

## DAILY EPIDEMIOLOGICAL SUMMARY

# COVID-19 in Ontario: January 15, 2020 to December 31, 2021

This report includes the most current information available from CCM as of **December 31, 2021**.

A [weekly summary report](#) is available with additional information to complement the daily report.

Please visit the interactive [Ontario COVID-19 Data Tool](#) to explore recent COVID-19 data by public health unit, age group, sex, and trends over time. For more information about whole genome sequencing, please see the [SARS CoV-2 Whole Genome Sequencing in Ontario report](#).

This **daily** report provides an epidemiologic summary of recent COVID-19 activity in Ontario. The change in cases is determined by taking the cumulative difference between the current day and the previous day.

## Highlights

- There are a total of 774,806 confirmed cases of COVID-19 in Ontario reported to date.
- Compared to the previous day, this represents:
  - An increase of 18,445 confirmed cases (percent change of +10.4%)
  - An increase of 12\* deaths (percent change of -20.0%)
  - An increase of 4,769 resolved cases (percent change of +3.0%)

\* This number only includes deaths that have occurred in the last month.

Due to changes in the availability of testing, driven by increasing COVID-19 cases related to the Omicron variant, case counts in this report are an underestimate of the true number of individuals with COVID-19 in Ontario. As such, data should be interpreted with caution. For more information, please see our data caveats and check out [our blog](#).

In this document, the term 'change in cases' refers to cases publicly reported by the province for a given day. Data corrections or updates can result in case records being removed and or updated from past reports and may result in subset totals for updated case counts (i.e., age group, sex) differing from the overall updated case counts.

The term public health unit reported date in this document refers to the date local public health units were first notified of the case.

## Case Characteristics

**Table 1a. Summary of recent confirmed cases of COVID-19: Ontario**

	Change in cases December 30, 2021	Change in cases December 31, 2021	Percentage change December 31, 2021 compared to December 30, 2021	Cumulative case count as of December 31, 2021
Total number of cases	16,713	18,445	+10.4%	774,806
Number of deaths	15	12	-20.0%	10,206
Number resolved	4,630	4,769	+3.0%	652,114

**Note:** The number of cases publicly reported by the province each day may not align with case counts reported to public health on a given day; public health unit reported date refers to the date local public health was first notified of the case. Data corrections or updates can result in case records being removed and or updated from past reports. The number of deaths presented in the change in cases column for each day only includes deaths that occurred in the last 30 days.

**Data Source:** CCM

**Table 1b. Summary of recent confirmed cases of COVID-19 by age group and sex: Ontario**

	Change in cases December 30, 2021	Change in cases December 31, 2021	Cumulative case count as of December 31, 2021
Sex: Male	7,818	8,662	385,330
Sex: Female	8,806	9,717	386,590
Ages: 0-4	497	634	22,942
Ages: 5-11	1,068	1,236	49,013
Ages: 12-19	1,798	1,903	70,721
Ages: 20-39	7,023	7,502	297,148
Ages: 40-59	4,607	5,169	212,933
Ages: 60-79	1,435	1,665	93,125
Ages: 80 and over	282	328	28,749

**Note:** Not all cases have a reported age or sex reported. Data corrections or updates can result in case records being removed and or updated from past reports and may result in subset totals (i.e., age group, sex) differing from past publicly reported case counts.

**Data Source:** CCM

**Table 2. Summary of recent confirmed cases of COVID-19 in long-term care homes: Ontario**

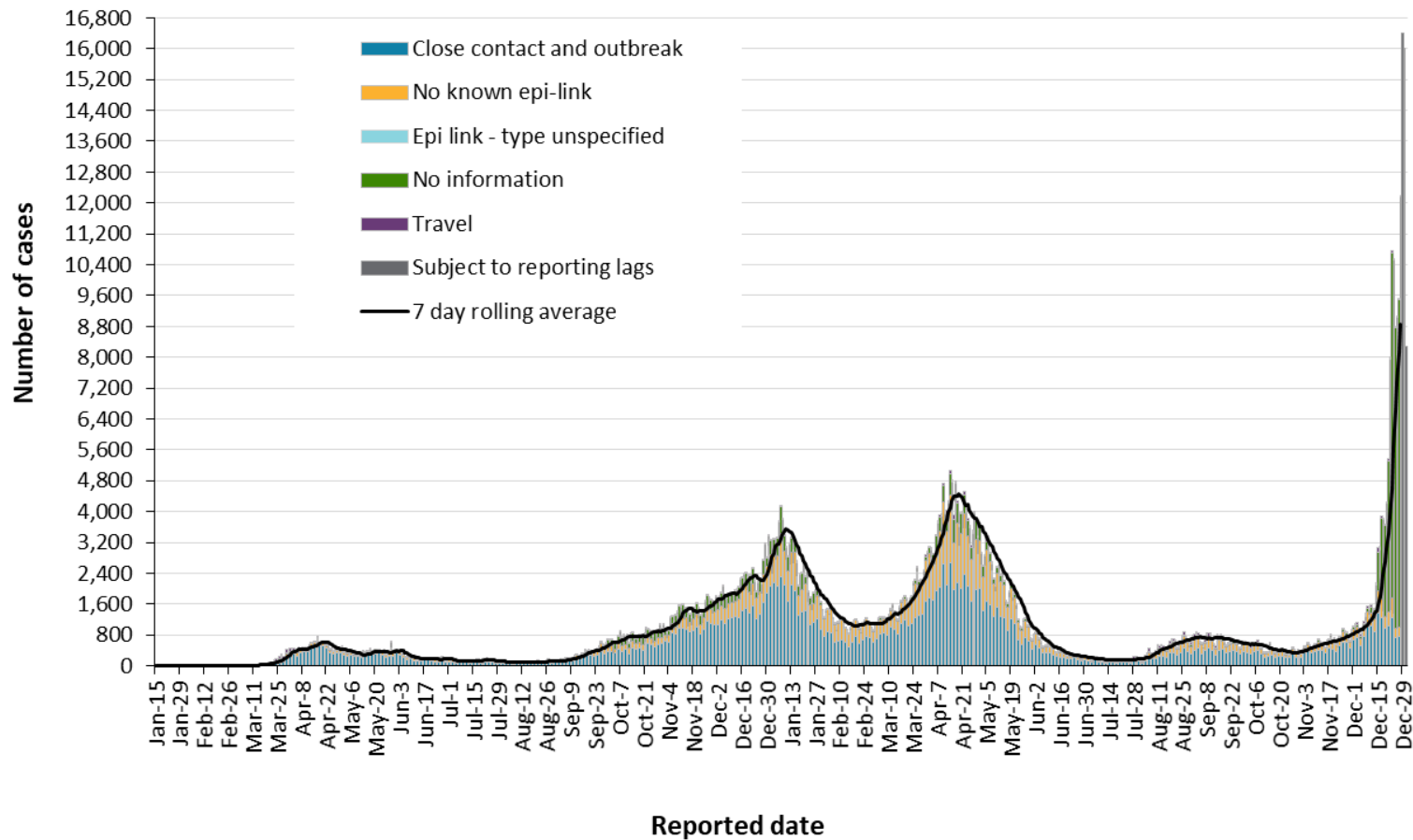
Long-term care home cases	Change in cases December 30, 2021	Change in cases December 31, 2021	Cumulative case count as of December 31, 2021
Residents	71	97	16,051
Health care workers	27	25	7,569
Deaths among residents	0	0	4,033
Deaths among health care workers	0	0	10

**Note:** Information on how long-term care home residents and health care workers are identified is available in the [technical notes](#). Also, the change in cases in these categories may represent existing case records that have been updated.

**Data Source:** CCM

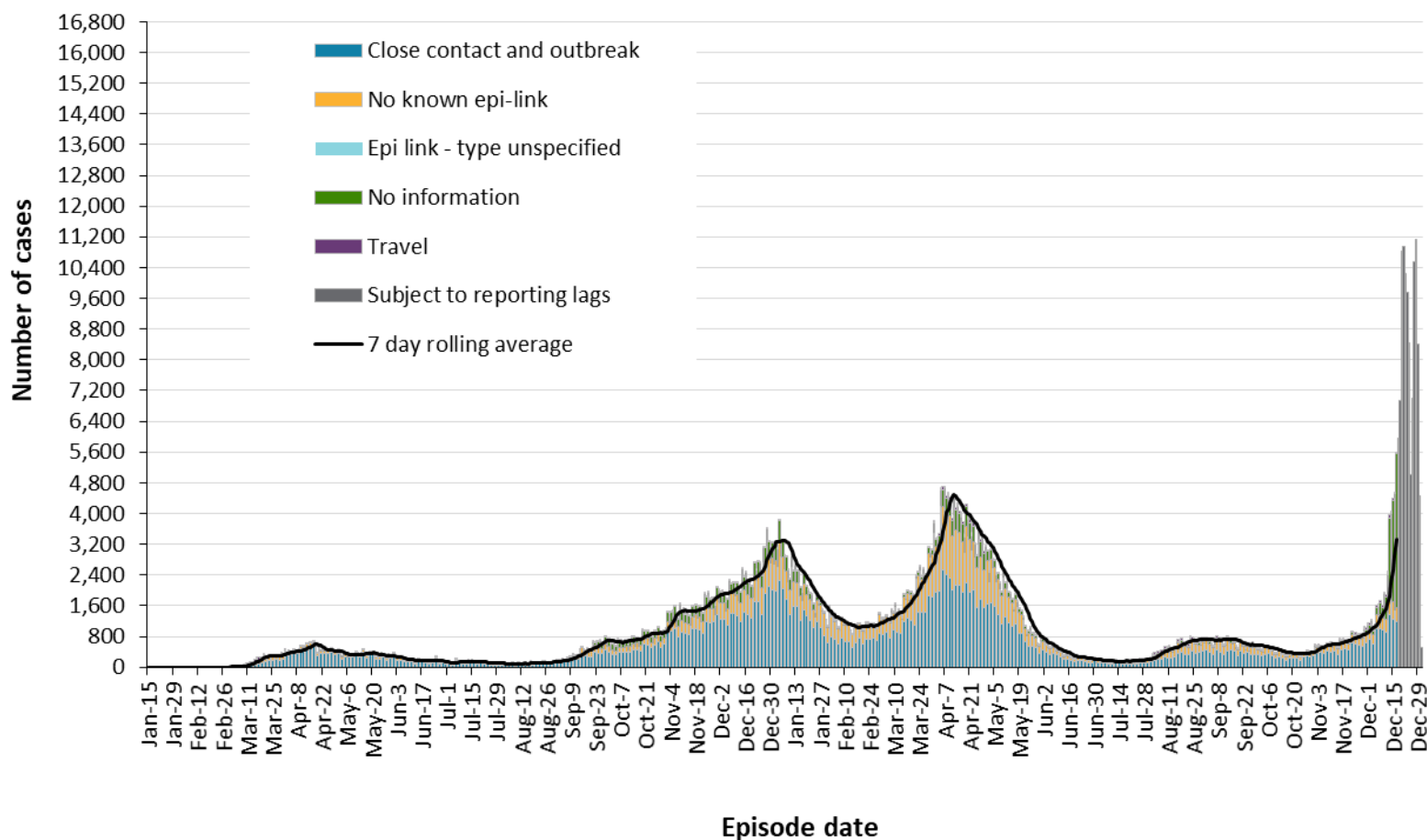
## Time

**Figure 1. Confirmed cases of COVID-19 by likely acquisition and public health unit reported date: Ontario, January 15, 2020 to December 31, 2021**



**Data Source:** CCM

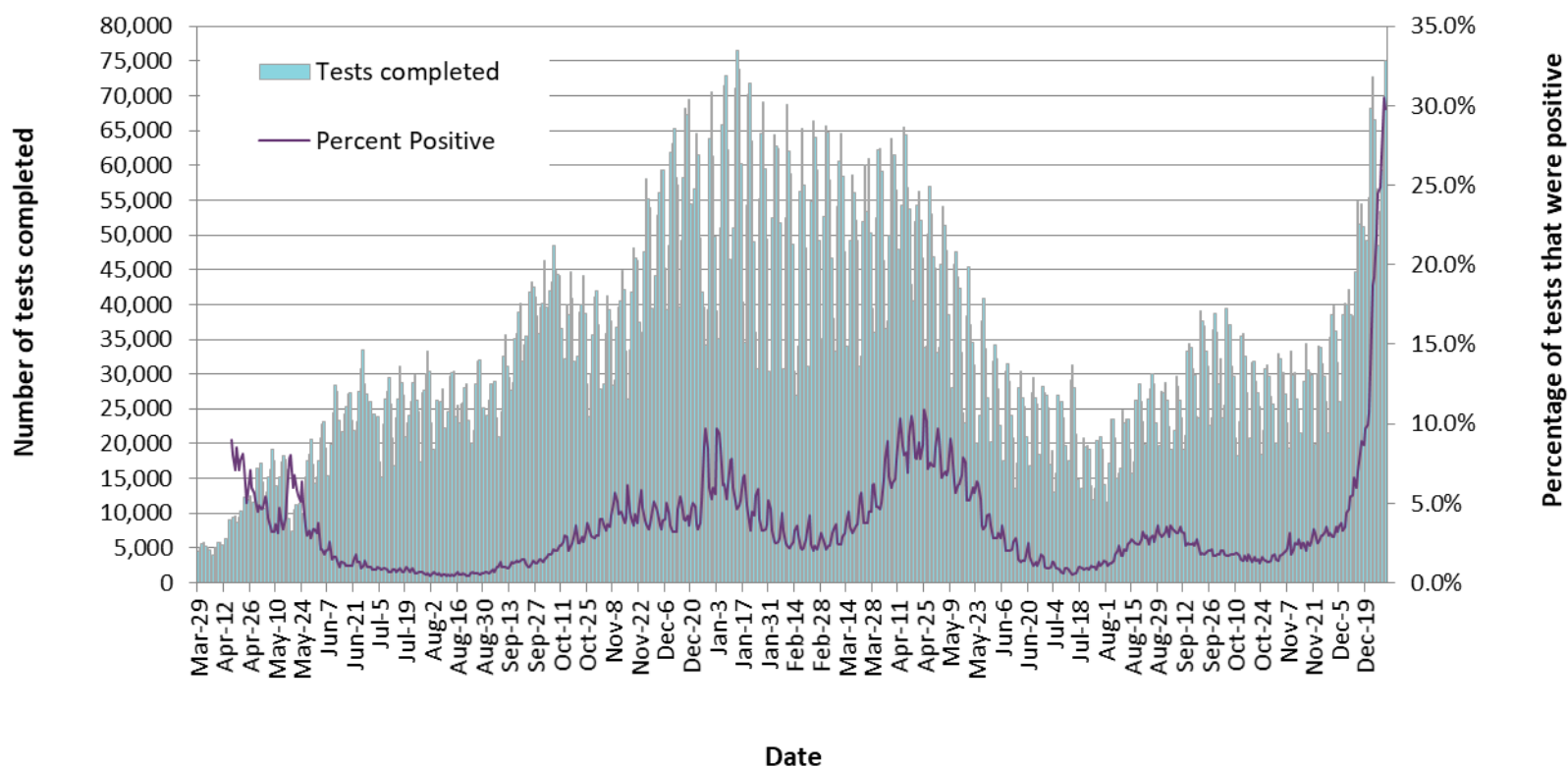
**Figure 2. Confirmed cases of COVID-19 by likely acquisition and approximation of symptom onset date: Ontario, January 15, 2020 to December 31, 2021**



**Note:** Not all cases may have an episode date and those without one are not included in the figure. Episode date is defined and available in the [technical notes](#).

**Data Source:** CCM

**Figure 3. Number of COVID-19 tests completed and percent positivity: Ontario, March 29, 2020 to December 30, 2021**

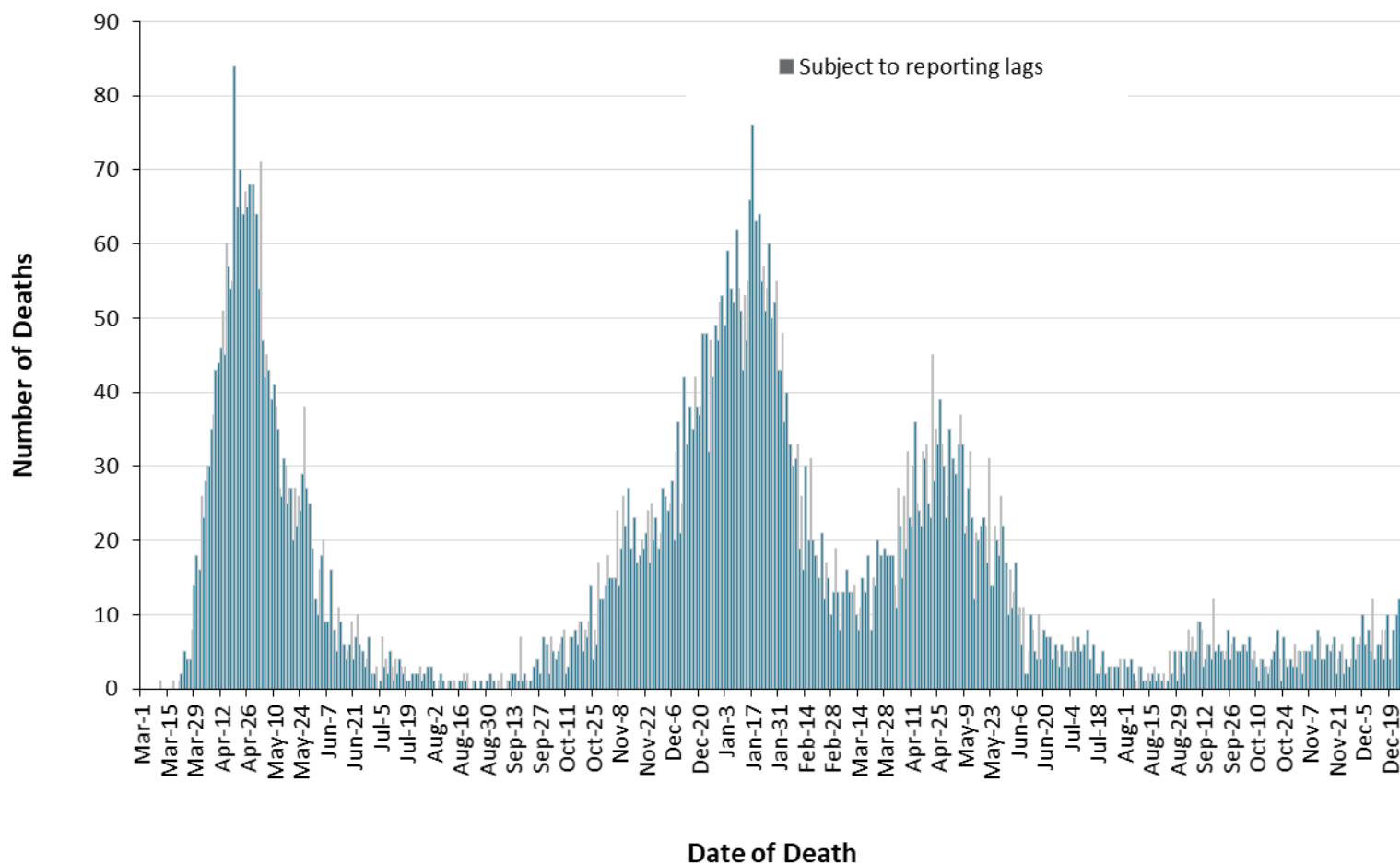


**Note:** The number of tests performed does not reflect the number of specimens or persons tested. More than one test may be performed per specimen or per person. As such, the percentage of tests that were positive does not necessarily translate to the number of specimens or persons testing positive.

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

## Severity

Figure 4. Confirmed deaths among COVID-19 cases by date of death: Ontario, March 1, 2020 to December 31, 2021



**Note:** Cases without a death date are not included in the figure.

**Data Source:** CCM

**Table 3. Confirmed cases of COVID-19 by severity: Ontario**

	Cumulative case count as of December 31, 2021	Percentage of all cases
Cumulative deaths reported (please note there may be a reporting delay for deaths)	10,206	1.3%
Deaths reported in ages: 19 and under	8	<0.1%
Deaths reported in ages: 20-39	113	<0.1%
Deaths reported in ages: 40-59	735	0.3%
Deaths reported in ages: 60-79	3,381	3.6%
Deaths reported in ages: 80 and over	5,968	20.8%
Ever in ICU	6,421	0.8%
Ever hospitalized	32,493	4.2%

**Note:** Not all cases have an age reported. Data corrections or updates can result in case records being removed and/or updated and may result in totals differing from past publicly reported case counts. Percentage of deaths reported for each age group is calculated using all cases in the age group as the denominator.

**Data Source:** CCM



## Geography

**Table 4. Summary of recent confirmed cases of COVID-19 by public health unit and region: Ontario**

Public Health Unit Name	Change in cases December 30, 2021	Change in cases December 31, 2021	Cumulative case count	Cumulative rate per 100,000 population
Northwestern Health Unit	79	73	1,783	2196.2
Thunder Bay District Health Unit	110	138	4,347	2756.4
<b>TOTAL NORTH WEST</b>	189	211	6,130	2566.0
Algoma Public Health	119	102	2,133	1810.1
North Bay Parry Sound District Health Unit	119	94	1,610	1245.1
Porcupine Health Unit	123	88	3,058	3597.6
Public Health Sudbury & Districts	184	240	5,630	2742.9
Timiskaming Health Unit	32	19	652	1924.2
<b>TOTAL NORTH EAST</b>	577	543	13,083	2290.1
Ottawa Public Health	1,431	1,482	43,322	4153.1
Eastern Ontario Health Unit	285	384	8,136	3769.1
Hastings Prince Edward Public Health	226	236	3,598	2081.8
Kingston, Frontenac and Lennox & Addington Public Health	287	262	6,431	3073.7
Leeds, Grenville & Lanark District Health Unit	248	251	3,807	2115.6
Renfrew County and District Health Unit	86	73	1,444	1331.2
<b>TOTAL EASTERN</b>	2,563	2,688	66,738	3458.9

Public Health Unit Name	Change in cases December 30, 2021	Change in cases December 31, 2021	Cumulative case count	Cumulative rate per 100,000 population
Durham Region Health Department	766	922	35,253	4955.3
Haliburton, Kawartha, Pine Ridge District Health Unit	159	151	3,646	1911.6
Peel Public Health	1,639	1,730	131,338	8399.5
Peterborough Public Health	134	144	3,110	2099.7
Simcoe Muskoka District Health Unit	662	850	22,072	3651.2
York Region Public Health	1,391	1,711	72,762	6062.2
<b>TOTAL CENTRAL EAST</b>	4,751	5,508	268,181	6069.2
Toronto Public Health	3,899	4,721	217,385	7274.3
<b>TOTAL TORONTO</b>	3,899	4,721	217,385	7274.3
Chatham-Kent Public Health	64	43	3,826	3588.4
Grey Bruce Health Unit	113	70	3,587	2036.3
Huron Perth Public Health	122	89	3,477	2377.5
Lambton Public Health	202	67	5,645	4245.3
Middlesex-London Health Unit	575	562	20,029	3922.6
Southwestern Public Health	198	201	7,165	3273.1
Windsor-Essex County Health Unit	280	344	25,498	5916.8
<b>TOTAL SOUTH WEST</b>	1,554	1,376	69,227	4019.1
Brant County Health Unit	226	143	6,518	4244.7
City of Hamilton Public Health Services	865	1,032	33,583	5773.0
Haldimand-Norfolk Health Unit	124	151	4,495	3745.6

Public Health Unit Name	Change in cases December 30, 2021	Change in cases December 31, 2021	Cumulative case count	Cumulative rate per 100,000 population
Halton Region Public Health	756	854	27,691	4535.2
Niagara Region Public Health	358	285	22,695	4711.2
Region of Waterloo Public Health and Emergency Services	533	600	26,318	4348.4
Wellington-Dufferin-Guelph Public Health	318	333	12,762	4090.5
<b>TOTAL CENTRAL WEST</b>	<b>3,180</b>	<b>3,398</b>	<b>134,062</b>	<b>4679.6</b>
<b>TOTAL ONTARIO</b>	<b>16,713</b>	<b>18,445</b>	<b>774,806</b>	<b>5258.6</b>

**Notes:** Health units with data corrections or updates could result in records being removed from totals, leading to negative or zero counts.

**Data Source:** CCM

## Outbreaks

**Table 5. Summary of recent confirmed COVID-19 outbreaks reported in long-term care homes, retirement homes and hospitals by status: Ontario**

Institution type	Change in outbreaks December 30, 2021	Change in outbreaks December 31, 2021	Number of ongoing outbreaks	Cumulative number of outbreaks reported
Long-term care homes	25	36	168	1,726
Retirement homes	16	11	55	979
Hospitals	12	9	69	695

**Note:** Ongoing outbreaks are those that are reported in CCM as 'Open' and without a 'Declared Over Date' recorded. The start of the outbreak is determined by the onset date of first case, or if missing the outbreak reported date, or else if that is also missing, then the outbreak created date.

**Data Source:** CCM

# Technical Notes

## Data Sources

- The data for this report were based on information successfully extracted from the Public Health Case and Contact Management Solution (CCM) for all PHUs by PHO as of **December 31, 2021 at 1 p.m.** for cases reported from February 1, 2021 onwards and as of **December 29, 2021 at 9 a.m.** for cases reported up to January 31, 2021.
- CCM is a dynamic disease reporting system, which allows ongoing updates to data previously entered. As a result, data extracted from CCM represent a snapshot at the time of extraction and may differ from previous or subsequent reports.
- 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].
- COVID-19 test data were based on information from The Provincial COVID-19 Diagnostics Network, reported by member microbiology laboratories.

## Data Caveats

- Due to changes in the availability of testing, driven by increasing COVID-19 cases related to the Omicron variant, case counts in this report are an underestimate of the true number of individuals with COVID-19 in Ontario. As such, data should be interpreted with caution.
- The data only represent cases reported to public health units and recorded in CCM. As a result, all counts will be subject to varying degrees of underreporting due to a variety of factors, such as disease awareness and medical care seeking behaviours, which may depend on severity of illness, clinical practice, changes in laboratory testing, and reporting behaviours.
- Data cleaning for older cases is incorporated on Mondays and Thursdays and may impact the case count published on Tuesdays and Fridays.
- Lags in CCM data entry due to weekend staffing may result in lower case counts than would otherwise be recorded.
- Only cases meeting the confirmed case classification as listed in the [MOH Case Definition – Coronavirus Disease \(COVID-19\) document](#) are included in the report counts from CCM.
- Cases of confirmed reinfection, as defined in the provincial case definitions, are counted as unique investigations.
- Case classification information may be updated for individuals with a positive result issued from a point-of-care assays.
- The number of tests performed does not reflect the number of specimens or persons tested. More than one test may be performed per specimen or per person. As such, the percentage of tests that were positive does not necessarily translate to the number of specimens or persons testing positive.
- Reported date is the date the case was reported to the public health unit.

- Case episode date represents an estimate of disease onset. This date is calculated based on the earliest date of symptom onset, specimen collection/test date, or the date reported to the public health unit.
- Resolved cases are determined only for COVID-19 cases that have not died. Cases that have died are considered fatal and not resolved. The following cases are classified as resolved:
  - Cases that are reported as 'recovered' in CCM
  - Cases that are not hospitalized and are 14 days past their episode date
  - Cases that are currently hospitalized (no hospital end date entered) and have a status of 'closed' in CCM (indicating public health unit follow-up is complete) and are 14 days past their symptom onset date or specimen collection date
- Hospitalization includes all cases for which a hospital admission date was reported or hospitalization/ICU was reported as 'Yes' at the time of data extraction. It includes cases that have been discharged from hospital as well as cases that are currently hospitalized. Emergency room visits are not included in the number of reported hospitalizations.
- ICU admission includes all cases for which an ICU admission date was reported at the time of data extraction. It is a subset of the count of hospitalized cases. It includes cases that have been treated or that are currently being treated in an ICU.
- Orientation of case counts by geography is based on the permanent health unit. This is equivalent to the diagnosing health unit (DHU) in iPHIS. DHU refers to the case's public health unit of residence at the time of illness onset and not necessarily the location of exposure. Cases for which the DHU was reported as MOH-PHO (to signify a case that is not a resident of Ontario) have been excluded from the analyses.
- Male/Female information presented in this report are sourced from the Sex field in CCM and are intended to represent sex assigned at birth. On October 14, 2021 changes were made in CCM to enable reporting on the Sex field where these data are supplemented by archived Male/Female information previously entered in the Gender field.
- Likely source of acquisition is determined by examining the epidemiologic link and epidemiologic link status fields in CCM. If no epidemiologic link is identified in those fields the risk factor fields are examined to determine whether a case travelled, was associated with a confirmed outbreak, was a contact of a case, had no known epidemiological link (sporadic community transmission) or was reported to have an unknown source/no information was reported. Some cases may have no information reported if the case is untraceable, was lost to follow-up or referred to FNIHB. Cases with multiple risk factors were assigned to a single likely acquisition source group which was determined hierarchically in the following order:
  - For cases with an episode date *on or after* April 1, 2020: Outbreak-associated > close contact of a confirmed case > travel > no known epidemiological link > information missing or unknown
  - For cases with an episode date *before* April 1, 2020: Travel > outbreak-associated > close contact of a confirmed case > no known epidemiological link > information missing or unknown

- Deaths are determined by using the outcome field in CCM. Any case marked 'Fatal' is included in the deaths data. The CCM field Type of Death is not used to further categorize the data.
  - If the date of death is missing the outcome date field is used as a proxy for cases marked as 'Fatal' in the outcome field.
- COVID-19 cases from CCM for which the Classification and/or Disposition was reported as ENTERED IN ERROR, DOES NOT MEET DEFINITION, IGNORE, DUPLICATE or any variation on these values have been excluded. The provincial case count for COVID-19 may include some duplicate records, if these records were not identified and resolved.
- Ongoing outbreaks are those that are reported in CCM as 'Open' and without a 'Declared Over Date' recorded. Closed outbreaks are 'Closed' or have a 'Declared Over Date' recorded in CCM or where the outbreak start date (determined by the onset date of first case, or if missing the reported date, or if missing the created date) is more than 5 months from the current date, even for outbreaks where the outbreak status value selected in CCM is 'OPEN'.
- 'Long-term care home residents' includes cases that reported 'Yes' to the risk factor 'Resident of a long-term care home'; or 'Yes' to the risk factor 'Resident of nursing home or other chronic care facility' and reported to be part of an outbreak assigned as a long-term care home (via the Outbreak number or case comments field); or were reported to be part of an outbreak assigned as a long-term care home (via the outbreak number or case comments field) with an age over 70 years and did not report 'No' to the risk factors 'Resident of long-term care home' or 'Resident of nursing home or other chronic care facility'. 'Long-term care home residents' excludes cases that reported 'Yes' to any of the health care worker occupational risk factors.
- The 'health care workers' variable includes cases that reported 'Yes' to any of the occupation of health care worker, doctor, nurse, dentist, dental hygienist, midwife, other medical technicians, personal support worker, respiratory therapist, first responder.
- 'Health care workers associated with long-term care outbreaks' includes 'health care workers' reported to be part of an outbreak assigned as a long-term care home (via the outbreak number or case comments field). Excludes cases that reported 'Yes' to risk factors 'Resident of long-term care home' or 'Resident of nursing home or other chronic care facility' and 'Yes' to the calculated 'health care workers' variable.
- Percent change is calculated by taking the difference between the current period (i.e., daily count or sum of the daily count over a 7-day period) and previous period (i.e., daily count or sum of the daily count over a 7-day period), divided by the previous period.

## Appendix A

**Table A1. Weekly rates of confirmed COVID-19 cases per 100,000 population over recent rolling 7-day periods, by reported date and public health unit: Ontario, December 16 to December 28, 2021**

Public Health Unit Name	Dec 16 to Dec 22	Dec 17 to Dec 23	Dec 18 to Dec 24	Dec 19 to Dec 25	Dec 20 to Dec 26	Dec 21 to Dec 27	Dec 22 to Dec 28	% change from Dec 16 – Dec 22 to Dec 22 – Dec 28
<b>NORTH WEST</b>								
Northwestern Health Unit	155.2	173.7	183.5	205.7	224.2	236.5	263.6	+69.8%
Thunder Bay District Health Unit	47.6	59.0	71.0	79.9	98.9	104.0	137.6	+189.1%
<b>NORTH EAST</b>								
Algoma Public Health	116.3	131.5	129.0	124.7	145.1	157.0	185.8	+59.8%
North Bay Parry Sound District Health Unit	83.5	120.6	137.7	158.5	162.4	214.2	232.0	+177.8%
Porcupine Health Unit	161.2	224.7	229.4	275.3	307.1	363.5	423.5	+162.7%
Public Health Sudbury & Districts	133.5	171.0	159.8	166.1	186.1	211.4	248.5	+86.1%
Timiskaming Health Unit	150.5	162.3	147.6	132.8	129.9	123.9	218.4	+45.1%
<b>EASTERN</b>								
Ottawa Public Health	279.3	320.2	368.6	386.9	389.3	404.2	437.8	+56.7%
Eastern Ontario Health Unit	180.7	237.2	300.7	337.7	381.7	402.6	438.7	+142.8%
Hastings Prince Edward Public Health	238.4	279.5	326.9	318.8	321.7	341.4	374.9	+57.3%
Kingston, Frontenac and Lennox & Addington Public Health	469.3	479.9	506.1	472.7	438.8	414.9	462.6	-1.4%

Public Health Unit Name	Dec 16 to Dec 22	Dec 17 to Dec 23	Dec 18 to Dec 24	Dec 19 to Dec 25	Dec 20 to Dec 26	Dec 21 to Dec 27	Dec 22 to Dec 28	% change from Dec 16 – Dec 22 to Dec 22 – Dec 28
Leeds, Grenville & Lanark District Health Unit	215.6	249.0	284.5	298.4	304.5	309.5	333.4	+54.6%
Renfrew County and District Health Unit	77.4	84.8	112.5	140.1	164.1	187.1	194.5	+151.3%
<b>CENTRAL EAST</b>								
Durham Region Health Department	207.2	253.3	307.0	335.9	383.5	422.7	445.3	+114.9%
Haliburton, Kawartha, Pine Ridge District Health Unit	106.4	127.9	168.3	189.8	211.8	214.4	242.2	+127.6%
Peel Public Health	177.5	231.9	273.5	306.3	347.2	388.9	438.3	+146.9%
Peterborough Public Health	172.8	226.2	252.5	276.1	280.9	299.1	333.5	+93.0%
Simcoe Muskoka District Health Unit	187.6	207.9	239.9	274.3	304.5	346.6	375.2	+100.0%
York Region Public Health	220.4	270.7	335.3	379.5	447.7	509.1	576.0	+161.3%
<b>TORONTO</b>								
Toronto Public Health	284.7	363.2	418.2	473.6	534.8	581.0	640.9	+125.1%
<b>SOUTH WEST</b>								
Chatham-Kent Public Health	131.3	151.0	174.5	199.8	220.4	255.1	248.5	+89.3%
Grey Bruce Health Unit	152.1	185.1	224.8	214.0	236.7	269.1	248.7	+63.5%
Huron Perth Public Health	101.2	122.4	158.6	193.5	220.9	231.1	229.8	+127.1%
Lambton Public Health	174.5	223.4	282.0	354.2	388.1	394.8	431.7	+147.4%
Middlesex-London Health Unit	215.4	270.3	299.8	335.3	364.7	387.4	415.2	+92.8%



Public Health Unit Name	Dec 16 to Dec 22	Dec 17 to Dec 23	Dec 18 to Dec 24	Dec 19 to Dec 25	Dec 20 to Dec 26	Dec 21 to Dec 27	Dec 22 to Dec 28	% change from Dec 16 – Dec 22 to Dec 22 – Dec 28
Southwestern Public Health	156.7	188.7	204.7	222.9	247.6	268.1	291.9	+86.3%
Windsor-Essex County Health Unit	153.4	169.4	180.1	186.3	218.1	229.0	253.6	+65.3%
<b>CENTRAL WEST</b>								
Brant County Health Unit	135.5	196.0	226.0	252.0	271.6	323.0	440.9	+225.4%
City of Hamilton Public Health Services	244.6	324.4	418.9	467.6	499.7	575.5	653.4	+167.1%
Haldimand-Norfolk Health Unit	145.0	221.7	253.3	262.5	275.8	305.8	355.0	+144.8%
Halton Region Public Health	309.1	398.8	463.3	493.1	534.3	554.6	612.7	+98.2%
Niagara Region Public Health	150.3	198.5	222.1	269.4	303.3	338.2	366.6	+143.9%
Region of Waterloo Public Health and Emergency Services	169.5	201.4	251.5	279.6	293.8	326.5	390.6	+130.4%
Wellington-Dufferin-Guelph Public Health	214.4	260.3	301.0	341.7	367.0	409.9	481.7	+124.7%
<b>TOTAL ONTARIO</b>	<b>217.7</b>	<b>269.8</b>	<b>315.2</b>	<b>348.9</b>	<b>385.5</b>	<b>421.2</b>	<b>467.6</b>	<b>+114.8%</b>

**Note:** Rates are based on the sum of the daily case counts during the date ranges specified in each column.

**Data Source:** CCM

## Citation

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