Public Health Ontario | Santé publique Ontario

Weekly Epidemiologic Summary

COVID-19 in Ontario: Focus on January 10, 2021 to January 16, 2021

This report includes the most current information available from CCM and other case management systems (CCM plus) as of **January 19, 2021.**

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.

A daily summary is available and provides an epidemiologic summary of recent COVID-19 activity in Ontario. This weekly report provides an epidemiologic summary of COVID-19 activity in Ontario over time.

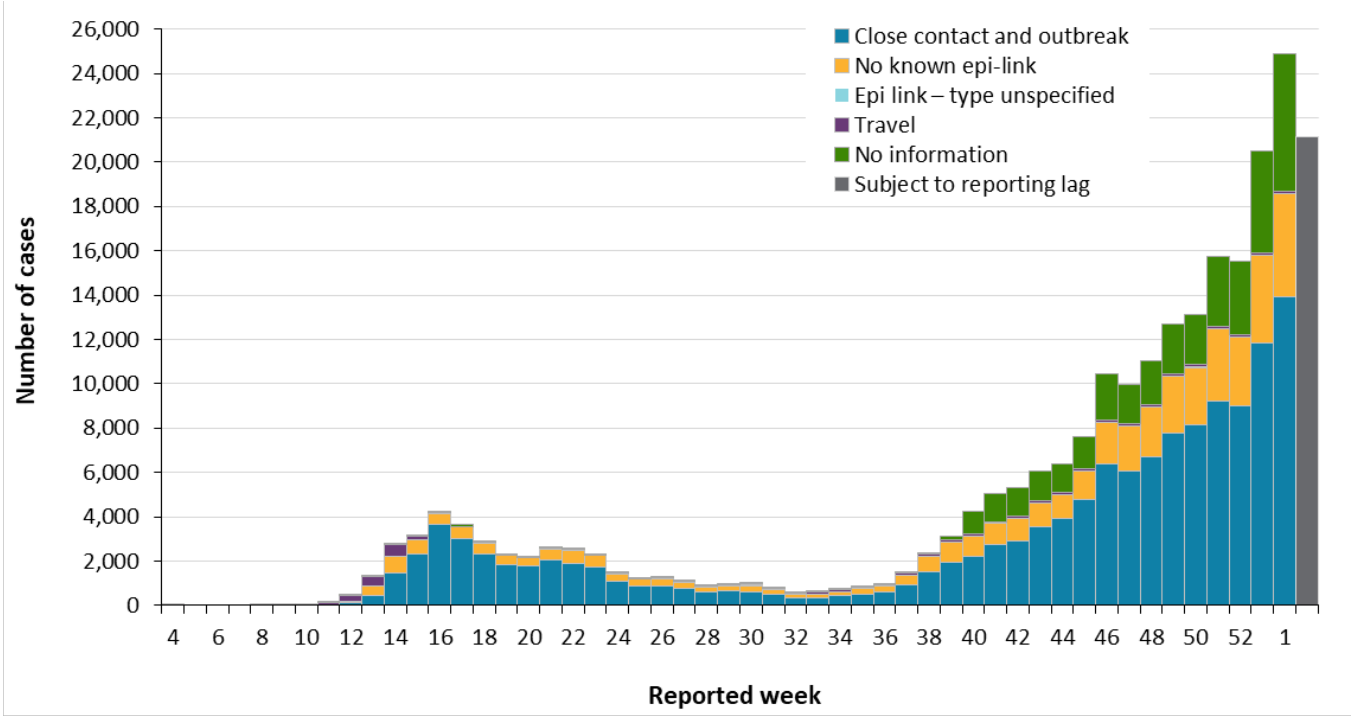
Highlights

- There are a total of 239,945 confirmed cases of COVID-19 in Ontario with a public health unit reported date up to January 16, 2021.
- For the period with a public health unit reported date between January 10 to 16, 2021 (week 2):
    - A total of 21,132 cases were reported to public health compared to 24,881 cases the previous week (January 3 to 9, 2021).
    - As of January 16th, there were 14 cases with the COVID-19 variant of concern B.1.1.7, which emerged in the United Kingdom in fall 2020, reported across 5 public health units.
    - Approximately 85% of public health units reported a decrease in the rate of disease in the current week. This downward trend is also reflected in the sharp decrease in the rate of disease among all age groups, as well as a decrease in the number of outbreak and outbreak-associated cases.

> The term public health unit reported date in this document refers to the date local public health units were first notified of the case.
>
> Data corrections or updates can result in case records being removed and or updated from past reports. Thus comparisons of case counts by public health unit reported date may not align with daily change in cases publicly reported by the province for the same time period, which reflects the difference in cumulative counts between one day and the next.

Cases Over Time

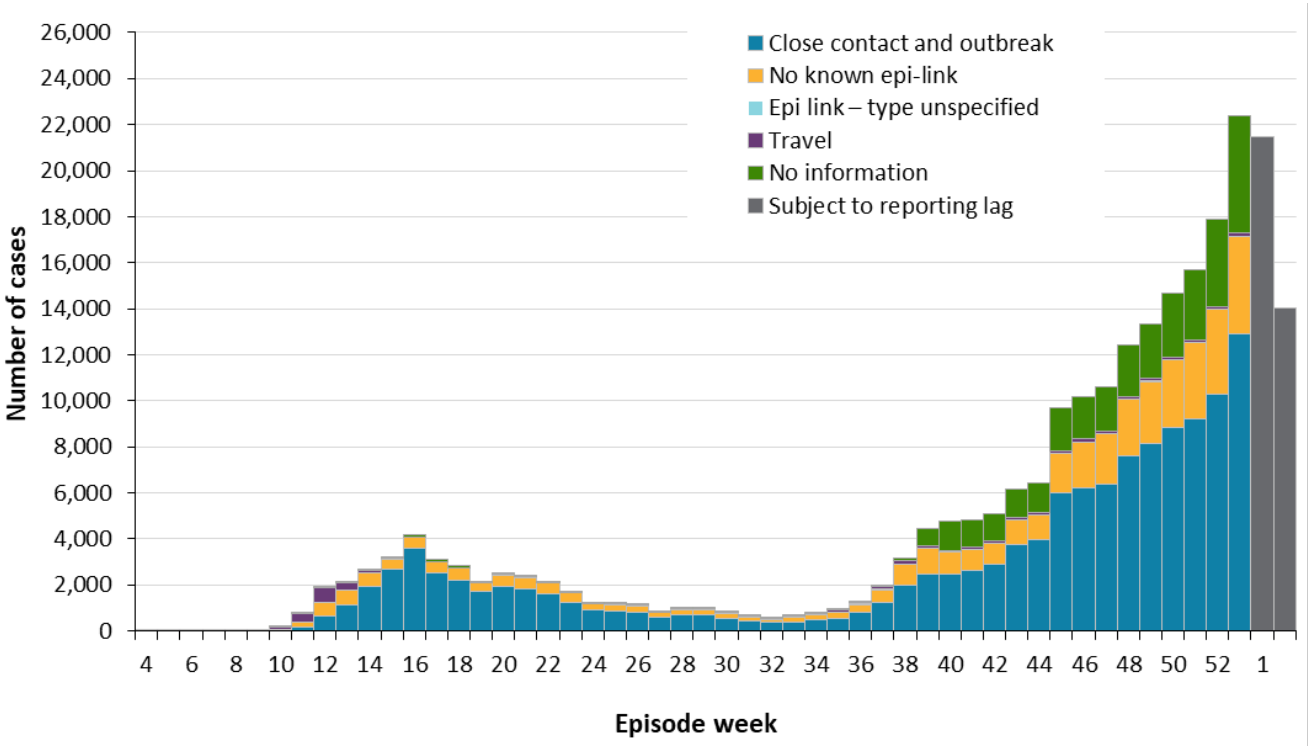
Figure 1. Confirmed cases of COVID-19 by likely source of acquisition and public health unit reported week: Ontario



Note: Include cases with reported dates ranging from week 4 (January 19 and 25, 2020) to week 2 (January 10 and 16, 2021). See Table 1A in Appendix A for a list of the weeks and corresponding start and end dates.

Data Source: CCM plus

Figure 2. Confirmed cases of COVID-19 by likely source of acquisition and approximation of symptom onset week: Ontario



Note: Not all cases have an episode date. Cases without an episode date are not included in the figure. The definition for how episode date is defined is available in the technical notes. Include cases with episode dates ranging from week 4 (January 19 and 25, 2020) to week 2 (January 10 and 16, 2021). See Table 1A in Appendix A for a list of the weeks and corresponding start and end dates.

Data Source: CCM plus

Case Characteristics

Table 1. Summary of confirmed cases of COVID-19 by public health unit reported date: Ontario

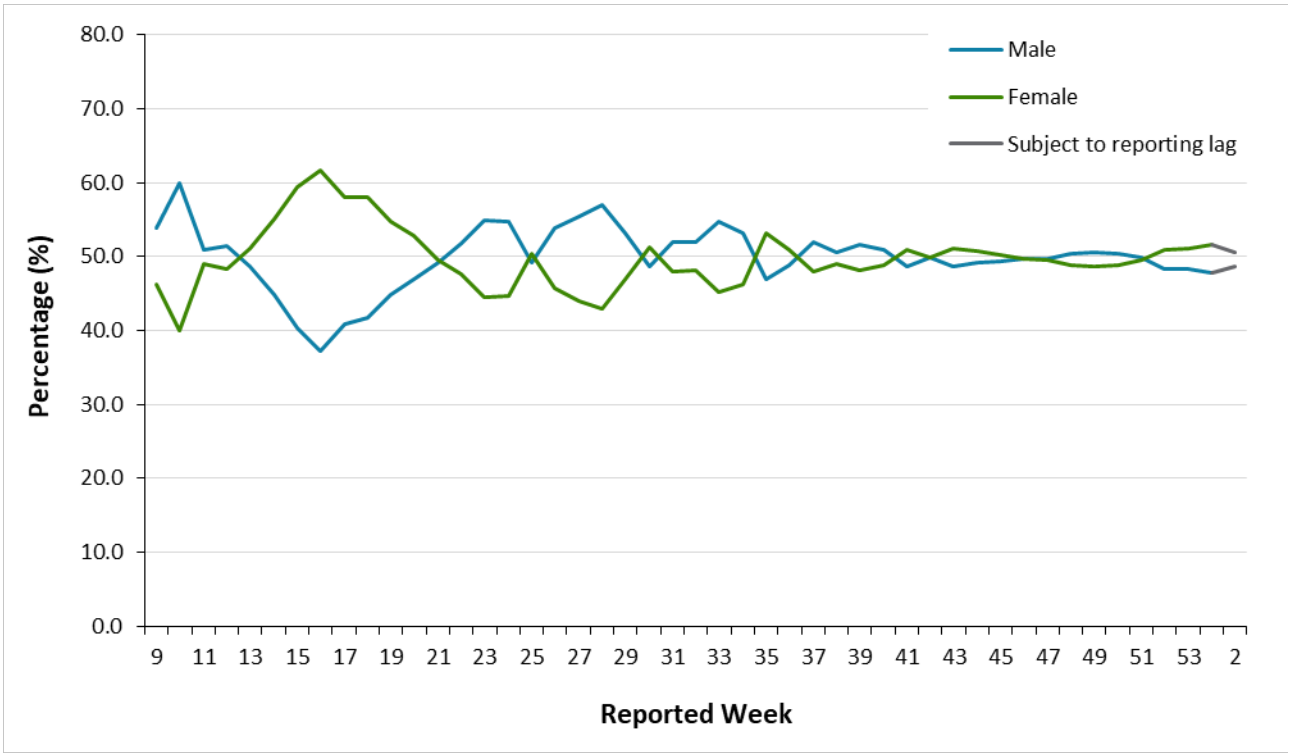
	Reported week 1 (January 3 to 9)	Reported week 2 (January 10 to 16)	Cumulative case count up to January 16	Cumulative rate per 100,000 population
Total number of cases	24,881	21,132	239,945	1,614.2
Gender: Male	11,899	10,296	117,204	1,601.3
Gender: Female	12,831	10,679	121,387	1,608.8
Ages: 19 and under	3,462	2,835	31,376	1,000.4
Ages: 20-39	9,243	7,925	87,844	2,113.5
Ages: 40-59	7,074	6,036	69,088	1,754.6
Ages: 60-79	3,530	2,928	34,512	1,167.9
Ages: 80 and over	1,560	1,402	17,080	2,514.5
Number resolved	N/A	N/A	212,729	N/A

Note: Not all cases have an age or gender reported.

Interpret information for the most recent week with caution due to reporting lags.

Data Source: CCM plus

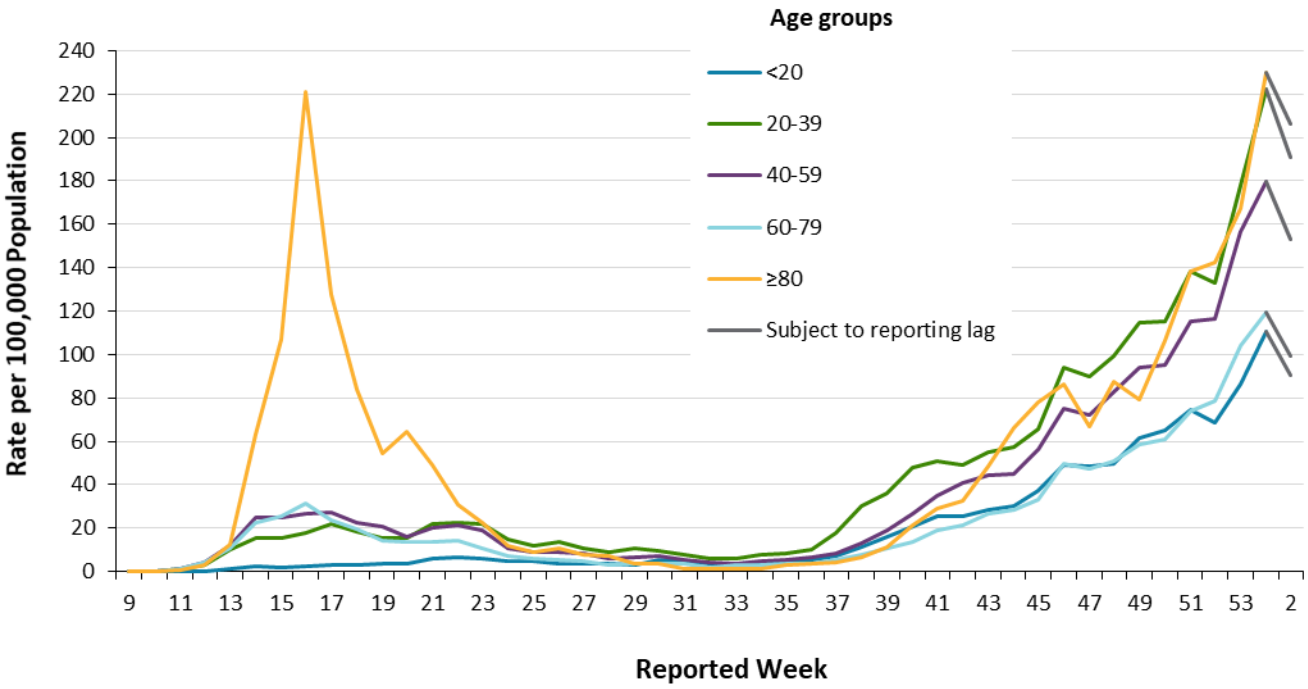
Figure 3. Percentage of confirmed cases of COVID-19 by gender and public health unit reported week: Ontario



Note: Not all cases have a gender reported. The denominator for calculating weekly percentages includes all cases. Only weeks with more than 10 cases by public health unit reporting date are included (starting in week 9). Include cases with reported dates ranging from Week 9 (February 23 and 29, 2020) to week 2 (January 10 and 16, 2021). See Table 1A in Appendix A for a list of the weeks and corresponding start and end dates.

Data Source: CCM plus

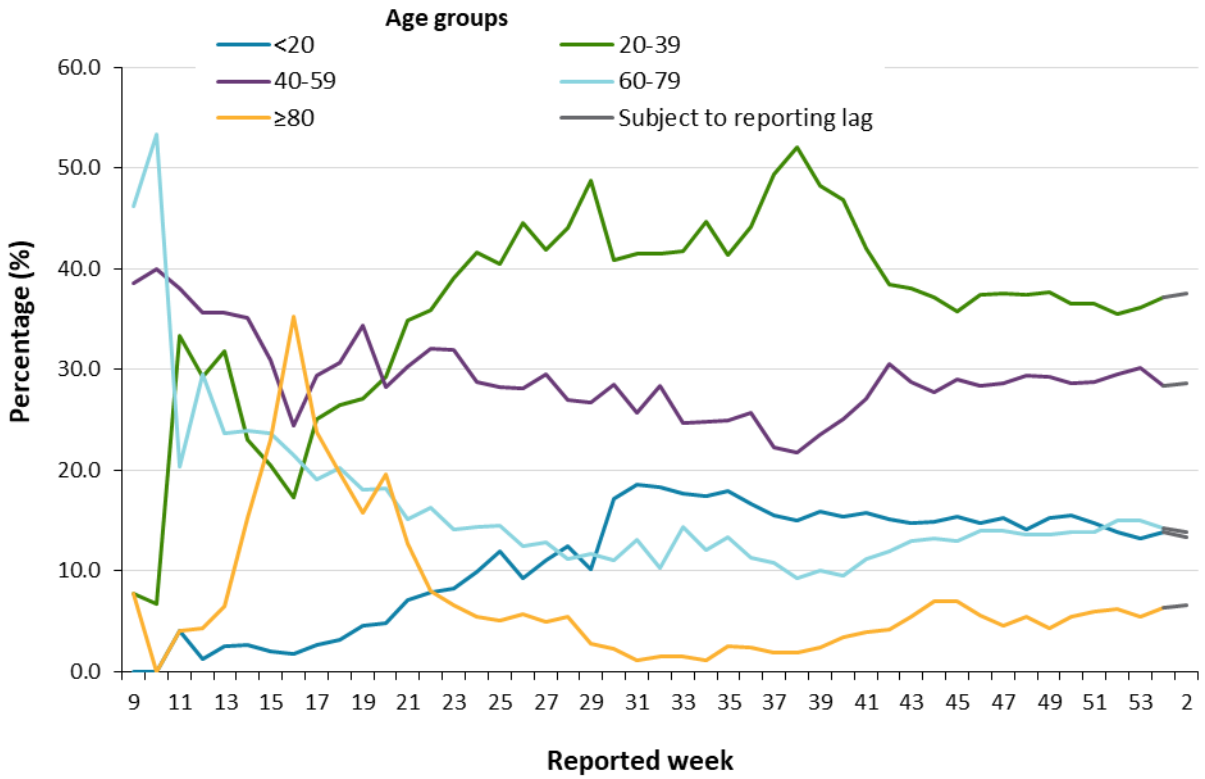
Figure 4a. Rate of confirmed cases of COVID-19 per 100,000 population by age group and public health unit reported week: Ontario



Note: Not all cases have an age reported. Only weeks with more than 10 cases by public health unit reporting date are included (starting in week 9). Include cases with reported dates ranging from week 9 (February 23 and 29, 2020) to week 2 (January 10 and 16, 2021). See Table 1A in Appendix A for a list of the weeks and corresponding start and end dates.

Data Source: CCM plus

Figure 4b. Percentage of confirmed cases of COVID-19 by age group and public health unit reported week: Ontario

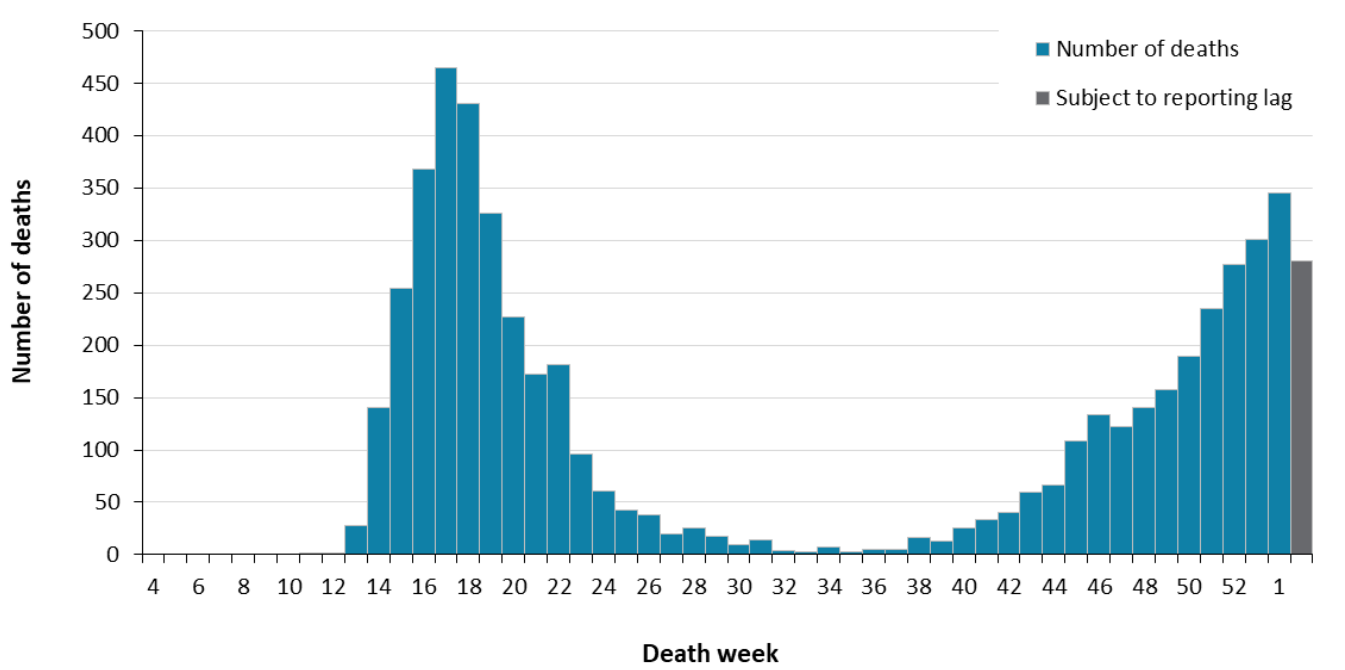


Note: Only weeks with more than 10 cases by public health unit reporting date are included (starting in week 9). Include cases with reported dates ranging from week 9 (February 23 and 29, 2020) to week 2 (January 10 and 16, 2021). See Table 1A in Appendix A for a list of the weeks and corresponding start and end dates.

Data Source: CCM plus

Deaths

Figure 5. Deaths among confirmed cases of COVID-19 by week of death: Ontario



Note: Cases without a death date are not included in the figure. Include cases with date of death ranging from week 4 (January 19 and 25, 2020) to week 2 (January 10 and 16, 2021). See Table 1A in Appendix A for a list of the weeks and corresponding start and end dates.

Data Source: CCM plus

Table 2. Summary of deaths among confirmed cases of COVID-19 by public health unit reported week: Ontario

Deaths	Reported week 1 (January 3 to 9)	Reported week 2 (January 10 to 16)	Cumulative case count up to January 16	Cumulative rate per 100,000 population
Number of deaths	221	88	5,562	37.4
Gender: Male	97	50	2,649	36.2
Gender: Female	124	37	2,873	38.1
Ages: 19 and under	0	0	1	0.0
Ages: 20-39	0	0	20	0.5
Ages: 40-59	5	4	213	5.4
Ages: 60-79	57	18	1,484	50.2
Ages: 80 and over	159	66	3,843	565.8

Note: Age and gender may not be reported for all cases. Reported week is the week the case was reported to the public health unit. This is different than the "week of death" presented in Figure 5 which reflects the week the case was reported to have a 'Fatal' outcome.

Interpret information for the most recent week with caution due to reporting lags.

Data Source: CCM plus

Exposure

Table 3. Confirmed cases of COVID-19 by likely source of acquisition and public health unit reported week: Ontario

	Reported week 1 (January 3 to 9)	Percentage	Reported week 2 (January 10 to 16)	Percentage	Cumulative case count up to January 16	Cumulative percentage
Travel	114	0.5%	178	0.8%	4,407	1.8%
Outbreak-associated or close contact of a confirmed case	13,947	56.1%	10,777	51.0%	145,358	60.6%
Epidemiological link – type unspecified	0	0.0%	0	0.0%	228	0.1%
No known epidemiological link	4,620	18.6%	3,876	18.3%	47,316	19.7%
Information missing or unknown	6,200	24.9%	6,301	29.8%	42,636	17.8%
Total	**24,881**		**21,132**		**239,945**	

Note: Information for how cases are grouped within each category is available in the technical notes. Interpret information for the most recent week with caution due to reporting lags.

Data Source: CCM plus.

Sub-populations of interest

Table 4. Summary of cases of COVID-19 among health care workers: Ontario

Health care workers	Reported week 1 (January 3 to 9)	Reported week 2 (January 10 to 16)	Cumulative case count up to January 16
Number of cases	1,187	1,051	16,204
Ever hospitalized	8	7	337
Ever in ICU	1	3	75

Note: Interpret information for the most recent week with caution due to reporting lags.

Data Source: CCM plus

Table 5. Summary of cases of COVID-19 associated with long-term care home outbreaks: Ontario

Long-term care home associated cases	Reported week 1 (January 3 to 9)	Reported week 2 (January 10 to 16)	Cumulative case count up to January 16
Residents	999	863	13,378
Deaths among residents	97	47	3,273
Health care workers	350	322	5,346
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. Interpret information for the most recent week with caution due to reporting lags.

Data Source: CCM plus

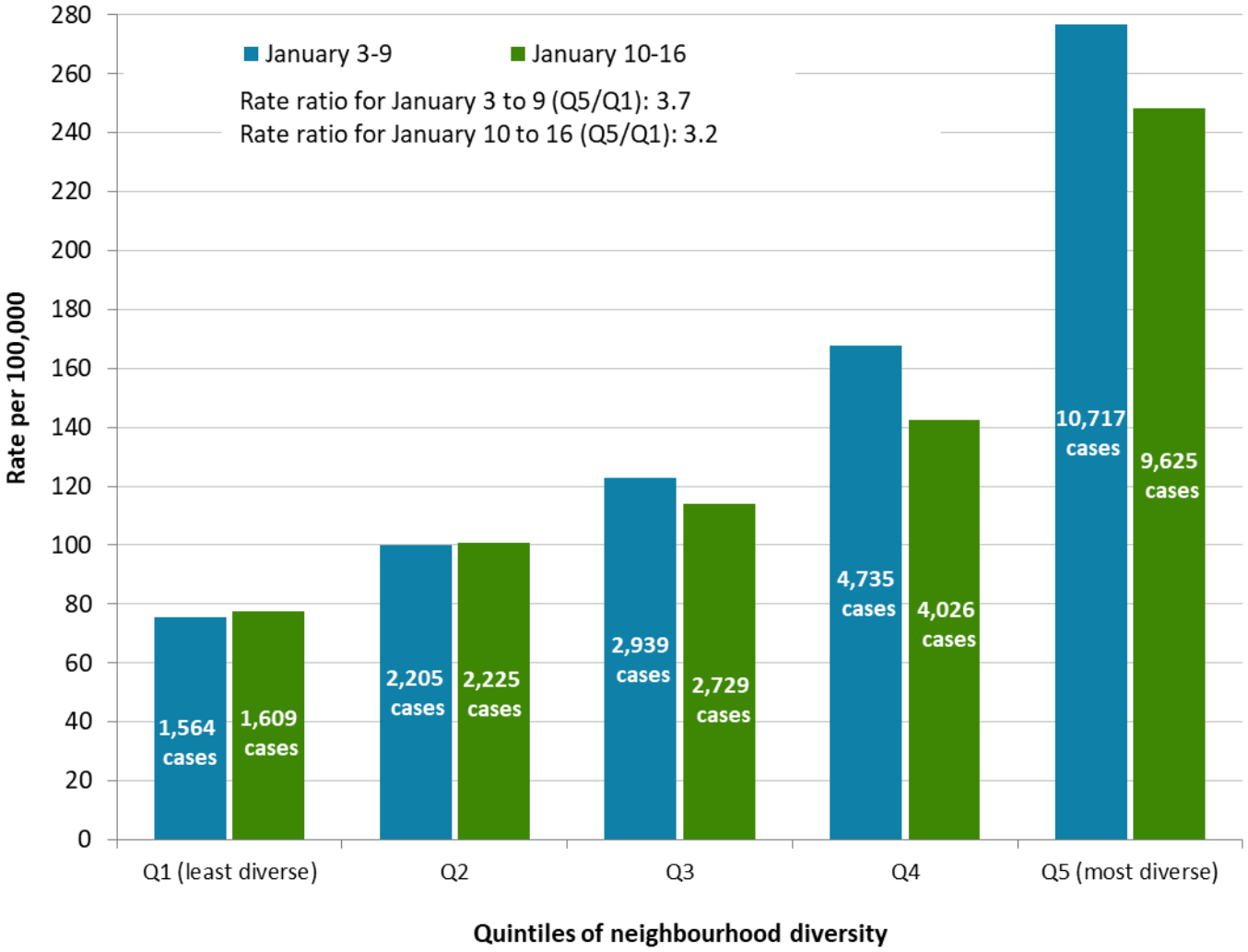
Table 6: Summary of cases of COVID-19 among school aged children by age group: Ontario

	Reported week 1 (December to January 2)	Reported week 2 (January 10 to 16)	Cumulative case count from August 30 up to January 16
Ages: 4-8	594	424	5,024
Ages: 9-13	762	606	7,050
Ages: 14-17	891	775	7,329

Note: Interpret information for the most recent week with caution due to reporting lags. Includes all confirmed cases of COVID-19 for specified ages, regardless of school attendance. Cumulative counts include cases of COVID-19 reported starting week 36 (August 30 to September 5, 2020).

Data Source: CCM plus

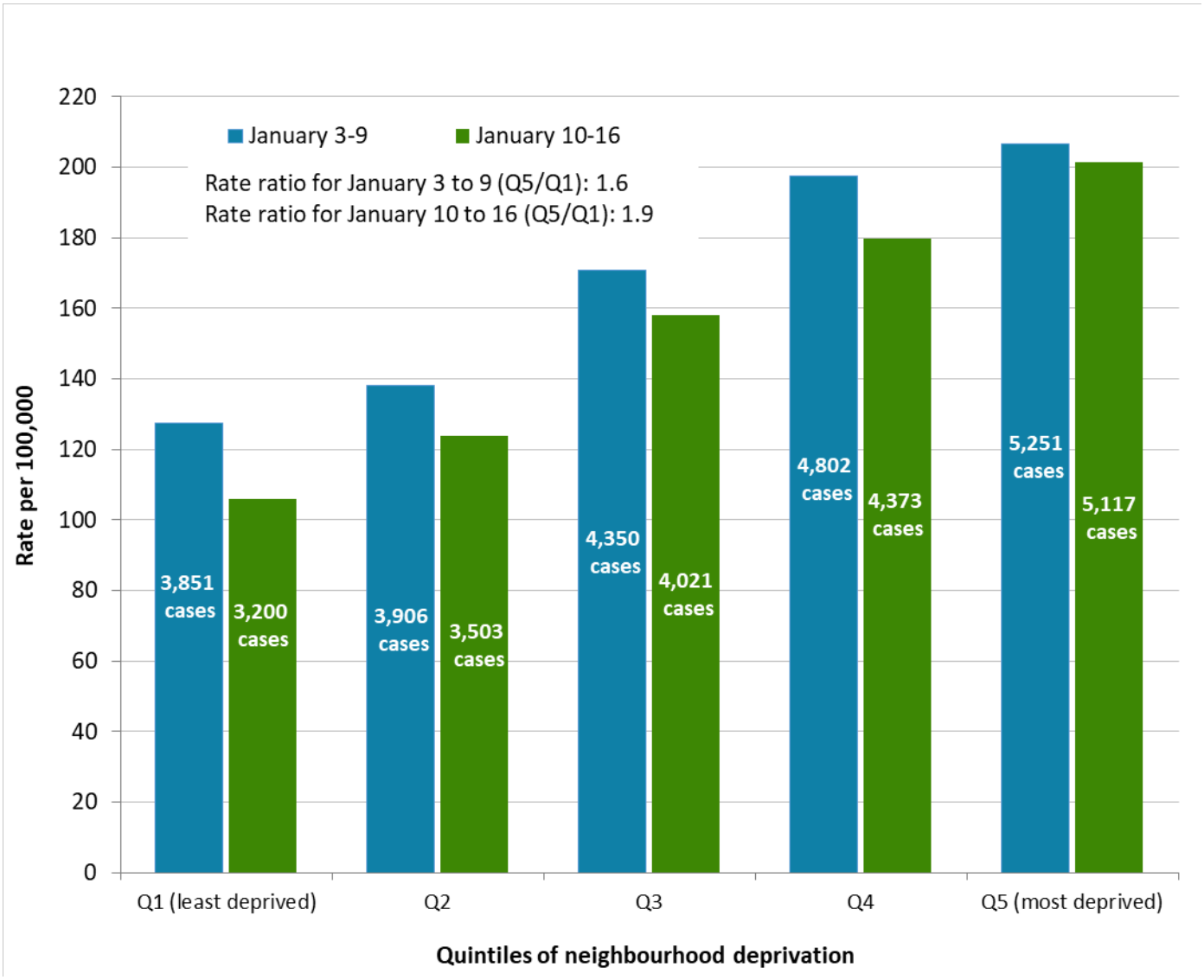
Figure 6. Rate and number of confirmed cases of COVID-19 for each quintile of neighbourhood diversity: Ontario, week 1 (January 3 to 9, 2021) and week 2 (January 10 to 16, 2021).



Note: Neighbourhood diversity is measured using the ethnic concentration dimension of the Ontario Marginalization Index. The ethnic concentration dimension is based on the proportion of non-white and non-Indigenous residents and/or the proportion of immigrants that arrived in Canada within the past five years.

Data Source: CCM plus, Ontario Marginalization Index

Figure 7. Rate and number of confirmed cases of COVID-19 for each quintile of neighbourhood deprivation: Ontario, week 1 (January 3 to 9, 2021) and week 2 (January 10 to 16, 2021).

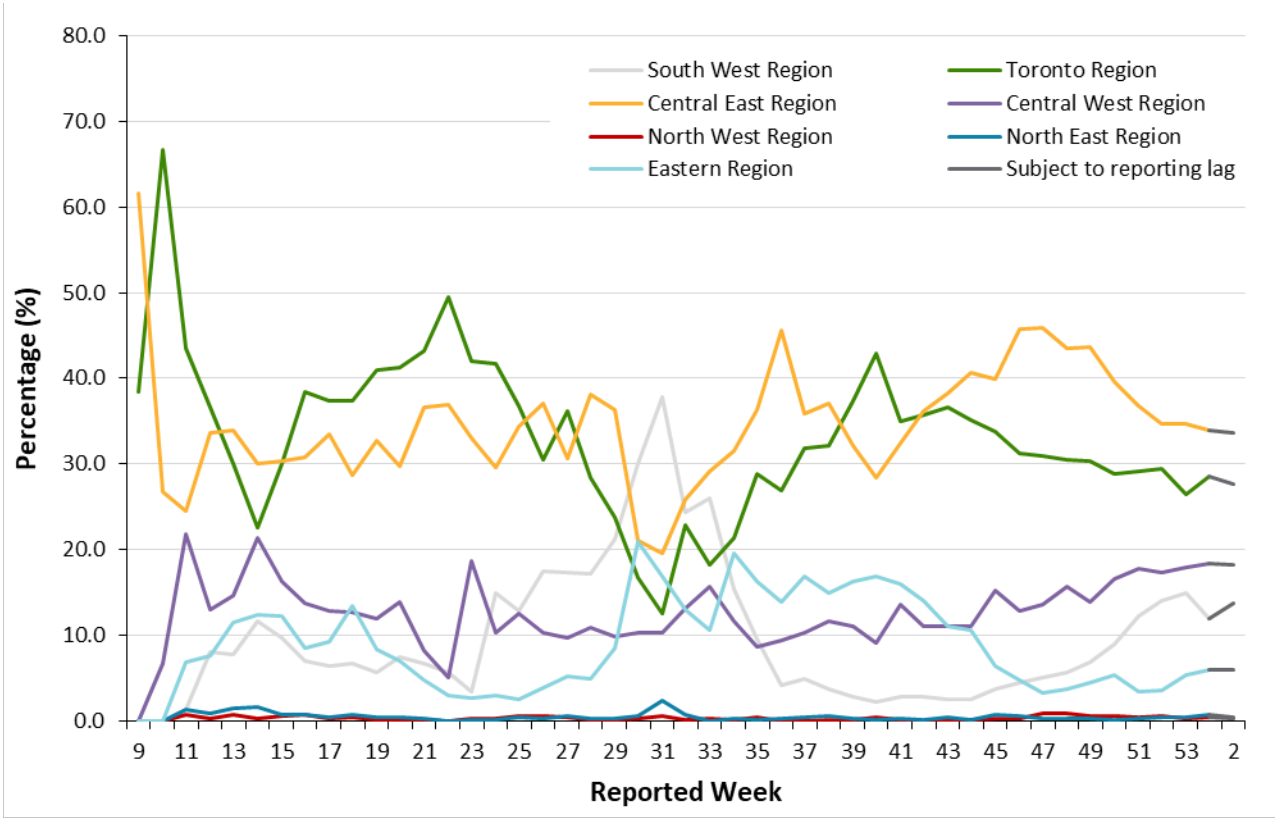


Note: Neighbourhood deprivation is measured using the material deprivation dimension of the Ontario Marginalization Index. The material deprivation dimension uses Canadian census data on income, quality of housing, educational attainment and family structure characteristics to assess the ability of individuals and communities to access and attain basic material needs.

Data Source: CCM plus, Ontario Marginalization Index

Geography

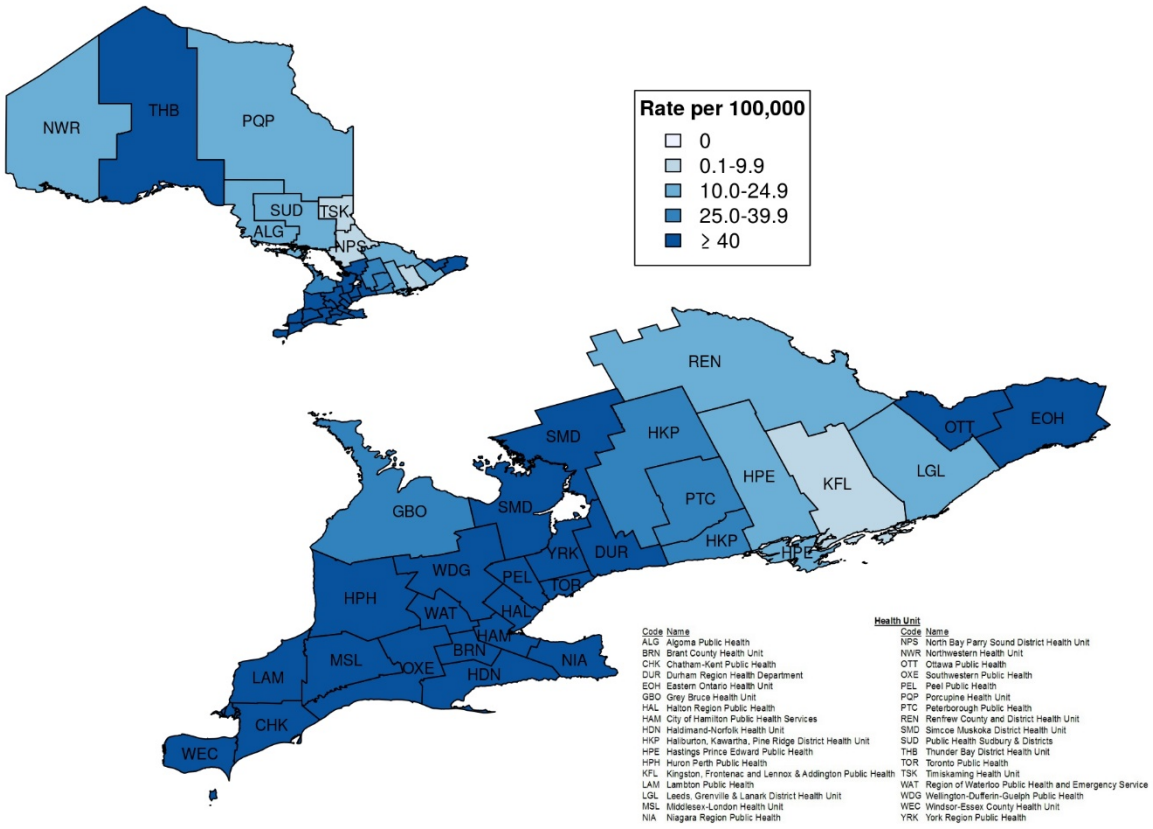
Figure 8. Percentage of COVID-19 cases by geographic region and public health unit reported week: Ontario



Note: Only weeks with more than 10 cases by public health unit reporting date are included (starting in week 9). Include cases with reported dates ranging from week 9 (February 23 and 29, 2020) to week 2 (January 10 and 16, 2021). Table 2A in Appendix A has a listing of public health units by region.

Data Source: CCM plus

Figure 9. Rate of confirmed cases of COVID-19 in public health reported week 2 (January 10 to 16, 2021) by public health unit: Ontario



Note: The provincial rate of confirmed cases of COVID-19 reported in week 2 was 142.2 cases per 100,000 population.
Data Source: CCM plus

Outbreaks

Table 7. Number of public health unit declared COVID-19 outbreaks by setting type: Ontario

Setting Type			
Congregate Care	**96**	**520**	**2,009**
Long-term care homes	34	257	1,080
Retirement homes	36	171	613
Hospitals	26	92	316
Congregate Living	**53**	**141**	**610**
Correctional facility	2	10	20
Shelter	5	20	106
Group Home/supportive housing	33	86	402
Short-term accommodations	0	1	8
Congregate other	13	24	74
Education	**30**	**117**	**844**
Child care	24	68	293
School – Elementary*	5	29	384
School – Elementary/secondary*	0	4	27
School – Secondary*	1	13	124
School – Post-secondary*	0	3	16
Other settings	**94**	**321**	**1,621**
Bar/restaurant/nightclub	7	19	142

Setting Type	Reported week 2 (January 10 to 16)	Number of ongoing outbreaks	Cumulative number of outbreaks reported to January 16
Personal service settings	0	2	13
Recreational fitness	0	6	53
Retail	10	44	186
Other recreation	2	23	85
Workplace - Farm	6	20	70
Workplace - Food processing	8	23	133
Other types of workplaces	51	157	836
Other	5	6	14
Unknown	0	6	14
Total number of outbreaks	**273**	**1,099**	**5,084**

Note: Reported week is based on the outbreak reported date, and if unavailable, the date the public health unit created the outbreak. Ongoing outbreaks includes all outbreaks that are 'Open' in CCM plus without a 'Declared Over Date' recorded 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/iPHIS is 'OPEN'. Interpret information for the most recent week with caution due to reporting lags. Outbreak categories are mutually exclusive. Retail includes settings such as grocery stores, pharmacies, malls, etc. Other types of workplaces include settings such as offices as well as warehousing, shipping and distribution, construction, etc. Other recreation includes settings such as entertainment and event venues, gatherings (e.g., weddings), religious facilities, etc. Medical/health services refer to settings such as doctor's office or clinic, wellness clinics, etc., and excludes categories listed in the congregate care setting group.
*Cumulative counts include COVID-19 school outbreaks reported starting week 36 (August 30 to September 5, 2020). Ongoing re-classification of settings for reported outbreaks can result in outbreak counts that may differ from previously reported counts.

Data Source: CCM plus

Table 8. Confirmed cases of COVID-19 associated with COVID-19 outbreaks by setting type and public health unit reported week: Ontario

Cases associated with the outbreak setting type	Reported week 1 (January 3 to 9)	Reported week 2 (January 10 to 16)	Cumulative number of cases
Congregate Care	**2,325**	**2,191**	**28,870**
Long-term care homes	1,469	1,338	20,500
Retirement homes	528	514	5,054
Hospitals	328	339	3,316
Congregate Living	**212**	**247**	**3,315**
Correctional facility	8	22	316
Shelter	22	47	760
Group Home/supportive housing	154	119	1,768
Short-term accommodations	2	0	16
Congregate other	26	59	455
Education	**56**	**71**	**2,863**
Child care	38	61	626
School – Elementary*	6	7	1,505
School – Elementary/secondary*	1	0	183
School – Secondary*	2	1	496
School – Post-secondary*	9	2	53
Other settings	**691**	**619**	**11,467**
Bar/restaurant/nightclub	24	14	552
Medical/health services	26	35	305
Personal service settings	1	0	40

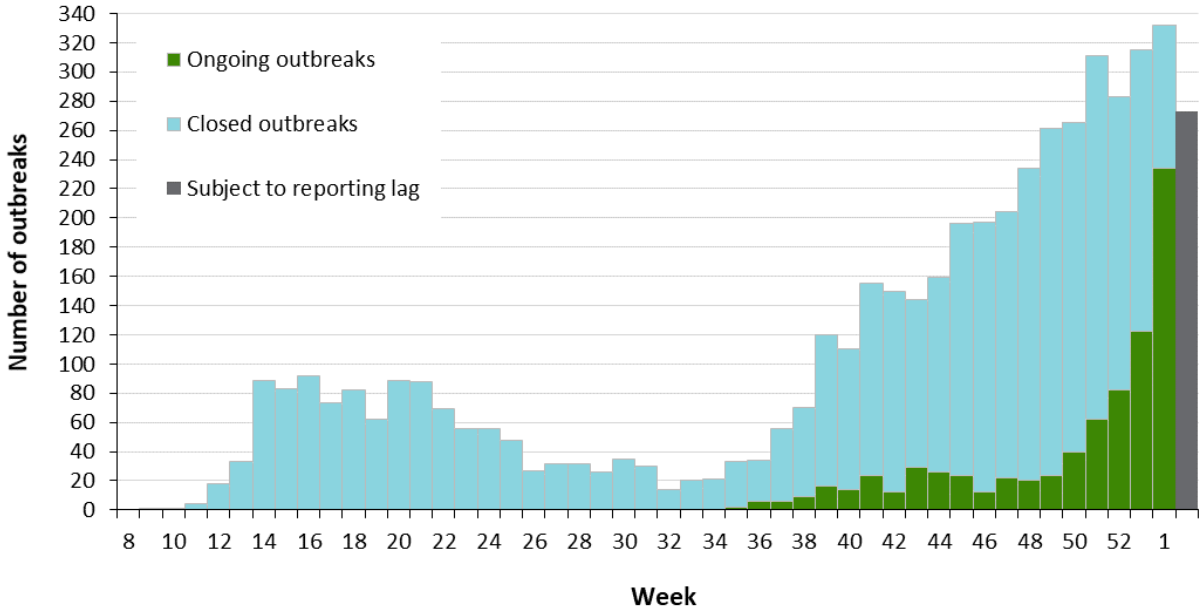
Cases associated with the outbreak setting type	Reported week 1 (January 3 to 9)	Reported week 2 (January 10 to 16)	Cumulative number of cases
Recreational fitness	0	0	447
Retail	78	56	740
Other recreation	18	8	667
Workplace - Farm	74	89	2,068
Workplace - Food processing	107	133	1,568
Other types of workplaces	353	273	4,914
Other	9	10	79
Unknown	1	1	87
Total number of cases	**3,284**	**3,128**	**46,515**

Note: Interpret case counts for the most recent week with caution due to reporting lags. Outbreak categories are mutually exclusive. Retail includes settings such as grocery stores, pharmacies, malls, etc. Other types of workplaces include settings such as offices as well as warehousing, shipping and distribution, construction, etc. Other recreation includes settings such as entertainment and event venues, gatherings (e.g., weddings), religious facilities, etc. Medical/health services refer to settings such as doctor's office or clinic, wellness clinics, etc., and excludes categories listed in the congregate care setting group.

*Cumulative counts include cases of COVID-19 associated with school outbreaks reported starting week 36 (August 30 to September 5, 2020). Ongoing re-classification of settings for reported outbreaks can result in case counts that may differ from previously reported counts.

Data Source: CCM plus

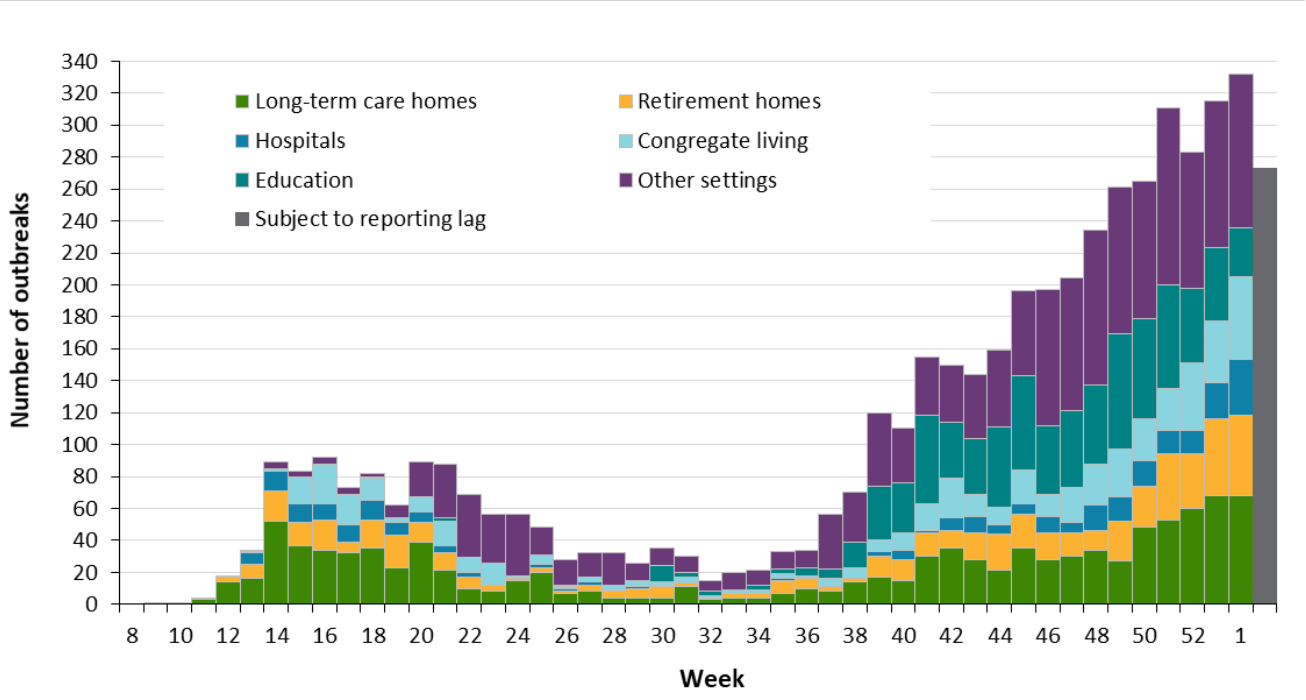
Figure 10. Public health unit declared COVID-19 outbreaks by status (ongoing or closed) and public health unit outbreak reported week: Ontario



Note: If public health unit outbreak reported date is unavailable, the date the public health unit created the outbreak is used. Ongoing outbreaks includes all outbreaks that are 'Open' in CCM plus without a 'Declared Over Date' recorded. Closed outbreaks are 'Closed' or have a 'Declared Over Date' recorded in CCM plus 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/iPHIS is 'OPEN'. Week 8 refers to February 16 and 22, 2020 and week 2 refers to January 10 and 16, 2021.

Data Source: CCM plus

Figure 11. Public health unit declared COVID-19 outbreaks by outbreak setting type and public health unit reported week: Ontario



Note: If public health unit outbreak reported date is unavailable, the date the public health unit created the outbreak is used. Week 8 refers to February 16 and 22, 2020 and week 2 refers to January 10 and 16, 2021. Congregate living include group homes, shelters, correctional facilities, etc. Other settings include outbreaks within workplaces, childcare, schools, restaurants, recreation etc.

Data Source: CCM plus

Variant COVID-19 Cases

Table 9a. Summary of cases by variant of concern (VOC): Ontario

Variant	Cumulative case count up to January 16

Note: Evidence suggest that the PANGO lineage B.1.1.7 arose in the United Kingdom in September, 2020. Further details on screening for variants of concern can be found in the technical notes.

Data Source: CCM plus

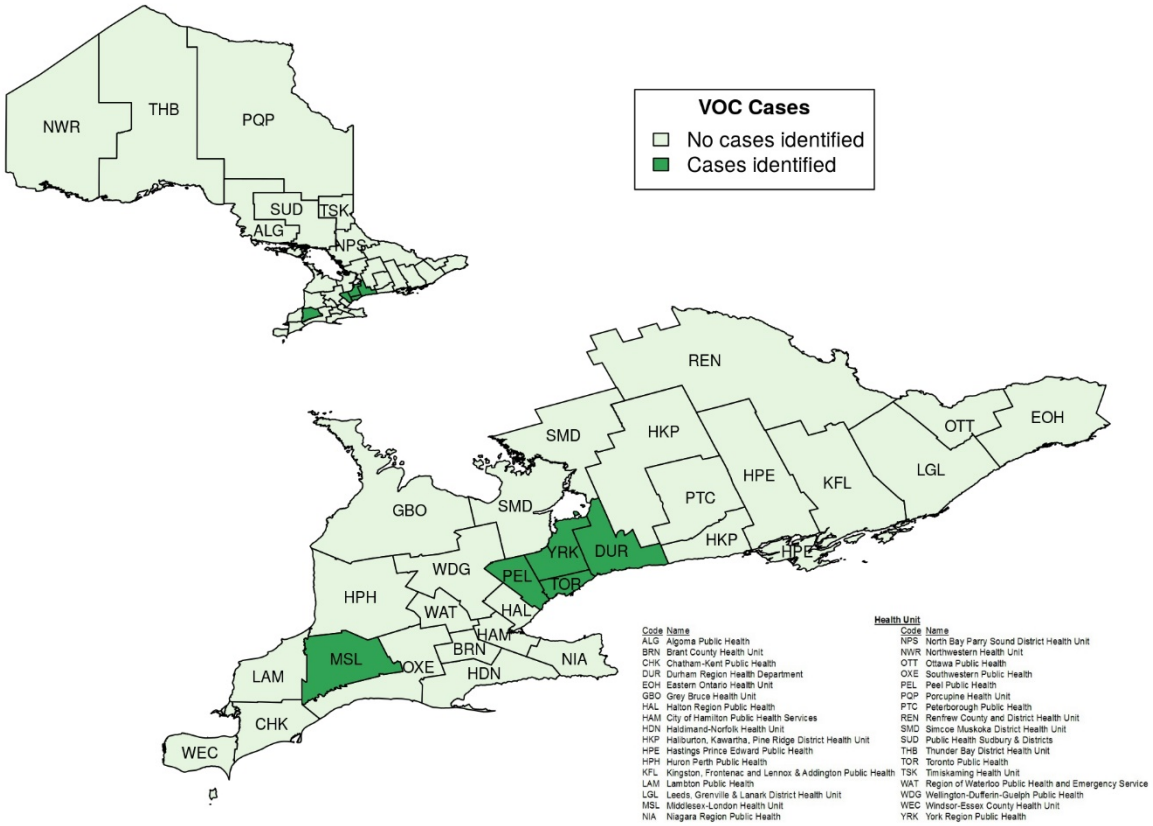
Table 9b. Ontario SARS-Co-V-2 Variant of Concern (VOC) screening data

	Cumulative count up to January 16
Specimens screened	2,834

Note: Individuals may have more than one specimen screened for VOCs. Cumulative counts include VOC screening data starting December 1, 2020. Ongoing sequencing can result in count that may differ from previously reported counts.

Data Source: PHO Laboratory and other Ontario sequencing laboratories

Figure 12. Confirmed COVID-19 variants of concern (VOC) by public health unit: Ontario



Note: Further details on testing for variants of concern can be found in the Technical Notes. The cumulative number of cases with a variant of concern have been reported in York Region (7), Durham Region (2), Peel (2), Toronto (2) and Middlesex-London (1) public health units.

Data Source: CCM plus

Technical Notes

Data Sources

- The data for this report were based on:
    - Information extracted from the Ontario Ministry of Health (Ministry) integrated Public Health Information System (iPHIS) database for Toronto Public Health as of **January 19, 2021 at 1 p.m.**
    - Information successfully uploaded to the Ministry from local systems: Toronto Public Health (Coronavirus Rapid Entry System) CORES as of **January 19, 2021 at 2 p.m.**
    - Information successfully extracted from the Public Health Case and Contact Management Solution (CCM) for all other PHUS by PHO as of **January 19, 2021 at 1 p.m.**
    - SARS-CoV-2 Variant of Concern screening performed at PHO Laboratory and other sequencing laboratories performing VOC screening in Ontario, as of **January 19, 2021**.
- CCM plus (which includes CCM, iPHIS, and CORES) are dynamic disease reporting systems, which allow ongoing updates to data previously entered. As a result, data extracted from CCM and the local systems represent a snapshot at the time of extraction and may differ from previous or subsequent reports.
- Ontario population projection data for 2020 were sourced from Ministry, IntelliHEALTH Ontario. Data were extracted on November 26, 2019.
- Statistics Canada Postal Code Conversion File (PCCF), reference date of May 2020.
- The health equity (neighbourhood-level diversity and deprivation) analyses use data from the 2016 Ontario Marginalization Index and population counts from the 2016 Canada Census:
    - Matheson FI; van Ingen T. 2016 Ontario marginalization index. Toronto, ON: Providence St. Joseph's and St. Michael's Healthcare; 2018. Joint publication with Public Health Ontario.
    - Statistics Canada. Census of Population, 2016: Profile for Canada, Provinces, Territories, Census Divisions, Census Subdivisions and Dissemination Areas. Retrieved from: https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/download-telecharger/comp/GetFile.cfm?Lang=E&FILETYPE=CSV&GEONO=044_ONTARIO.

Data Caveats and Methods: Case Data

- The data only represent cases reported to public health units and recorded in CCM plus. As a result, all counts are 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.

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

- All cases meeting the confirmed case classification as listed in the MOH COVID-19 case definition are included except where noted (e.g., analyses that describe the relationship between COVID-19 and marginalization). This includes persons with a positive detection of serum/plasma immunoglobulin G (IgG) antibodies to SARS-CoV-2, which was added to the confirmed case definition on **August 6, 2020**.

- Cases of confirmed reinfection, i.e. where genome sequencing indicates the two episodes are caused by different viral lineages, added to the confirmed case definition on November 20, 2020, are counted as unique investigations.

- COVID-19 cases from CCM plus 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 includes cases that are counted once across all systems from which the case data are obtained. Duplicate records may exist if these records were not identified and resolved prior to data upload to the Ministry.

- Reported date is the date the case was reported to the public health unit. This is different than the daily change in cases released by the Province for the same time period, which reflects the difference in cumulative counts reported to the Province between one day and the next.

- Reported weeks were created to align with the Public Health Agency of Canada (PHAC) influenza surveillance weeks.

- Case episode date is based on an estimate of the best date of disease onset. This date is calculated based on either the date of symptom onset, specimen collection/test date, or the date reported to the public health unit.

- Cases with unknown or missing ages were excluded from age-specific analyses.

- Health care worker includes cases that reported 'Yes' to any of the following occupations: health care worker, doctor, nurse, dentist, dental hygienist, midwife, other medical technicians, personal support worker, respiratory therapist, first responder.

- 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 considered resolved:

    - Cases that are reported as 'recovered' in CCM based on local public health unit assessment

    - Cases that are not hospitalized and are 14 days past their symptom onset date or specimen collection date (where symptom onset date is not known)

    - Cases that are currently hospitalized (no hospitalization end date entered) and have a case status of 'closed' indicating that public health follow up is complete and are 14 days past their symptom onset date or specimen collection date

- Data on hospital admissions, ICU admissions and deaths are likely under-reported as these events may occur after the completion of public health follow up of cases. Cases that were admitted to hospital or died after follow-up was completed may not be captured in CCM.

- Deaths are determined by using the outcome field in CCM plus. Any case marked 'Fatal' is included in the deaths data. The CCM field Type of Death is not used to further categorize the data.

    - The date of death is determined using the outcome date field for cases marked as 'Fatal' in the outcome field.

- Hospitalization includes all cases for which a hospital admission date was reported 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.

- Likely source of acquisition is determined by examining the epidemiologic link and epidemiologic link status fields in CCM and local systems. 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 an Epidemiological link with type unspecified, 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

- '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.

- ‘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.

- ‘Cases associated with school outbreaks’ includes cases that are linked to an outbreak, by school classification type (Elementary, Elementary/Secondary, Secondary, Post-Secondary), that met the definition of a school outbreak.

- School classification types are defined by the Ministry of Education.

    - Elementary/Secondary schools include public or private schools educating children in a combination of elementary and secondary grades (e.g., Kindergarten to Grade 8, Grades 9 to 12, and Kindergarten to Grade 12).

- Orientation of case counts by geography is based on the diagnosing health unit (DHU). 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 (to signify a case that is not a resident of Ontario) have been excluded from the analyses.

    - GTA health units include: Durham Region Health Department, Peel Public Health, Toronto Public Health and York Region Public Health

- Ongoing outbreaks are those that are reported in CCM plus as ‘Open’ and without a ‘Declared Over Date’ recorded. Closed outbreaks are ‘Closed’ or have a ‘Declared Over Date’ recorded in CCM plus 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/iPHIS is 'OPEN'.

- Outbreaks are declared by the local medical officer of health or their designate in accordance to the Health Protection and Promotion Act and criteria outlined in Ministry guidance documents.

- School outbreaks include outbreaks declared on or after week 36 (August 30 to September 5, 2020).

- A confirmed VOC case is defined as a COVID-19 case in whom a designated VOC was detected by genome sequencing in their clinical SARS-CoV-2 positive specimen.

- PANGO lineage B.1.1.7

    - Evidence suggests this lineage arose in the United Kingdom in September, 2020. Epidemiological analysis has associated this lineage with a significant increase in the rate of COVID-19 infection in United Kingdom, and it is believed to be related to an N501Y mutation in the spike (S) gene. The VOC-202012/01 is highly associated with this lineage. The PANGO lineage B.1.1.7 will be assigned to sequences with more than 4 of the 17 defining B.1.1.7 SNPs.

- PANGO lineage B.1.351
    - Evidence suggests this lineage arose in South Africa in October, 2020 and has several mutations of concern: S: N501Y, S: K417N, S: E484K. The PANGO lineage B.1.351 will be assigned to any sequences with more than 5 of the 9 defining B.1.351 SNPs.

- Public Health Ontario conducts variants of concern (VOC) surveillance on a subset of SARS-CoV-2 positive specimens. Additional SARS-CoV-2 specimens are referred to PHO Laboratory for screening provided they meet the criteria outlined here: https://www.publichealthontario.ca/en/laboratory-services/test-information-index/covid-19-voc

- Other Ontario laboratories conducting sequencing include: Sunnybrook Health Sciences, and McMaster University.

- VOC surveillance data should be interpreted with caution due to the lag between initial laboratory detection of SARS-CoV-2 and subsequent variant screening. Laboratory confirmation of VOCs by genome sequencing occurs at variable intervals after initial detection, depending when the request is made to have the screening conducted.

Data Caveats and Methods: ON-Marg

- ON-Marg is a data tool that combines a wide range of demographic indicators into multiple distinct dimensions of marginalization. It is an area-based index which assigns a measure of marginalization based on neighbourhood versus individual characteristics. As such, the broader demographic trends of an area may not reflect all residents of a neighbourhood owing to the inherent heterogeneity of demographic characteristics which can vary substantially especially across large rural geographies. For more information, please visit PHO's ON-Marg website.

- Neighbourhood diversity is defined using the ethnic concentration dimension of ON-Marg, which measures populations who may experience marginalization related to racism and discrimination. It is based on the proportion of non-white and non-Indigenous residents (visible minority) and/or the proportion of immigrants that arrived in Canada within the past five years. 'Visible minority' is a term used by Statistics Canada that, although is considered to be outdated, is used here to be consistent with the Canadian census.

- Neighbourhood deprivation is defined using the material deprivation dimension of ON-Marg, which is closely connected to poverty. It refers to the inability of individuals and communities to access and attain basic material needs. The indicators included in this dimension measure income, quality of housing, educational attainment and family structure characteristics.

- "Neighbourhoods" are considered to be Statistic Canada dissemination areas (DA). The Single Link Indicator Postal Code Conversion File (PCCF) was used to match individuals to a DA based on their postal code, which were subsequently assigned to a quintile of marginalization that contained 20% of Ontario neighbourhoods. The quintiles for the ethnic concentration and the material deprivation dimensions are ordered from quintiles 1 to 5, with quintile 1 having the lowest level of marginalization (i.e., least diverse or least deprived) and quintile 5 having the highest level of marginalization (i.e., most diverse or most deprived).

- The following were not included in analyses that summarize the impact of COVID-19 among Ontarians who may experience marginalization:

    - People who have tested positive for COVID-19 that reside in institutional and congregate settings are not included in the census data from which the marginalization indicators (ethnic concentration and material deprivation) are derived. Although these cases represent a large number of cases overall and deaths, their exclusion ensures appropriate comparisons since institutional and congregate setting residents are excluded from ON-Marg.

    - People who have tested positive for COVID-19 that reside in census dissemination areas where data has been suppressed, and cases that have missing or invalid postal codes could not be assigned to a quintile of marginalization.

    - Due to data suppression for some census indicators on Indian Reserves in Ontario, residents of Indian Reserves could not be included in ON-Marg and therefore people who have tested positive for COVID-19 and are living on Indian Reserves could not be assigned to a quintile of marginalization. While Indigenous individuals living off reserves are included in this analysis, Indigeneity data is not currently collected or captured in dimensions of ON-Marg.

Appendix A

Table 1A. Confirmed cases of COVID-19 by public health unit reported week: Ontario

Reported Week	Start date	End date	Number of cases	Cumulative count
2	January 5, 2020	January 11, 2020	0	0
3	January 12, 2020	January 18, 2020	0	0
4	January 19, 2020	January 25, 2020	3	3
5	January 26, 2020	February 1, 2020	0	3
6	February 2, 2020	February 8, 2020	0	3
7	February 9, 2020	February 15, 2020	0	3
8	February 16, 2020	February 22, 2020	1	4
9	February 23, 2020	February 29, 2020	13	17
10	March 1, 2020	March 7, 2020	15	32
11	March 8, 2020	March 14, 2020	147	179
12	March 15, 2020	March 21, 2020	447	626
13	March 22, 2020	March 28, 2020	1,326	1,952
14	March 29, 2020	April 4, 2020	2,800	4,752
15	April 5, 2020	April 11, 2020	3,168	7,920
16	April 12, 2020	April 18, 2020	4,273	12,193
17	April 19, 2020	April 25, 2020	3,652	15,845
18	April 26, 2020	May 2, 2020	2,905	18,750
19	May 3, 2020	May 9, 2020	2,345	21,095
20	May 10, 2020	May 16, 2020	2,234	23,329
21	May 17, 2020	May 23, 2020	2,614	25,943

Reported Week	Start date	End date	Number of cases	Cumulative count
22	May 24, 2020	May 30, 2020	2,615	28,558
23	May 31, 2020	June 6, 2020	2,306	30,864
24	June 7, 2020	June 13, 2020	1,469	32,333
25	June 14, 2020	June 20, 2020	1,231	33,564
26	June 21, 2020	June 27, 2020	1,252	34,816
27	June 28, 2020	July 4, 2020	1,086	35,902
28	July 5, 2020	July 11, 2020	865	36,767
29	July 12, 2020	July 18, 2020	932	37,699
30	July 19, 2020	July 25, 2020	994	38,693
31	July 26, 2020	August 1, 2020	804	39,497
32	August 2, 2020	August 8, 2020	595	40,092
33	August 9, 2020	August 15, 2020	611	40,703
34	August 16, 2020	August 22, 2020	729	41,432
35	August 23, 2020	August 29, 2020	855	42,287
36	August 30, 2020	September 5, 2020	976	43,263
37	September 6, 2020	September 12, 2020	1,505	44,768
38	September 13, 2020	September 19, 2020	2,392	47,160
39	September 20, 2020	September 26, 2020	3,129	50,289
40	September 27, 2020	October 3, 2020	4,240	54,529
41	October 4, 2020	October 10, 2020	5,052	59,581
42	October 11, 2020	October 17, 2020	5,298	64,879
43	October 18, 2020	October 24, 2020	6,056	70,935
44	October 25, 2020	October 31, 2020	6,398	77,333

Reported Week	Start date	End date	Number of cases	Cumulative count
45	November 1, 2020	November 7, 2020	7,621	84,954
46	November 8, 2020	November 14, 2020	10,430	95,384
47	November 15, 2020	November 21, 2020	9,946	105,330
48	November 22, 2020	November 28, 2020	11,050	116,380
49	November 29, 2020	December 5, 2020	12,674	129,054
50	December 6, 2020	December 12, 2020	13,103	142,157
51	December 13, 2020	December 19, 2020	15,742	157,899
52	December 20, 2020	December 26, 2020	15,550	173,449
53	December 27, 2020	January 2, 2021	20,483	193,932
1	January 3, 2021	January 9, 2021	24,881	218,813
2	January 10, 2021	January 16, 2021	21,132	239,945

Table 2A. Confirmed cases of COVID-19 by public health unit and region: Ontario

Public Health Unit Name	Cases reported week 1	Rate per 100,000 population Reported week 1	Cases reported week 2	Rate per 100,000 population Reported week 2
Northwestern Health Unit	44	50.2	11	12.5
Thunder Bay District Health Unit	59	39.3	60	40.0
TOTAL NORTH WEST	**103**	**43.3**	**71**	**29.9**
Algoma Public Health	45	39.3	17	14.9
North Bay Parry Sound District Health Unit	30	23.1	12	9.2
Porcupine Health Unit	29	34.8	10	12.0
Public Health Sudbury & Districts	69	34.7	42	21.1
Timiskaming Health Unit	4	12.2	2	6.1
TOTAL NORTH EAST	**177**	**31.6**	**83**	**14.8**
Ottawa Public Health	984	93.3	931	88.3
Eastern Ontario Health Unit	340	162.9	251	120.3
Hastings Prince Edward Public Health	30	17.8	19	11.3
Kingston, Frontenac and Lennox & Addington Public Health	56	26.3	15	7.1
Leeds, Grenville & Lanark District Health Unit	37	21.4	28	16.2
Renfrew County and District Health Unit	28	25.8	13	12.0
TOTAL EASTERN	**1,475**	**76.6**	**1,257**	**65.3**

Public Health Unit Name	Cases reported week 1	Rate per 100,000 population Reported week 1	Cases reported week 2	Rate per 100,000 population Reported week 2
Durham Region Health Department	1,144	160.6	763	107.1
Haliburton, Kawartha, Pine Ridge District Health Unit	88	46.6	70	37.0
Peel Public Health	4,236	263.8	3,989	248.4
Peterborough Public Health	53	35.8	40	27.0
Simcoe Muskoka District Health Unit	496	82.7	450	75.1
York Region Public Health	2,437	198.8	1,798	146.7
TOTAL CENTRAL EAST	**8,454**	**188.7**	**7,110**	**158.7**
Toronto Public Health	7,097	227.4	5,838	187.1
TOTAL TORONTO	**7,097**	**227.4**	**5,838**	**187.1**
Chatham-Kent Public Health	124	116.6	115	108.2
Grey Bruce Health Unit	67	39.4	48	28.3
Huron Perth Public Health	123	88.0	160	114.5
Lambton Public Health	297	226.8	378	288.6
Middlesex-London Health Unit	839	165.3	659	129.8
Southwestern Public Health	316	149.4	256	121.0
Windsor-Essex County Health Unit	1,223	287.9	1,293	304.4
TOTAL SOUTH WEST	**2,989**	**176.8**	**2,909**	**172.1**
Brant County Health Unit	181	116.6	121	78.0
City of Hamilton Public Health Services	916	154.7	714	120.6

Public Health Unit Name	Cases reported week 1	Rate per 100,000 population Reported week 1	Cases reported week 2	Rate per 100,000 population Reported week 2
Haldimand-Norfolk Health Unit	117	102.6	88	77.1
Halton Region Public Health	741	119.7	482	77.9
Niagara Region Public Health	1,090	230.7	1,142	241.7
Region of Waterloo Public Health and Emergency Services	1,081	185.0	970	166.0
Wellington-Dufferin-Guelph Public Health	460	147.5	347	111.3
TOTAL CENTRAL WEST	**4,586**	**161.0**	**3,864**	**135.6**
TOTAL ONTARIO	**24,881**	**167.4**	**21,132**	**142.2**

Note: Interpret information for the most recent week with caution due to reporting lags.

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For Further Information

For more information, email cd@oahpp.ca.

Public Health Ontario

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