Public Health Ontario | Santé publique Ontario

WEEKLY EPIDEMIOLOGICAL SUMMARY

COVID-19 in Ontario: Focus on October 9, 2022 to October 15, 2022 (Week 41)

Published: October 21, 2022

Figures and tables in this report present the most recent 52 weeks of data for Ontario, ranging from **October 17, 2021 to October 15, 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 9,332 this week, similar when compared to 8,997 last week. However, a gradual increase in case numbers is observed when looking back over the past 5 weeks. Current projections suggest weekly case numbers may continue to gradually rise over the next 2 weeks.
    - Case rates were similar this week in all 7 of Ontario's regions and similar or increased in 27 of 34 public health units, compared to last week.
    - Case rates were similar for all age groups 20 and older, compared to last week. Children aged 0 to 4 years reported a 20% increased case rate while children aged 5 to 11 and 12 to 19 reported decreased case rates of 19% and 14%, respectively.
- **Percent positivity up 19% and testing volumes similar (+/- 10%) compared to last week:** Percent positivity was 16.1% this week, higher when compared to 13.5% last week. Testing volume this week was 60,687, compared to 66,117 tests last week.

Severity

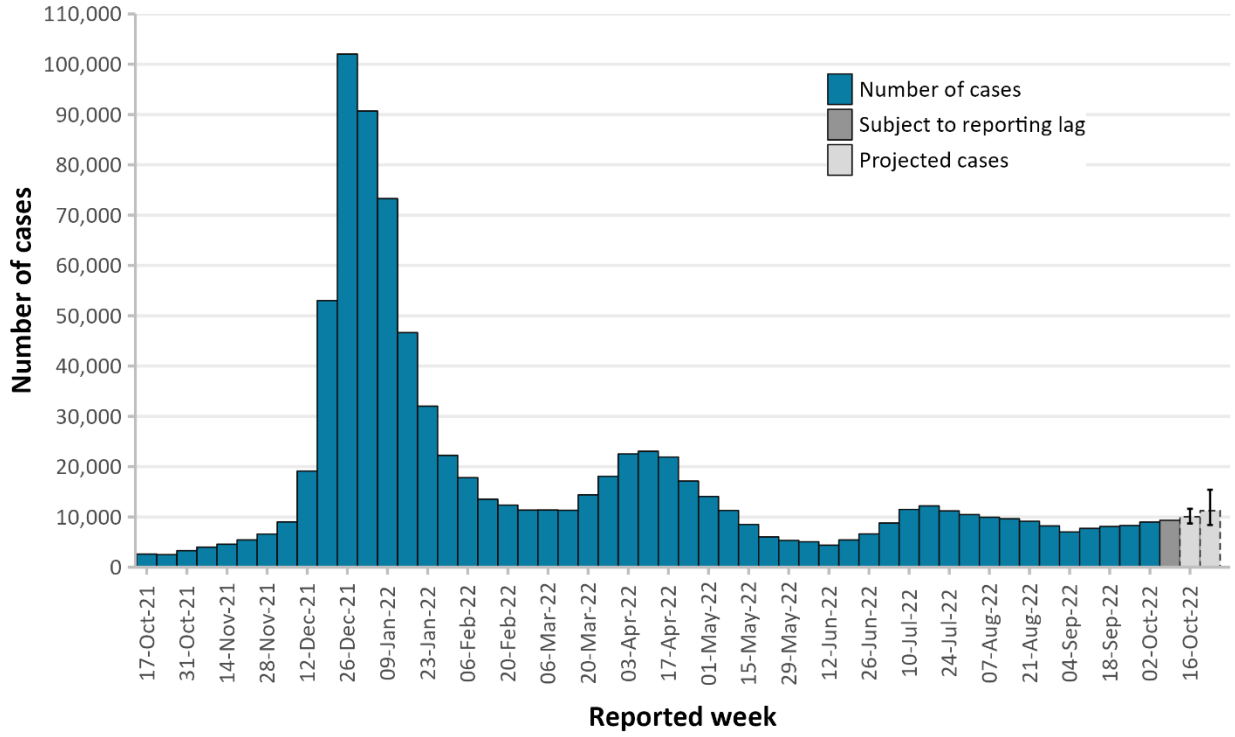
- **Hospital admissions and deaths similar (+/- 10%) compared to last week:** There were 491 hospital admissions reported this week, compared to 464 last week. There were 67 deaths reported this week, compared to 72 last week. Hospital admission and death counts, particularly for more recent weeks, may increase, as these outcomes are lagging indicators.

Outbreaks

- **Outbreaks in high-risk settings down 12% compared to last week:** The total number of outbreaks in high-risk settings was 204 this week, compared to 232 last week. Most settings reported a decreased or similar (+/- 10%) number of outbreaks, except hospitals, which reported a 14% increase in outbreaks compared with last week.
- **Outbreak-associated cases in high-risk settings similar (+/- 10%) compared to last week**: There were 2,737 outbreak-associated cases reported this week in high-risk settings, compared to 2,716 last week.

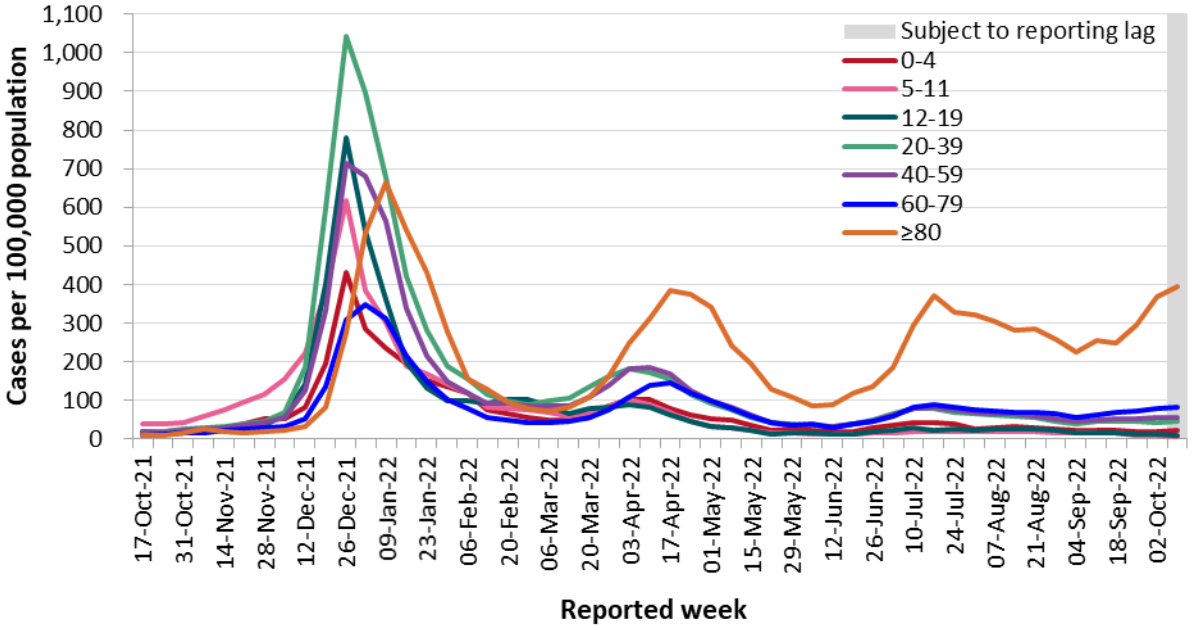
Cases

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.

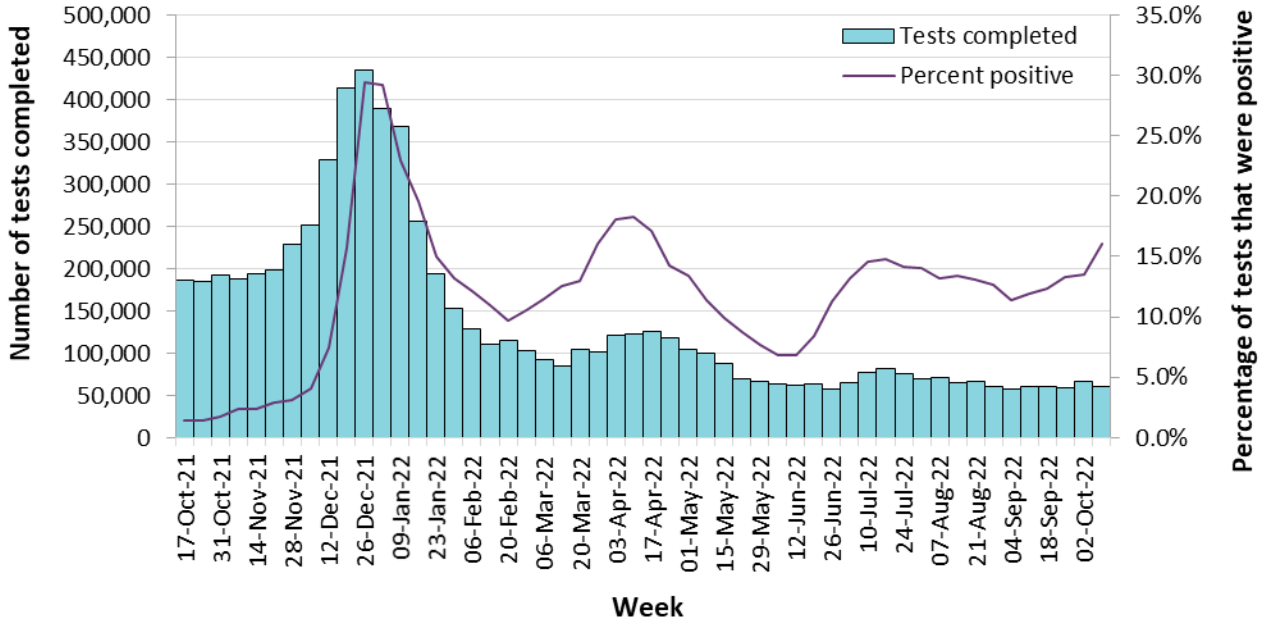
Figure 1b. Confirmed cases of COVID-19 (per 100,000 population), by age group and reported week



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

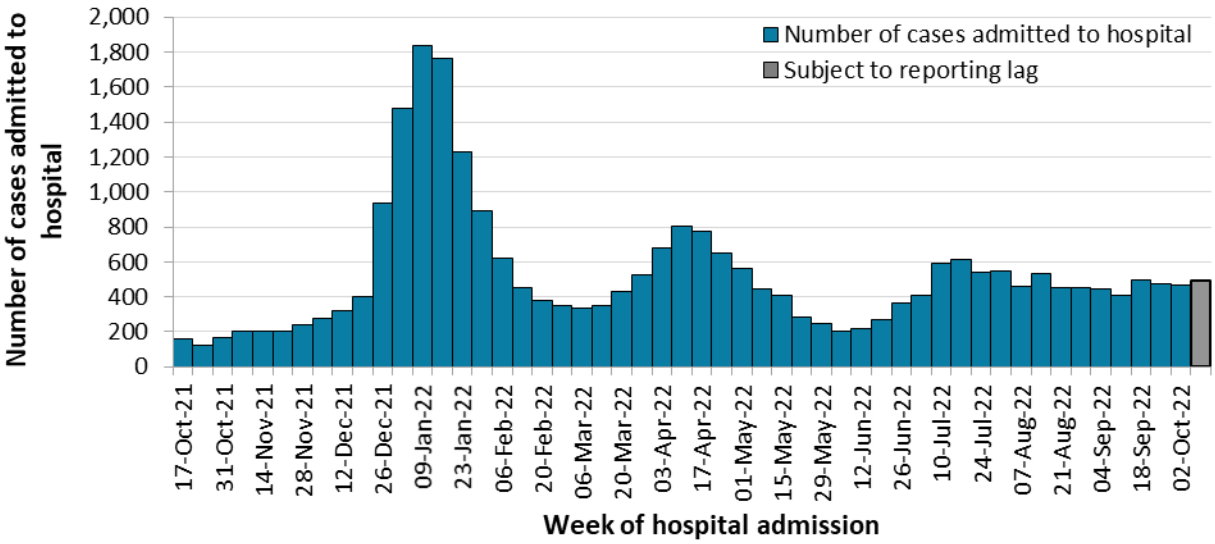
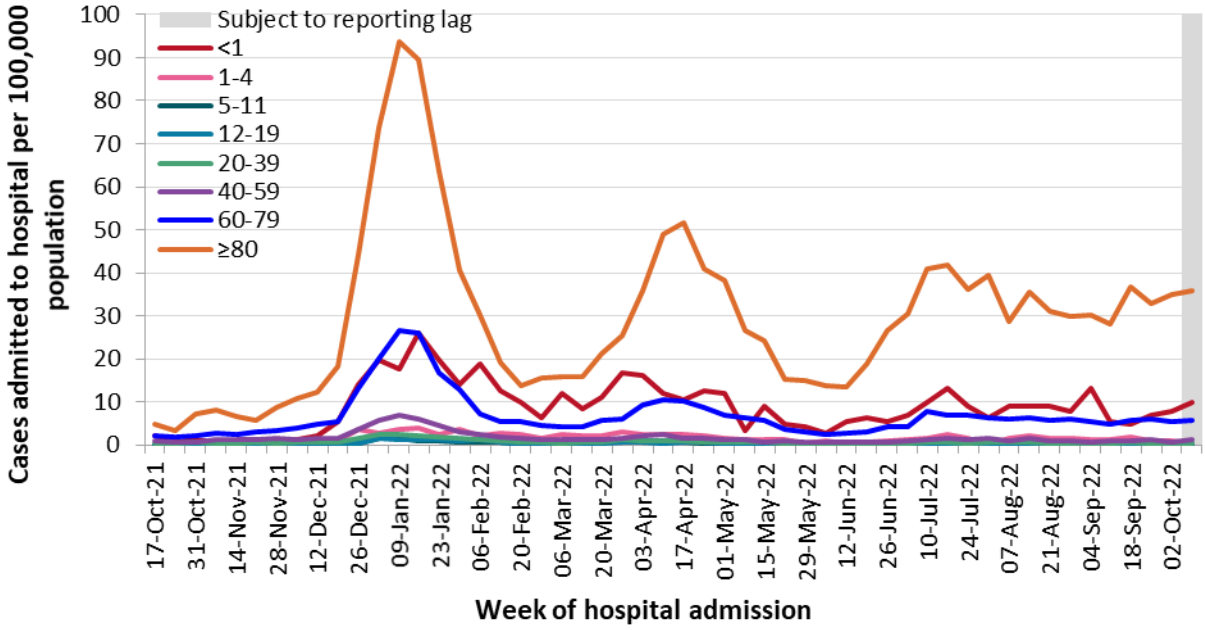


Figure 3b. Confirmed COVID-19 cases that were admitted to hospital (per 100,000 population), by age group and hospital admission date



Note: Not all cases have an age reported.

Deaths

Figure 4a. Confirmed COVID-19 deaths, by cause and week of death

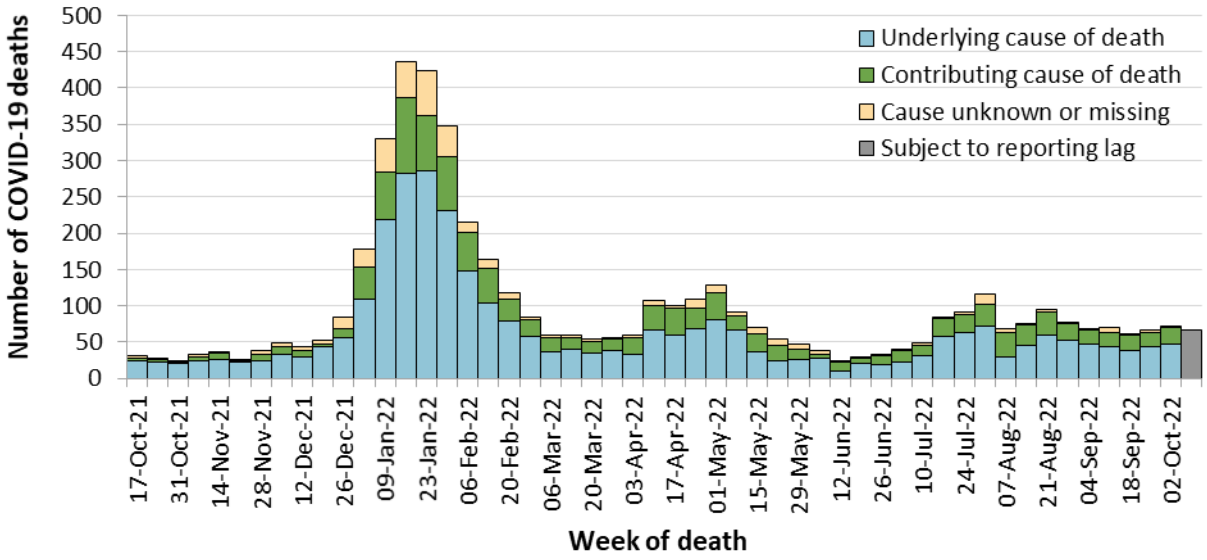
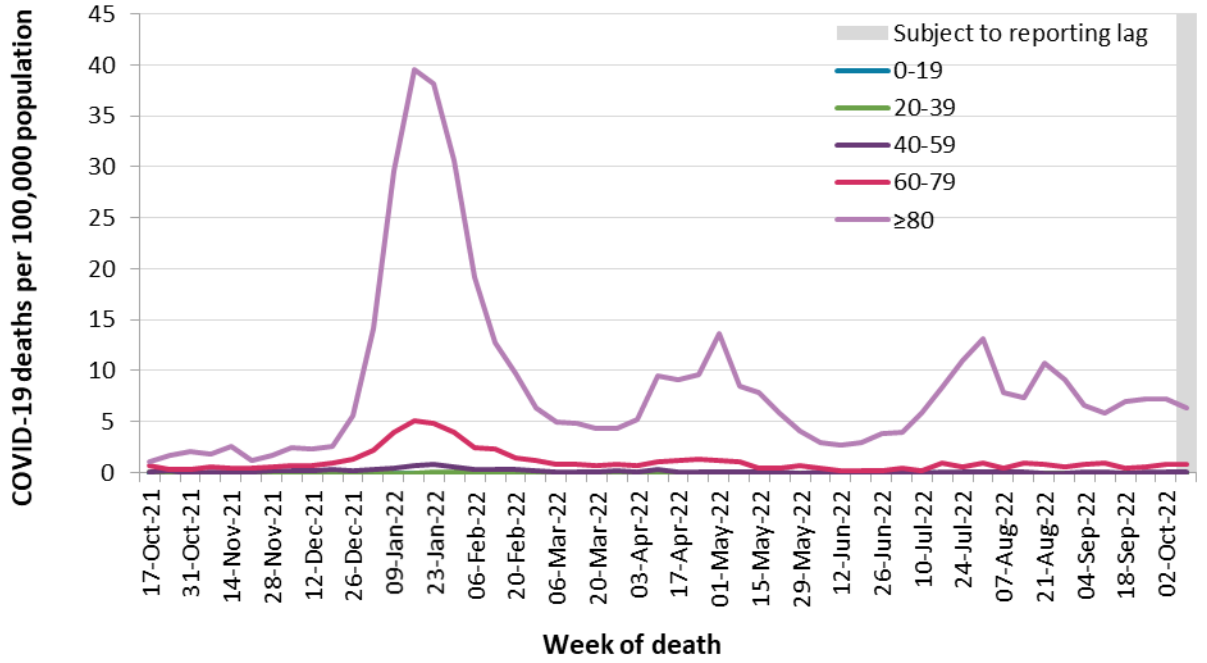
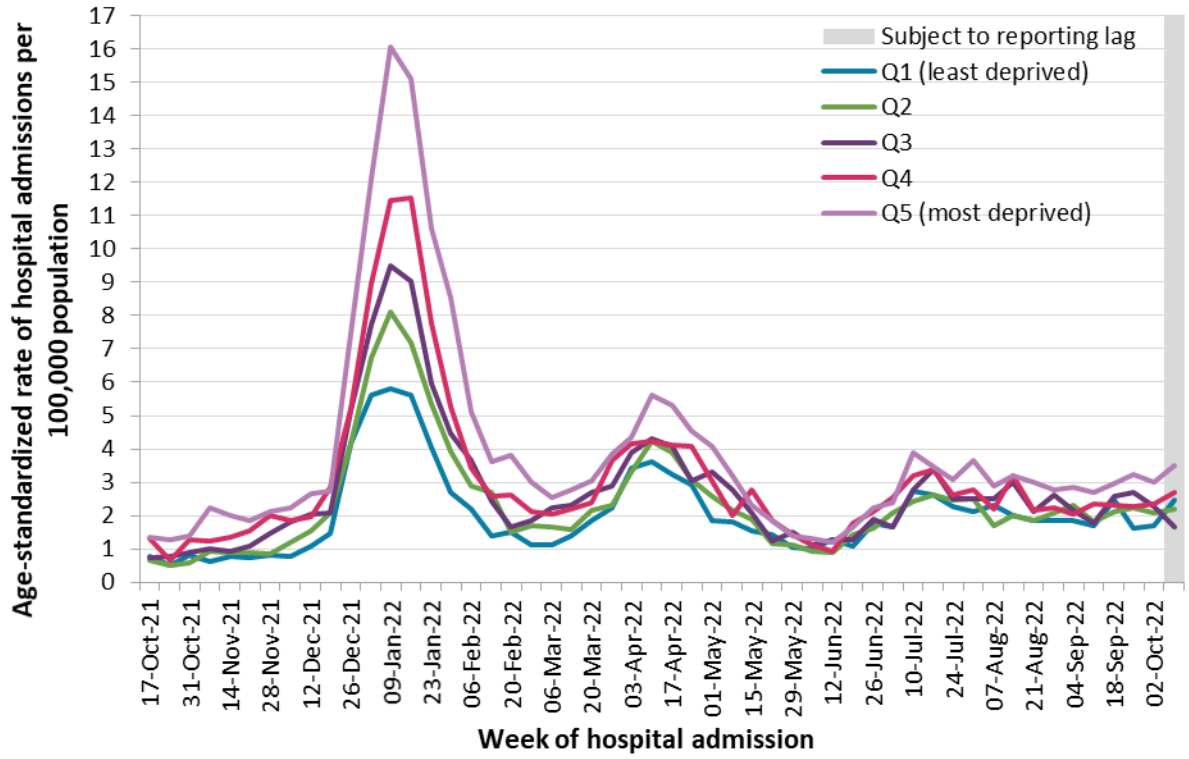


Figure 4b. Confirmed COVID-19 deaths (per 100,000 population), by age group and week of death



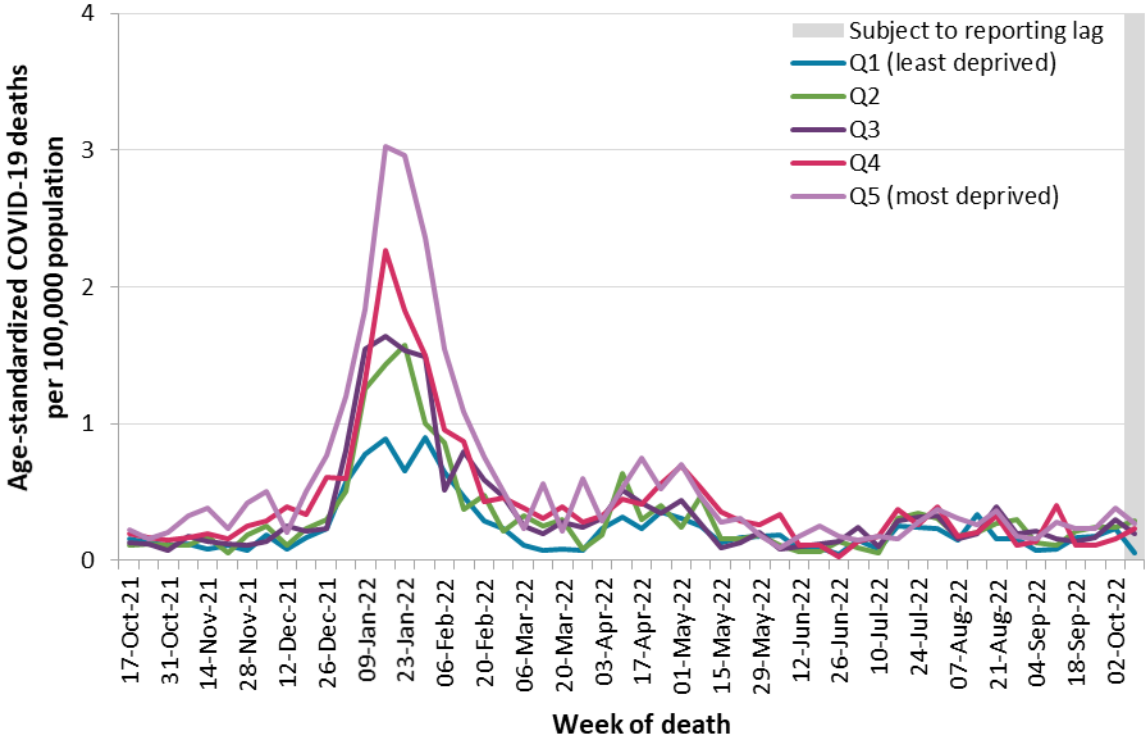
Severity by Neighbourhood Material Deprivation

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

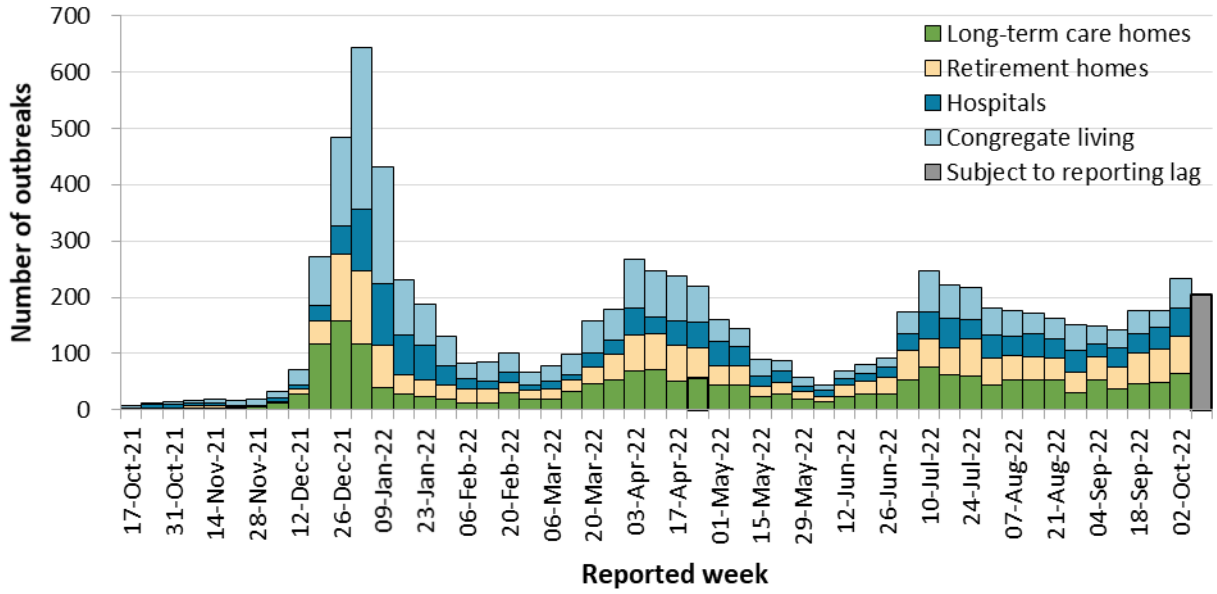
Figure 5b. Confirmed COVID-19 deaths (per 100,000 population), by quintile of neighbourhood material deprivation and week of death



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 October 2 to October 8, 2022	Reported October 9 to October 15, 2022	Ongoing outbreaks	Reported Past 52 Weeks (October 17, 2021 to October 15, 2022)
Congregate Care	**181**	**166**	**439**	**5,508**
Long-term care homes	64	61	183	2,081
Retirement homes	66	47	154	1,858
Hospitals	51	58	102	1,569
Congregate Living	**51**	**38**	**70**	**2,504**
Correctional facility	5	4	7	139
Shelter	10	3	11	459
Group home/supportive housing	36	31	52	1,906
Total number of outbreaks*	**232**	**204**	**509**	**8,012**

*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 October 2 to October 8, 2022	Reported October 9 to October 15, 2022	Reported Past 52 Weeks (October 17, 2021 to October 15, 2022)
Congregate Care	**2,556**	**2,644**	**92,353**
Long-term care homes	1,318	1,416	55,108
Retirement homes	817	839	23,418
Hospitals	421	389	13,827
Congregate Living	**160**	**93**	**14,457**
Correctional facility	36	28	4,409
Shelter	16	3	2,683
Group home/supportive housing	108	62	7,365
Total number of cases*	**2,716**	**2,737**	**106,810**

*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:
    - **October 18, 2022 at 1 p.m.** for cases reported in waves 6 and 7 (March 1, 2022 onwards)
    - **October 17, 2022 at 9 a.m.** for cases reported in waves 4 and 5 (August 1, 2021 to February 28, 2022)
    - **October 3, 2022 at 9 a.**m. for cases reported in waves 1, 2, and 3 (up to July 31, 2021)
- Hospital and ICU bed occupancy data were obtained from the Ministry of Health on **October 19, 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 **October 12, 2022** from PHO and **October 11, 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

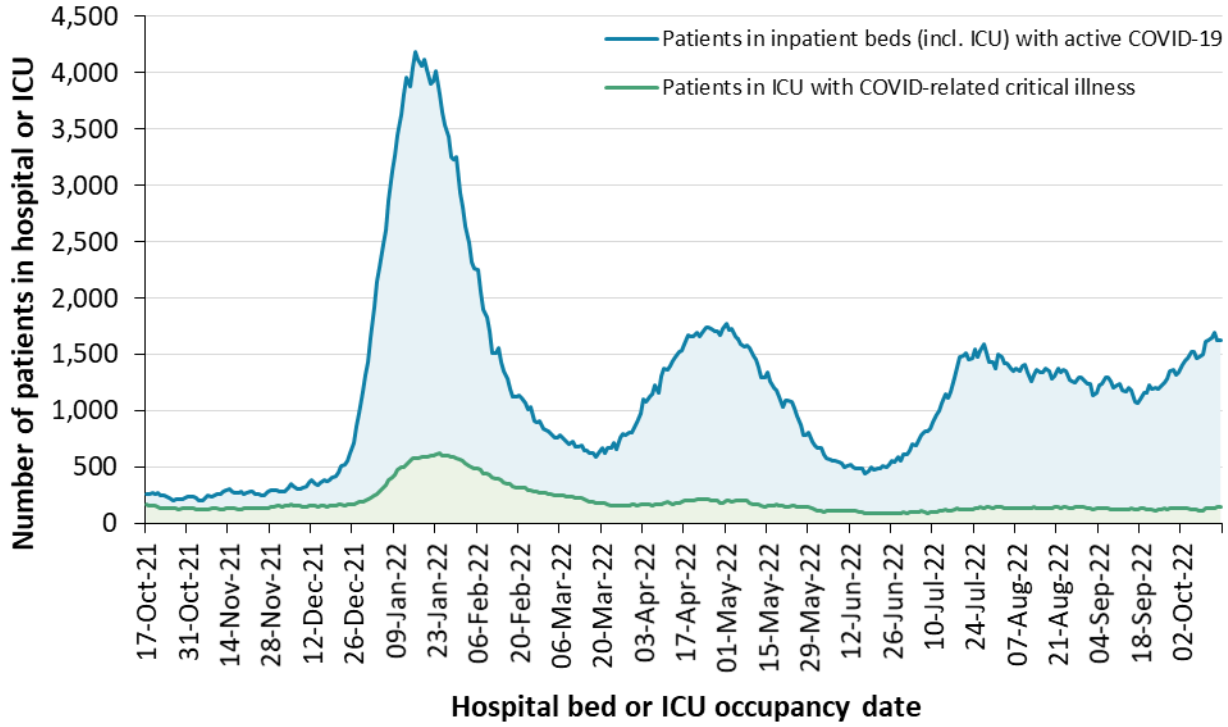
This graph shows a daily count of:

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

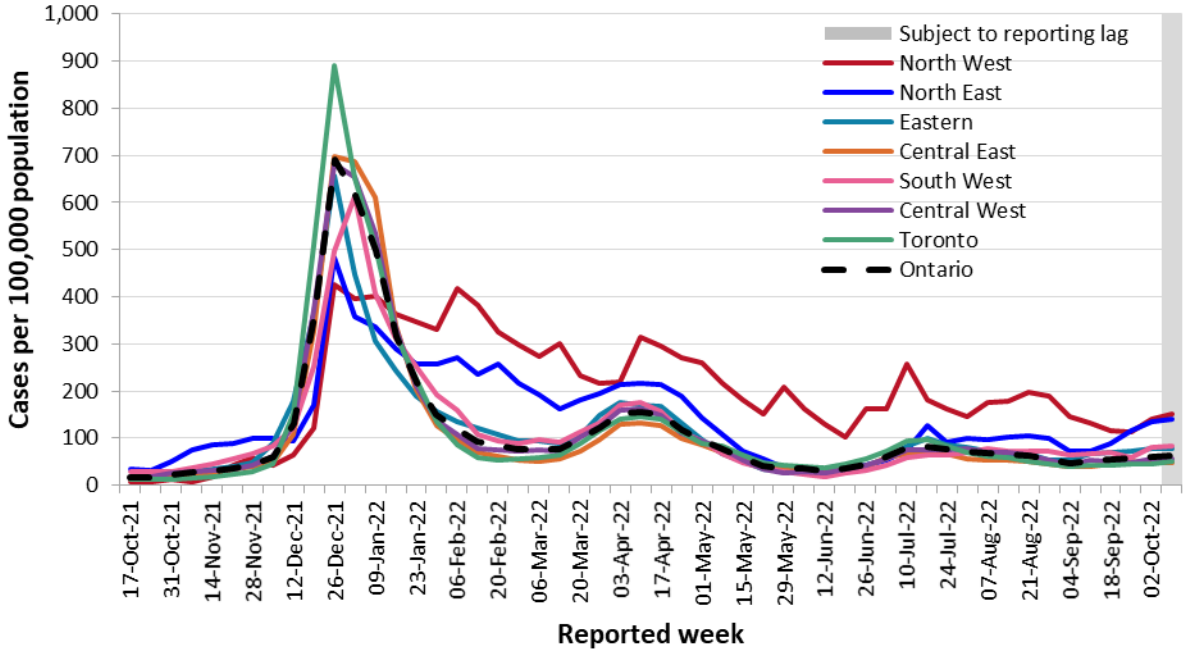


Table 3. Confirmed cases of COVID-19, by public health unit and region

Public Health Unit Name	Cases October 2 to October 8, 2022	Cases per 100,000 population October 2 to October 8, 2022	Cases October 9 to October 15, 2022	Cases per 100,000 population October 9 to October 15, 2022	Cases per 100,000 population Past 52 weeks (October 17, 2021 to October 15, 2022)
Northwestern Health Unit	108	133.0	134	165.1	14,178.7
Thunder Bay District Health Unit	225	142.7	227	143.9	8,160.8
TOTAL NORTH WEST	**333**	**139.4**	**361**	**151.1**	**10,205.9**
Algoma Public Health	197	167.2	263	223.2	8,369.8
North Bay Parry Sound District Health Unit	162	125.3	144	111.4	5,603.7
Porcupine Health Unit	88	103.5	69	81.2	7,411.8
Public Health Sudbury & Districts	250	121.8	260	126.7	8,029.0
Timiskaming Health Unit	71	209.5	67	197.7	6,770.0
TOTAL NORTH EAST	**768**	**134.4**	**803**	**140.6**	**7,383.8**
Ottawa Public Health	588	56.4	553	53.0	5,126.0
Eastern Ontario Health Unit	106	49.1	119	55.1	5,987.2
Hastings Prince Edward Public Health	167	96.6	170	98.4	6,692.1
Kingston, Frontenac and Lennox & Addington Public Health	308	147.2	268	128.1	9,351.4

Public Health Unit Name	Cases October 2 to October 8, 2022	Cases per 100,000 population October 2 to October 8, 2022	Cases October 9 to October 15, 2022	Cases per 100,000 population October 9 to October 15, 2022	Cases per 100,000 population Past 52 weeks (October 17, 2021 to October 15, 2022)
Leeds, Grenville & Lanark District Health Unit	261	145.0	261	145.0	5,668.9
Renfrew County and District Health Unit	86	79.3	127	117.1	5,014.1
TOTAL EASTERN	**1,516**	**78.6**	**1,498**	**77.6**	**5,865.2**
Durham Region Health Department	345	48.5	345	48.5	5,829.8
Haliburton, Kawartha, Pine Ridge District Health Unit	161	84.4	206	108.0	4,653.2
Peel Public Health	491	31.4	477	30.5	5,308.1
Peterborough Public Health	226	152.6	180	121.5	5,187.1
Simcoe Muskoka District Health Unit	396	65.5	464	76.8	6,385.0
York Region Public Health	442	36.8	495	41.2	5,542.0
TOTAL CENTRAL EAST	**2,061**	**46.6**	**2,167**	**49.0**	**5,570.7**
Toronto Public Health	1,367	45.7	1,494	50.0	6,074.1
TOTAL TORONTO	**1,367**	**45.7**	**1,494**	**50.0**	**6,074.1**
Chatham-Kent Public Health	61	57.2	72	67.5	6,870.2
Grey Bruce Health Unit	102	57.9	156	88.6	4,525.1

Public Health Unit Name	Cases October 2 to October 8, 2022	Cases per 100,000 population October 2 to October 8, 2022	Cases October 9 to October 15, 2022	Cases per 100,000 population October 9 to October 15, 2022	Cases per 100,000 population Past 52 weeks (October 17, 2021 to October 15, 2022)
Huron Perth Public Health	146	99.8	135	92.3	4,398.8
Lambton Public Health	141	106.0	172	129.4	7,096.2
Middlesex-London Health Unit	431	84.4	411	80.5	5,850.7
Southwestern Public Health	201	91.8	173	79.0	5,427.4
Windsor-Essex County Health Unit	301	69.8	305	70.8	6,710.1
TOTAL SOUTH WEST	**1,383**	**80.3**	**1,424**	**82.7**	**5,912.3**
Brant County Health Unit	66	43.0	82	53.4	5,726.2
City of Hamilton Public Health Services	556	95.6	470	80.8	7,256.9
Haldimand-Norfolk Health Unit	84	70.0	115	95.8	5,836.3
Halton Region Public Health	230	37.7	200	32.8	5,761.6
Niagara Region Public Health	300	62.3	317	65.8	6,039.5
Region of Waterloo Public Health and Emergency Services	229	37.8	250	41.3	5,297.3
Wellington-Dufferin-Guelph Public Health	104	33.3	151	48.4	5,035.0

Public Health Unit Name	Cases October 2 to October 8, 2022	Cases per 100,000 population October 2 to October 8, 2022	Cases October 9 to October 15, 2022	Cases per 100,000 population October 9 to October 15, 2022	Cases per 100,000 population Past 52 weeks (October 17, 2021 to October 15, 2022)
TOTAL CENTRAL WEST	**1,569**	**54.8**	**1,585**	**55.3**	**5,936.0**
TOTAL ONTARIO	**8,997**	**61.1**	**9,332**	**63.3**	**5,967.8**

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 October 2 to October 8, 2022	Hospital admissions per 100,000 population October 2 to October 8, 2022	Hospital admissions October 9 to October 15, 2022	Hospital admissions per 100,000 population October 9 to October 15, 2022	Hospital admissions Past 52 weeks (October 17, 2021 to October 15, 2022)	Hospital admissions per 100,000 population Past 52 weeks (October 17, 2021 to October 15, 2022)
Total Cases	464	3.1	491	3.3	27,189	184.5
Sex: Female	221	3.0	222	3.0	12,457	167.1
Sex: Male	243	3.3	266	3.7	14,691	201.8
Sex: Did not specify female or male	0	N/A	3	N/A	41	N/A
Ages: <1	11	7.7	14	9.8	652	457.8
Ages: 1 – 4	5	0.9	3	0.5	470	80.9
Ages: 5 – 11	7	0.6	1	0.1	225	20.9
Ages: 12 – 19	1	0.1	4	0.3	266	20.0
Ages: 20 – 39	17	0.4	17	0.4	1,634	39.4
Ages: 40 – 59	33	0.8	48	1.2	3,474	89.2
Ages: 60 – 79	160	5.5	168	5.8	10,420	359.3
Ages: 80 and over	230	35.1	236	36.0	10,048	1,532.1

Sex and age group	Hospital admissions October 2 to October 8, 2022	Hospital admissions per 100,000 population October 2 to October 8, 2022	Hospital admissions October 9 to October 15, 2022	Hospital admissions per 100,000 population October 9 to October 15, 2022	Hospital admissions Past 52 weeks (October 17, 2021 to October 15, 2022)	Hospital admissions per 100,000 population Past 52 weeks (October 17, 2021 to October 15, 2022)
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 October 2 to October 8, 2022	Deaths per 100,000 population October 2 to October 8, 2022	Deaths October 9 to October 15, 2022	Deaths per 100,000 population October 9 to October 15, 2022	Deaths Past 52 weeks (October 17, 2021 to October 15, 2022)	Deaths per 100,000 population Past 52 weeks (October 17, 2021 to October 15, 2022)
Total Cases	72	0.5	67	0.5	4,976	33.8
Sex: Female	34	0.5	33	0.4	2,181	29.3
Sex: Male	38	0.5	34	0.5	2,784	38.2
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	0	0.0	1	<0.1	59	1.4
Ages: 40 – 59	3	0.1	2	0.1	321	8.2
Ages: 60 – 79	22	0.8	23	0.8	1,652	57.0
Ages: 80 and over	47	7.2	41	6.3	2,931	446.9
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)	9,048	1,948	21.5%
Wave 3 (March 1, 2021 to July 31, 2021)	414	60	14.5%
Wave 4 (August 1, 2021 to December 14, 2021)	245	45	18.4%
Wave 5 (December 15, 2021 to February 28, 2022)	10,113	481	4.8%
Wave 6 (March 1, 2022 to June 18, 2022)	7,658	203	2.7%
Wave 7 (June 19, 2022 to October 15, 2022)[2]	15,527	407	2.6%
Total	**49,016**	**5,050**	**10.3%**

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 October 15, 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 and a half 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

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