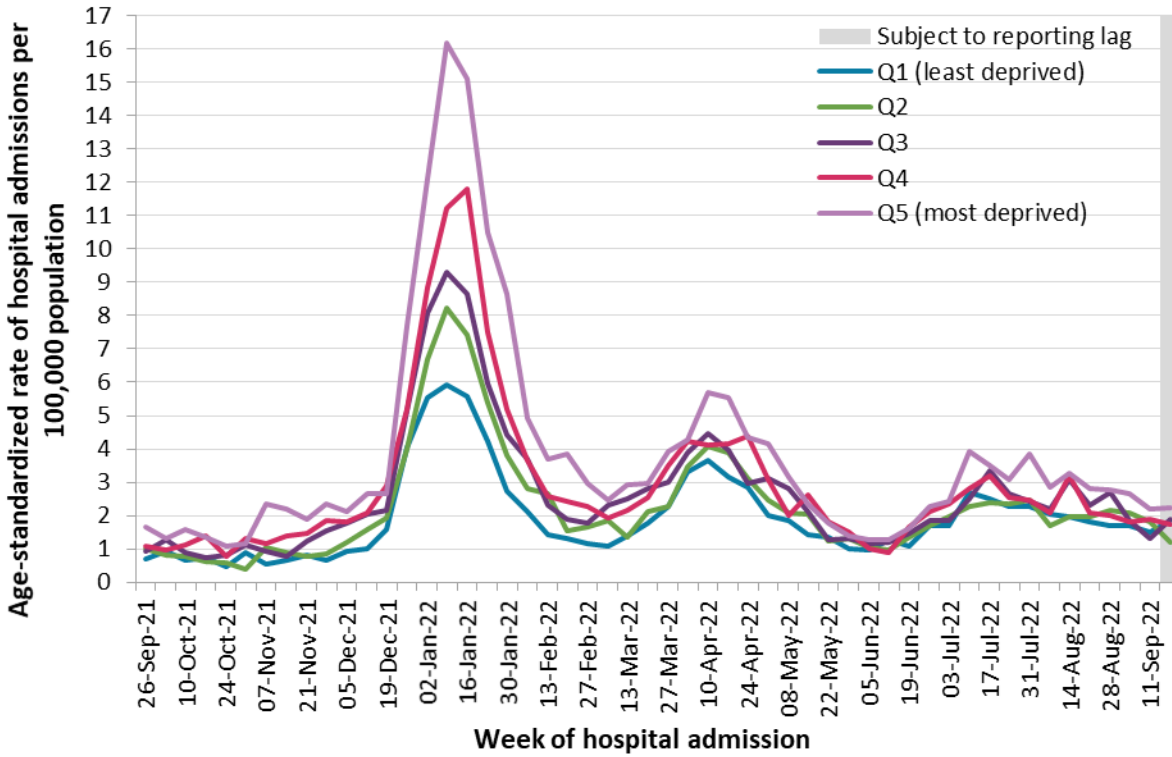
Data Source: CCM, ON-Marg 2016

Figure 5b. Confirmed COVID-19 deaths (per 100,000 population), by quintile of neighbourhood material deprivation and week of death
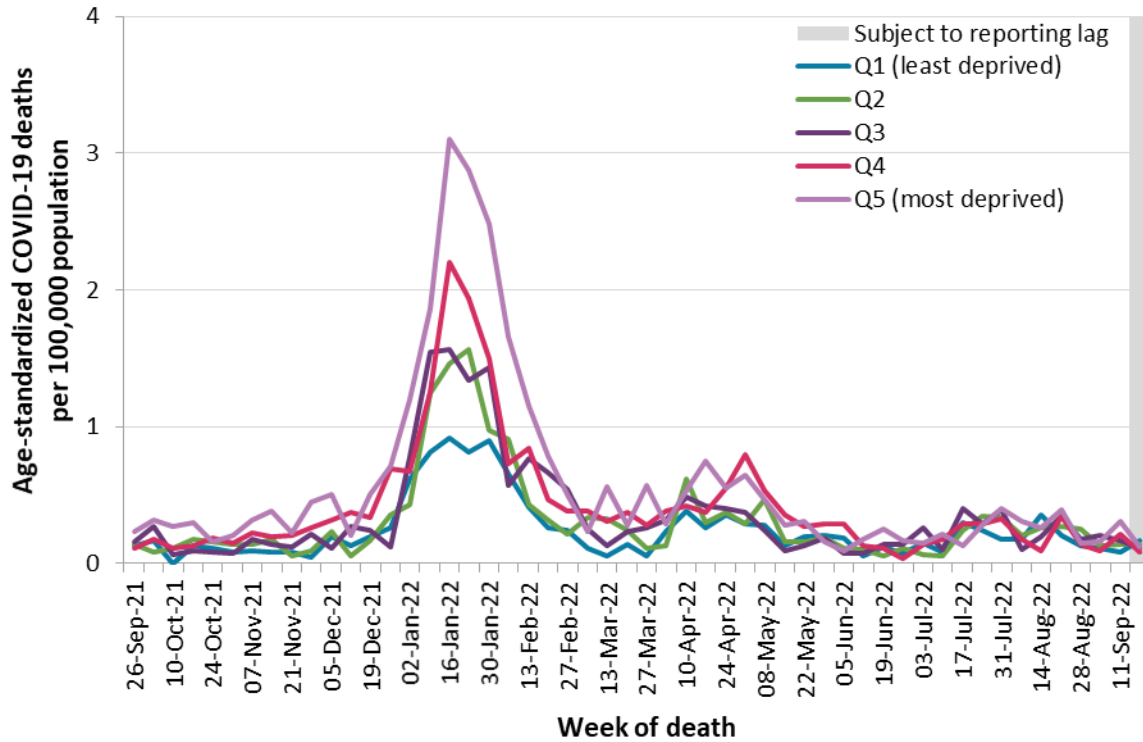
Data Source: CCM, ON-Marg 2016

Outbreaks

Figure 6. Confirmed COVID-19 outbreaks, by setting type and reported week
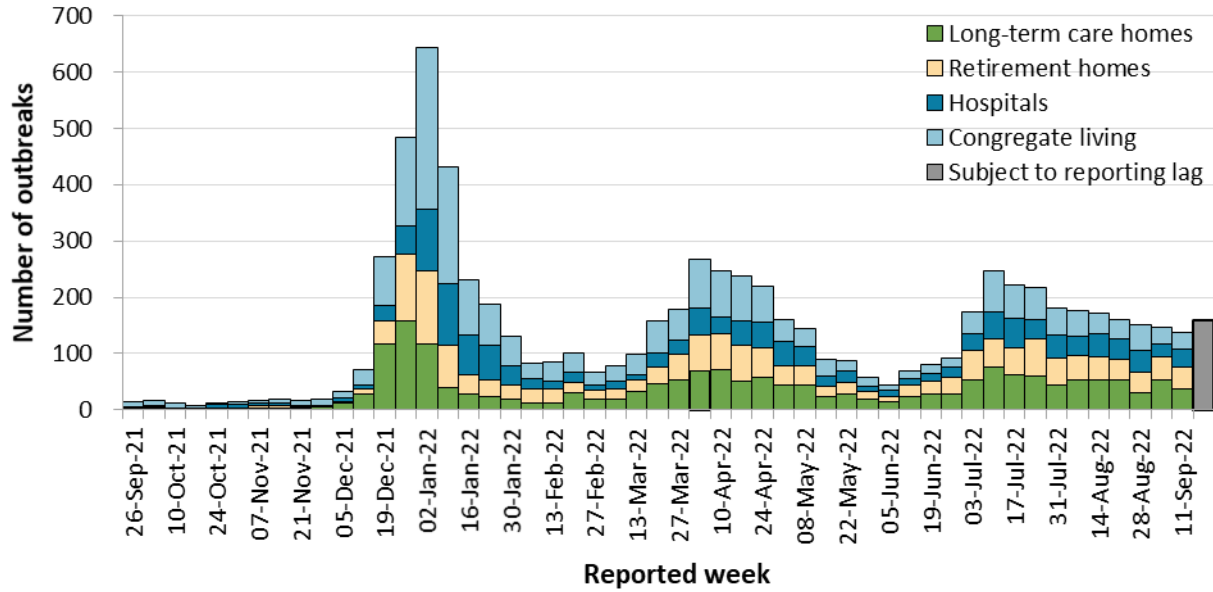
Note: Congregate living includes group homes, shelters, and correctional facilities.

Table 1. Confirmed COVID-19 outbreaks, by setting type

Setting Type	Reported September 11 to 17, 2022	Reported September 18 to 24, 2022	Ongoing outbreaks	Reported Past 52 Weeks (September 26, 2021 to September 24, 2022)
Congregate Care	**108**	**120**	**290**	**5,013**
Long-term care homes	37	41	128	1,907
Retirement homes	38	44	103	1,684
Hospitals	33	35	59	1,422
Congregate Living	**30**	**39**	**65**	**2,406**
Correctional facility	6	0	9	129
Shelter	6	9	11	444
Group home/supportive housing	18	30	45	1,833
Total number of outbreaks*	**138**	**159**	**355**	**7,419**

*Only includes outbreaks in the setting types above

Table 2. Confirmed outbreak-associated COVID-19 cases, by setting type and reported week

Cases associated with the outbreak setting type	Reported September 11 to 17, 2022	Reported September 18 to 24, 2022	Reported Past 52 Weeks (September 26, 2021 to September 24, 2022)
Congregate Care	**1,805**	**1,520**	**84,741**
Long-term care homes	1,088	921	50,969
Retirement homes	517	368	21,144
Hospitals	200	231	12,628
Congregate Living	**130**	**112**	**14,095**
Correctional facility	57	35	4,320
Shelter	15	13	2,644
Group home/supportive housing	58	64	7,131
Total number of cases*	**1,935**	**1,632**	**98,836**

*Only includes cases associated to outbreaks in the setting types above

Technical Notes

Details on data caveats and methods are documented in Technical Notes of the Ontario COVID-19 Data Tool. For information on data caveats and methods related to Ontario Marginalization Index (ON-Marg), please visit PHO's ON-Marg webpage.

Data Sources

- The data for this report were based on information successfully extracted from the CCM for all PHUS by PHO as of:

    - **September 27, 2022 at 1 p.m.** for cases reported from January 1, 2022 onwards

    - **September 26, 2022 at 9 a.m.** for cases reported from January 1, 2021 to December 31, 2021

    - **September 9, 2022 at 9 a.m.** for cases reported up to December 31, 2020.

- Hospital and ICU bed occupancy data were obtained from the Ministry of Health on **September 28, 2022**. The same data is available weekly from Ontario's Data Catalogue (dataset: COVID-19 cases in hospital and ICU, by Ontario Health (OH) region). The 'date' field was adjusted to account for reporting lags. Specifically, hospital occupancy counts ('hospitalizations') correspond to the 'date' field minus two days, and ICU occupancy counts ('icu_crci_total') correspond to the 'date' field minus one day.

- Ontario population estimate data were sourced from Statistics Canada. Population estimates 2001-2020: Table 1 annual population estimates by age and sex for July 1, 2001 to 2020, health regions, Ontario [unpublished data table]. Ottawa, ON: Government of Canada; 2021 [received April 22, 2021].

- Statistics Canada Postal Code Conversion File Plus (PCCF+), version 7E.

- The health equity (material deprivation) analyses use data from the 2016 Ontario Marginalization Index (ON-Marg), and population counts from the Ontario Health Insurance Plan (OHIP) Registered Person Database (RPDB) as of May 1, 2021 (provided by the Institute for Clinical Evaluative Sciences [ICES]). For more information, please visit PHO's ON-Marg webpage.

- Whole genome sequencing data used in the short-term projection model were based on information extracted on **September 21, 2022** from PHO and **September 20, 2022** from partner laboratories in the Ontario COVID-19 Genomics Network. For more information on SARS-CoV-2 whole genome sequencing surveillance please see the report SARS-CoV-2 Genomic Surveillance in Ontario report.

Appendix A: Hospital Bed Occupancy

This graph shows a daily count of:

1. the number of people in hospital (including intensive care unit (ICU)) with active COVID-19 (i.e. testing positive); and

2. the number of people in ICU because of COVID-19.

These counts differ from hospital admissions data in this report (Figures 3a, 3b, and Table 4), which count the number of people admitted to hospital each week due to COVID-19.

Figure 7. Hospital and ICU bed occupancy, by day
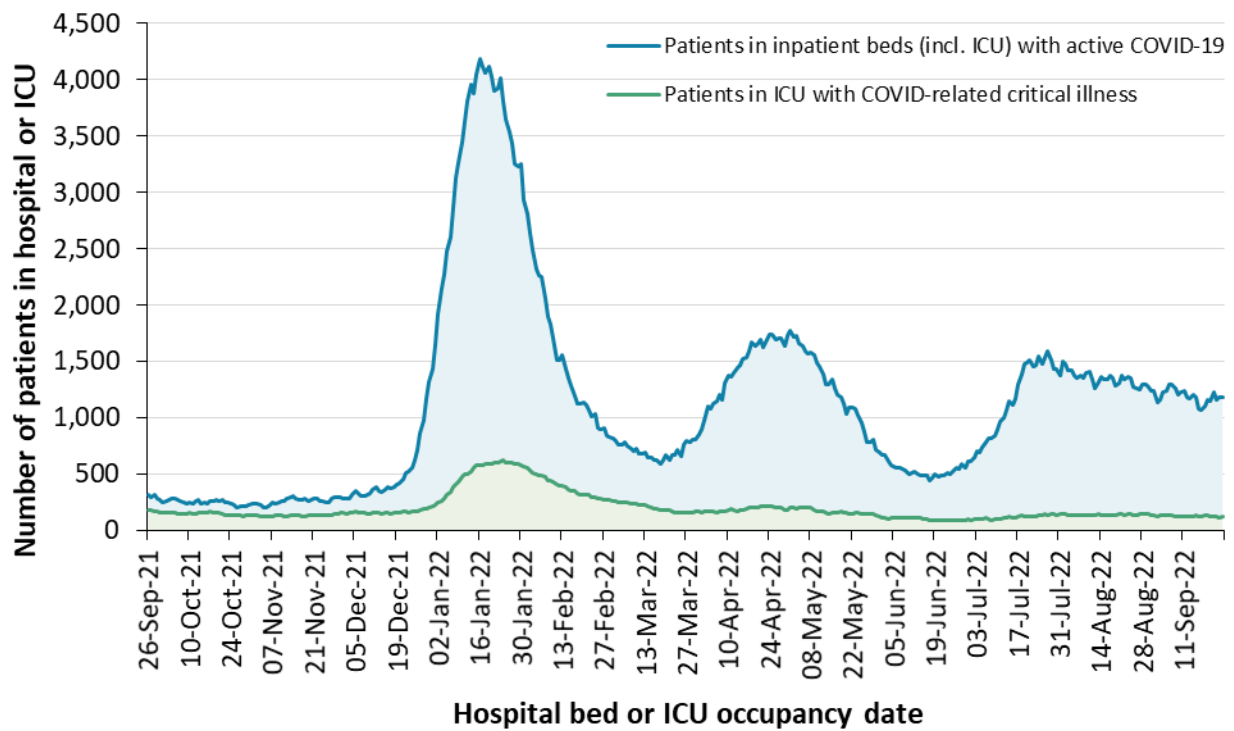
Data Source: Ontario Ministry of Health
Note: Hospital bed occupancy data comes from the Hospital Daily Bed Census and ICU bed occupancy data comes from the Critical Care Information System.

Appendix B: Cases by Public Health Unit

Figure 8. Confirmed cases of COVID-19 (per 100,000 population), by region and reported week

Table 3. Confirmed cases of COVID-19, by public health unit and region

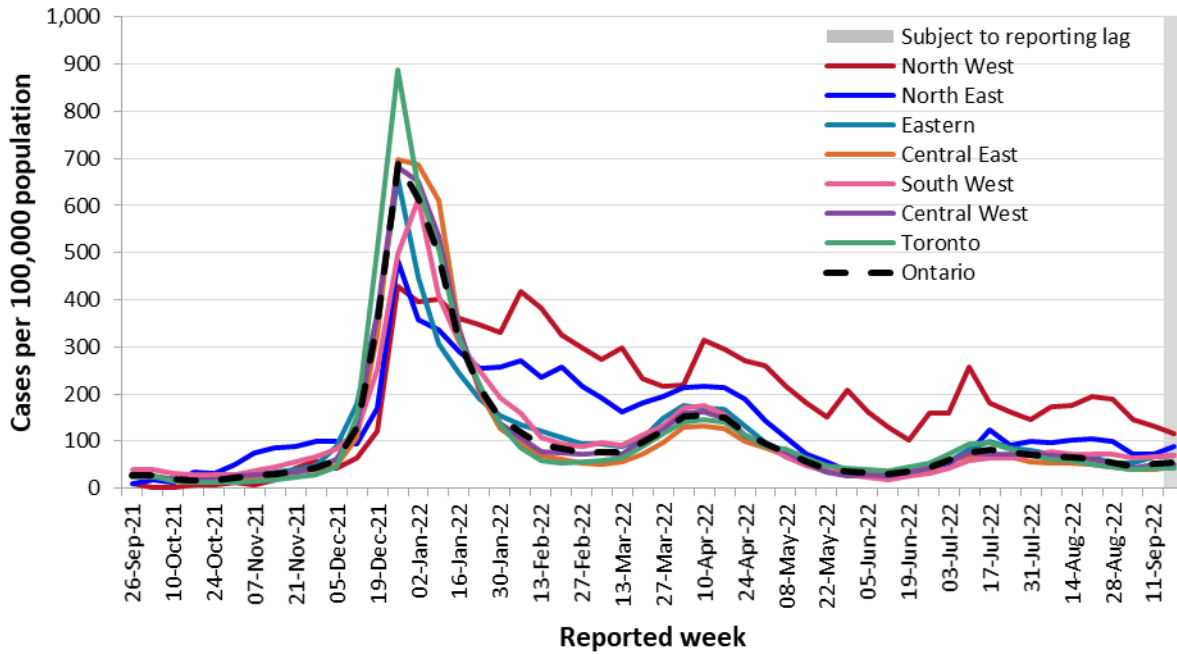| Public Health Unit Name	Cases September 11 to 17, 2022	Cases per 100,000 population September 11 to 17, 2022	Cases September 18 to 24, 2022	Cases per 100,000 population September 18 to 24, 2022	Cases per 100,000 population Past 52 weeks (September 26, 2021 to September 24, 2022)
Northwestern Health Unit	87	107.2	100	123.2	13,757.5
Thunder Bay District Health Unit	227	143.9	178	112.9	7,756.8
TOTAL NORTH WEST	**314**	**131.4**	**278**	**116.4**	**9,796.1**
Algoma Public Health	95	80.6	111	94.2	7,841.1
North Bay Parry Sound District Health Unit	77	59.5	132	102.1	5,281.2
Porcupine Health Unit	47	55.3	30	35.3	7,122.4
Public Health Sudbury & Districts	175	85.3	200	97.4	7,727.4
Timiskaming Health Unit	21	62.0	33	97.4	6,297.8
TOTAL NORTH EAST	**415**	**72.6**	**506**	**88.6**	**7,022.4**
Ottawa Public Health	434	41.6	494	47.4	5,043.6
Eastern Ontario Health Unit	174	80.6	113	52.3	5,967.3
Hastings Prince Edward Public Health	271	156.8	202	116.9	6,401.7

Public Health Unit Name	Cases September 11 to 17, 2022	Cases per 100,000 population September 11 to 17, 2022	Cases September 18 to 24, 2022	Cases per 100,000 population September 18 to 24, 2022	Cases per 100,000 population Past 52 weeks (September 26, 2021 to September 24, 2022)
Kingston, Frontenac and Lennox & Addington Public Health	194	92.7	254	121.4	8,993.9
Leeds, Grenville & Lanark District Health Unit	183	101.7	176	97.8	5,291.0
Renfrew County and District Health Unit	51	47.0	97	89.4	4,777.2
TOTAL EASTERN	**1,307**	**67.7**	**1,336**	**69.2**	**5,705.0**
Durham Region Health Department	251	35.3	287	40.3	5,742.0
Haliburton, Kawartha, Pine Ridge District Health Unit	87	45.6	102	53.5	4,422.5
Peel Public Health	577	36.9	597	38.2	5,293.6
Peterborough Public Health	99	66.8	194	131.0	4,798.2
Simcoe Muskoka District Health Unit	290	48.0	339	56.1	6,221.7
York Region Public Health	456	38.0	505	42.1	5,492.6
TOTAL CENTRAL EAST	**1,760**	**39.8**	**2,024**	**45.8**	**5,492.6**
Toronto Public Health	1,249	41.8	1,267	42.4	5,971.5

Public Health Unit Name	Cases September 11 to 17, 2022	Cases per 100,000 population September 11 to 17, 2022	Cases September 18 to 24, 2022	Cases per 100,000 population September 18 to 24, 2022	Cases per 100,000 population Past 52 weeks (September 26, 2021 to September 24, 2022)
TOTAL TORONTO	**1,249**	**41.8**	**1,267**	**42.4**	**5,971.5**
Chatham-Kent Public Health	106	99.4	56	52.5	6,924.6
Grey Bruce Health Unit	72	40.9	87	49.4	4,367.9
Huron Perth Public Health	65	44.4	120	82.1	4,238.8
Lambton Public Health	96	72.2	120	90.2	6,908.2
Middlesex-London Health Unit	259	50.7	312	61.1	5,686.2
Southwestern Public Health	229	104.6	146	66.7	5,294.0
Windsor-Essex County Health Unit	324	75.2	337	78.2	6,671.4
TOTAL SOUTH WEST	**1,151**	**66.8**	**1,178**	**68.4**	**5,796.1**
Brant County Health Unit	81	52.7	94	61.2	5,650.6
City of Hamilton Public Health Services	415	71.3	393	67.6	7,109.6
Haldimand-Norfolk Health Unit	60	50.0	62	51.7	5,648.8
Halton Region Public Health	239	39.1	234	38.3	5,696.8

Public Health Unit Name	Cases September 11 to 17, 2022	Cases per 100,000 population September 11 to 17, 2022	Cases September 18 to 24, 2022	Cases per 100,000 population September 18 to 24, 2022	Cases per 100,000 population Past 52 weeks (September 26, 2021 to September 24, 2022)
Niagara Region Public Health	235	48.8	259	53.8	5,911.9
Region of Waterloo Public Health and Emergency Services	300	49.6	286	47.3	5,212.5
Wellington-Dufferin-Guelph Public Health	147	47.1	133	42.6	4,978.3
TOTAL CENTRAL WEST	**1,477**	**51.6**	**1,461**	**51.0**	**5,834.8**
TOTAL ONTARIO	**7,673**	**52.1**	**8,050**	**54.6**	**5,848.7**

Note: Access to testing can vary across the province and as a result may impact the reported confirmed case rates by public health unit.

Appendix C: Severity Measures by Age and Sex

Table 4. Confirmed COVID-19 cases that were admitted to hospital, by sex and age group

Sex and age group	Hospital admissions September 11 to 17, 2022	Hospital admissions per 100,000 population September 11 to 17, 2022	Hospital admissions September 18 to 24, 2022	Hospital admissions per 100,000 population September 18 to 24, 2022	Hospital admissions Past 52 weeks (September 26, 2021 to September 24, 2022)	Hospital admissions per 100,000 population Past 52 weeks (September 26, 2021 to September 24, 2022)
Total Cases	347	2.4	359	2.4	25,930	176.0
Sex: Female	152	2.0	169	2.3	11,855	159.0
Sex: Male	195	2.7	190	2.6	14,036	192.8
Sex: Did not specify female or male	0	N/A	0	N/A	39	N/A
Ages: <1	7	4.9	6	4.2	615	431.9
Ages: 1 – 4	7	1.2	7	1.2	453	78.0
Ages: 5 – 11	4	0.4	3	0.3	212	19.7
Ages: 12 – 19	2	0.2	4	0.3	267	20.1
Ages: 20 – 39	15	0.4	20	0.5	1,651	39.8
Ages: 40 – 59	32	0.8	26	0.7	3,441	88.3
Ages: 60 – 79	129	4.4	126	4.3	10,018	345.5
Ages: 80 and over	151	23.0	167	25.5	9,273	1,413.9
Ages: Unknown	0	N/A	0	N/A	0	N/A

Table 5. Confirmed COVID-19 deaths, by sex and age group

Sex and age group	Deaths September 11 to 17, 2022	Deaths per 100,000 population September 11 to 17, 2022	Deaths September 18 to 24, 2022	Deaths per 100,000 population September 18 to 24, 2022	Deaths Past 52 weeks (September 26, 2021 to September 24, 2022)	Deaths per 100,000 population Past 52 weeks (September 26, 2021 to September 24, 2022)
Total Cases	65	0.4	45	0.3	4,828	32.8
Sex: Female	32	0.4	16	0.2	2,103	28.2
Sex: Male	33	0.5	29	0.4	2,714	37.3
Sex: Did not specify female or male	0	N/A	0	N/A	11	N/A
Ages: 0 – 19	0	0.0	0	0.0	13	0.4
Ages: 20 – 39	1	<0.1	1	<0.1	62	1.5
Ages: 40 – 59	3	0.1	0	0.0	324	8.3
Ages: 60 – 79	25	0.9	10	0.3	1,626	56.1
Ages: 80 and over	36	5.5	34	5.2	2,803	427.4
Ages: Unknown	0	N/A	0	N/A	0	N/A

Appendix D: All Time Severe Outcomes

Table 6. Confirmed COVID-19 cases and deaths among LTCH residents, by wave[1]

Wave	Number of LTCH Resident Cases	Number of LTCH Resident COVID-19 deaths	Case Fatality Rate (CFR)
Wave 1 (February 26, 2020 to August 31, 2020)	6,011	1,906	31.7%
Wave 2 (September 1, 2020 to February 28, 2021)	9,047	1,946	21.5%
Wave 3 (March 1, 2021 to July 31, 2021)	413	59	14.3%
Wave 4 (August 1, 2021 to December 14, 2021)	245	45	18.4%
Wave 5 (December 15, 2021 to February 28, 2022)	10,060	480	4.8%
Wave 6 (March 1, 2022 to June 18, 2022)	7,615	203	2.7%
Wave 7 (June 19, 2022 to September 24, 2022)[2]	12,305	339	2.8%
Total	**45,696**	**4,978**	**10.9%**

Notes:
1. As of August 31, 2022, only LTCH resident cases linked to an outbreak are required to be identified as LTCH residents in CCM. As a result, fewer LTCH resident cases will be identified. The number of LTCH resident cases, deaths, and CFR should be interpreted with this reporting change in mind.
2. Wave 7 is ongoing and only includes cases up to September 24, 2022. Therefore, the case fatality rate for the time period of wave 7 presented here may increase.

Appendix E: Short-term Projections of COVID-19 in Ontario

- A multinomial logistic regression model (from the R package, *nnet*[1]) of whole genome sequencing (WGS) data, was used to estimate the proportion of each SARS-CoV-2 lineage over the last two months. The lineage categorization is made using the top five prevalent lineages over that time. These proportions were then applied to the reported daily COVID-19 cases to determine the daily estimated number of cases for each lineage.

- The R package, *EpiNow2*[2], was used to project the daily number of cases forward 14 days. The model was run by lineage to ensure potential differences in lineage-specific transmission were accounted for. *EpiNow2*[2] calculates these projections using Bayesian latent variable modelling[3]. Model inputs included an incubation period of 4 days[4,5] and a generation time of 2.5 days[6]. The reporting delay was estimated to be about 3 days using the symptom onset date. The results by lineage were then summed to generate the projected total number of cases and 75% credible interval. Modelling results of past weeks were compared with reported cases to confirm model accuracy.

References

1. Venables WN, Ripley BD. Modern applied statistics with S. 4th ed. New York, NY: Springer; 2002.

2. Abbot S, Hellewell J, Sherratt K, Gostic K, Hickson J, Badr HS, et al. EpiNow2: estimate real-time case counts and time-varying epidemiological parameters. Zenodo 3957489 [Preprint]. 2021 Jun 28 [cited 2022 Sep 08]. Available from: https://doi.org/10.5281/zenodo.3957489

3. Abbot S, Hellewell J, Thompson RN, Sherratt K, Gibbs HP, Bosse NI, et al. Estimating the time-varying reproduction number of SARS-CoV-2 using national and subnational case counts [version 2; peer review: 1 approved, 1 approved with reservations]. Wellcome Open Res. 2020;5:112. Available from: https://doi.org/10.12688/wellcomeopenres.16006.2

4. Backer JA, Eggink D, Andeweg SP, Veldhuijzen IK, van Maarseveen N, Vermaas K, et al. Shorter serial intervals in SARS-CoV-2 cases with Omicron BA.1 variant compared with Delta variant, the Netherlands, 13 to 26 December 2021. Euro Surveill. 2022;27(6):2200042. Available from: https://doi.org/10.2807%2F1560-7917.ES.2022.27.6.2200042

5. Jansen L, Tegomoh B, Lange K, Showalter K, Figliomeni J, Abdalhamid B, et al. Investigation of a SARS-CoV-2 B.1.1.529 (Omicron) variant cluster – Nebraska, November – December 2021. MMWR Morb Mortal Wkly Rep. 2021;70(51-52):1782-4. Available from: https://doi.org/10.15585%2Fmmwr.mm705152e3

6. Abbot S, Sherratt K, Gerstung M, Funk S. Estimation of the test to test distribution as a proxy for generation interval distribution for the Omicron variant in England. medRxiv 22268920 [Preprint]. 2022 Jan 10 [cited 2022 Sep 08]. Available from: https://doi.org/10.1101/2022.01.08.22268920

Citation

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Weekly epidemiologic summary: COVID-19 in Ontario – September 18, 2022 to September 24, 2022. Toronto, ON: King's Printer for Ontario; 2022.

Disclaimer

This document was developed by Public Health Ontario (PHO). PHO provides scientific and technical advice to Ontario's government, public health organizations and health care providers. PHO's work is guided by the current best available evidence at the time of publication. The application and use of this document is the responsibility of the user. PHO assumes no liability resulting from any such application or use. This document may be reproduced without permission for non-commercial purposes only and provided that appropriate credit is given to PHO. No changes and/or modifications may be made to this document without express written permission from PHO.

For Further Information

For more information, email cd@oahpp.ca.

Public Health Ontario

Public Health Ontario is an agency of the Government of Ontario dedicated to protecting and promoting the health of all Ontarians and reducing inequities in health. Public Health Ontario links public health practitioners, front-line health workers and researchers to the best scientific intelligence and knowledge from around the world.

For more information about PHO, visit publichealthontario.ca.