

Epidemiologic Summary

COVID-19 in Ontario: January 15, 2020 to June 4, 2020

This report includes the most current information available from the integrated Public Health Information System (iPHIS) as of **4 p.m. June 4, 2020**, from the Toronto Public Health Coronavirus Rapid Entry System (CORES) and the Ottawa Public Health COVID-19 Ottawa Database (The COD), and Middlesex-London COVID-19 Case and Contact Management tool (CCMtool) as of **2 p.m. June 4, 2020**.

Please visit the interactive [Ontario COVID-19 Data Tool](#) to explore recent COVID-19 data by public health unit, age group, sex, and view trends over time.

Additionally, PHO produces [Enhanced Epidemiologic Summaries](#) on COVID-19, including: *COVID-19 in Ontario – A Focus on Diversity, Evolution of COVID-19 Case Growth in Ontario, COVID-19 Infection in Children and COVID-19 and Severe Outcomes in Ontario*.

Purpose

- This daily report provides an epidemiologic summary of COVID-19 activity in Ontario to date.

Highlights

- There are 29,747 confirmed cases of COVID-19 in Ontario reported to date. This represents an increase of 344 confirmed cases from the previous report.
 - 44.4% of cases are male, 54.8% are female.
 - 38.6% of cases are 60 years of age and older.
 - Greater Toronto Area public health units account for 66.6% of cases.
 - 12.2% of cases were hospitalized.
- 2,372 deaths have been reported (please note there may be a reporting delay for deaths). This is an increase of 15 deaths from the previous report.
- 310 outbreaks have been reported in long-term care homes. This is an increase of 2 outbreaks from the previous report.

Case Characteristics

Table 1. Summary of cases of COVID-19: Ontario, January 15, 2020 to June 4, 2020

	Number	Percentage
Number of cases ¹	29,747	N/A
Change from previous report	344	1.2% increase
Gender: Male	13,197	44.4
Gender: Female	16,302	54.8
Ages: 19 and under	1,123	3.8
Ages: 20-39	7,987	26.8
Ages: 40-59	9,151	30.8
Ages: 60-79	5,907	19.9
Ages: 80 and over	5,563	18.7
Number of cases in health care workers	4,890	16.4

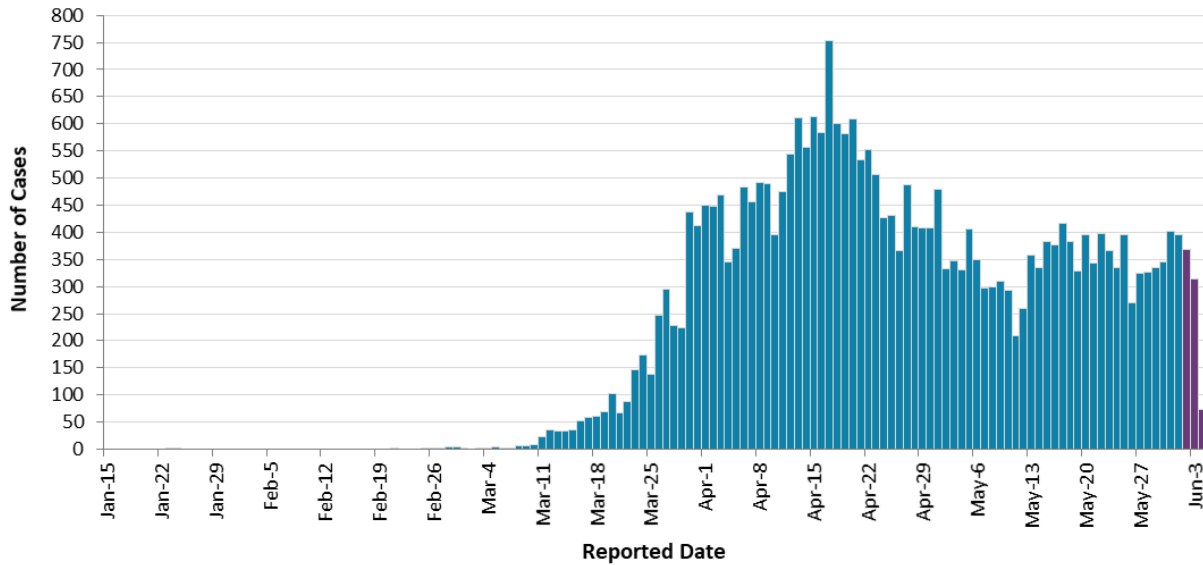
¹ Cases and rates by public health units are provided in [Appendix A](#).

Note: 248 cases did not specify male or female. 16 cases had an unknown age.

Data Source: integrated Public Health Information System (iPHIS) database, Coronavirus Rapid Entry System (CORES) database, The COVID-19 Ottawa Database (The COD), COVID-19 Case and Contact Management tool (CCMtool).

Time

Figure 1. Confirmed cases (n=29,747) of COVID-19 by reported date: Ontario, January 15, 2020 to June 4, 2020^{1,2}

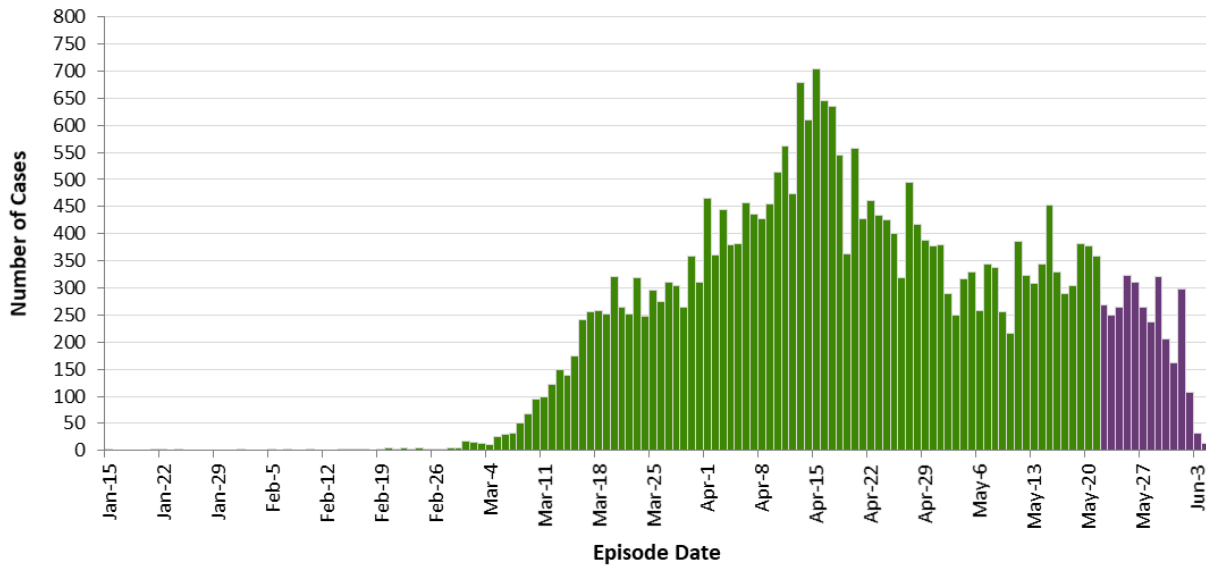


¹ Interpret case counts for the most recent days (approximately 3 days, as shown in purple) with caution due to reporting lags.

² Case counts from May 25 forward are impacted by a laboratory-to-public health reporting delay that is being rectified during this period.

Data Source: integrated Public Health Information System (iPHIS) database, Coronavirus Rapid Entry System (CORES) database, The COVID-19 Ottawa Database (The COD), COVID-19 Case and Contact Management tool (CCMtool).

Figure 2. Confirmed cases (n=29,742¹) of COVID-19 by an approximation of symptom onset date²: Ontario, January 15, 2020 to June 4, 2020³



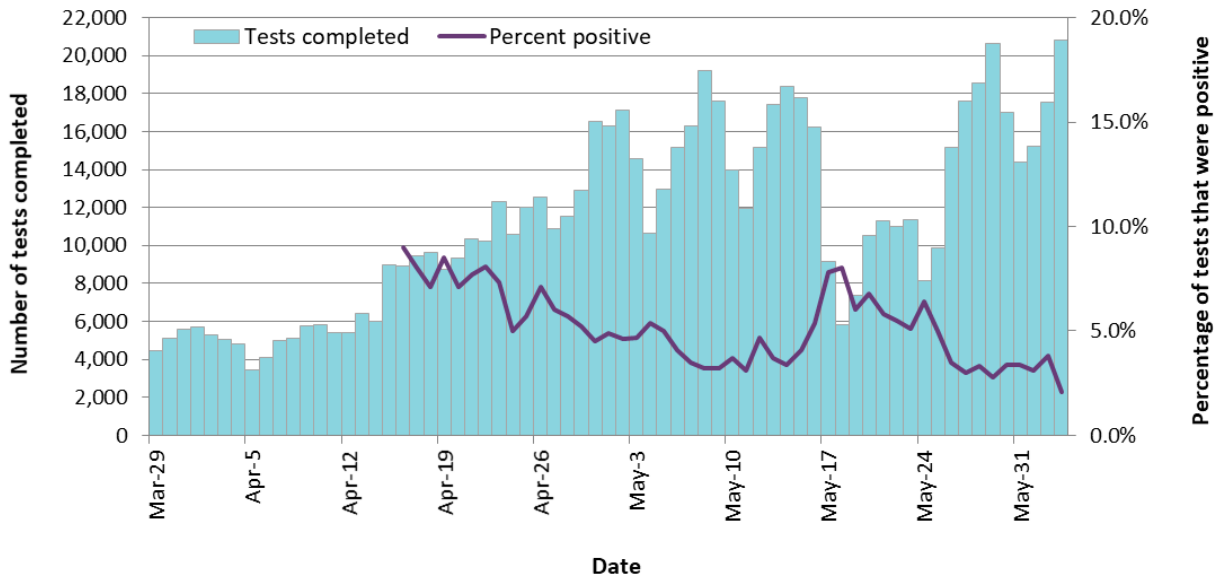
¹ This count excludes 5 cases that did not have an episode date.

² This date, referred to as episode date, is intended to approximate symptom onset date. It is calculated based on either the date of symptom onset, specimen collection/test date, or the date reported to public health.

³ Interpret case counts for the most recent days (approximately 14 days, as shown in purple) with caution due to reporting lags.

Data Source: integrated Public Health Information System (iPHIS) database, Coronavirus Rapid Entry System (CORES) database, The COVID-19 Ottawa Database (The COD), COVID-19 Case and Contact Management tool (CCMtool).

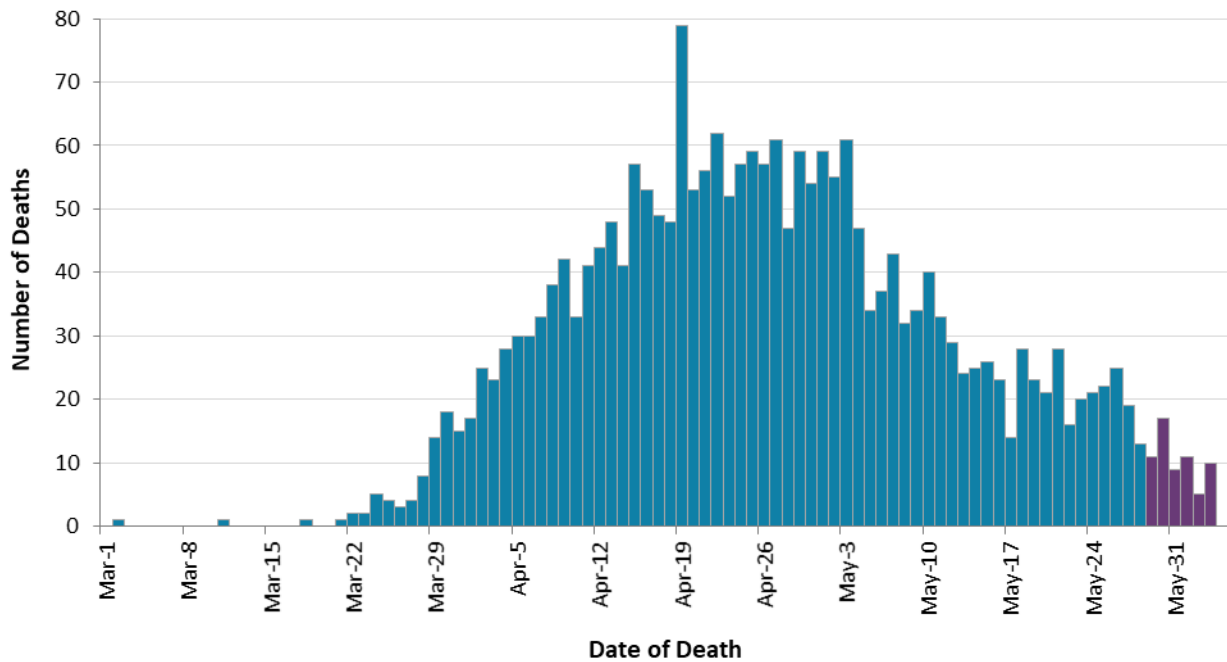
Figure 3. Number of COVID-19 tests completed¹ and percent positivity: Ontario, March 29, 2020 to June 3, 2020



¹The 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.

Figure 4. Confirmed deaths (n=2,370¹) among COVID-19 cases by date of death: Ontario, March 1, 2020 to June 4, 2020²



¹This count excludes 2 cases that did not have a date of death reported.

²Interpret case counts for the most recent days (approximately 7 days, as shown in purple) with caution due to reporting lags.

Data Source: integrated Public Health Information System (iPHIS) database, Coronavirus Rapid Entry System (CORES) database, The COVID-19 Ottawa Database (The COD), COVID-19 Case and Contact Management tool (CCMtool).

Exposure

Table 2. Confirmed cases (n=29,747) of COVID-19 by likely source of acquisition: Ontario, January 15, 2020 to June 4, 2020

	Number	Percentage
Travel ¹	1,569	5.3
Outbreak-associated ² or close contact of a confirmed case	18,395	61.8
No known epidemiological link ³	6,199	20.8
Information missing or unknown ⁴	3,584	12.0

¹ Travel outside of Ontario during the incubation period, where close contact with a confirmed case or link to an outbreak was not reported.

² Includes cases indicating a link to a local outbreak.

³ Includes cases that could not be classified as travel, outbreak-associated or close contact. Sporadic community transmission was re-labelled to no known epidemiological link on May 27. This name change does not represent a change in the way cases are categorized.

⁴ Includes cases that only identified unknown exposure or risk factor data, as well as cases with no information.

Data Source: integrated Public Health Information System (iPHIS) database, Coronavirus Rapid Entry System (CORES) database, The COVID-19 Ottawa Database (The COD), COVID-19 Case and Contact Management tool (CCMtool).

Severity

Table 3. Confirmed cases (n=29,747) of COVID-19 by severity: Ontario, January 15, 2020 to June 4, 2020

	Number	Percentage
Cumulative deaths reported (please note there may be a reporting delay for deaths in iPHIS)	2,372	8.0
Change from previous report	15	0.6% increase
Deaths reported in ages: 19 and under	0	0.0
Deaths reported in ages: 20-39	10	0.1
Deaths reported in ages: 40-59	93	1.0
Deaths reported in ages: 60-79	623	10.5
Deaths reported in ages: 80 and over	1,646	29.6
Cumulative intensive care ¹	784	2.6
Cumulative hospitalized ¹	3,621	12.2
Number of resolved ² cases	23,583	79.3

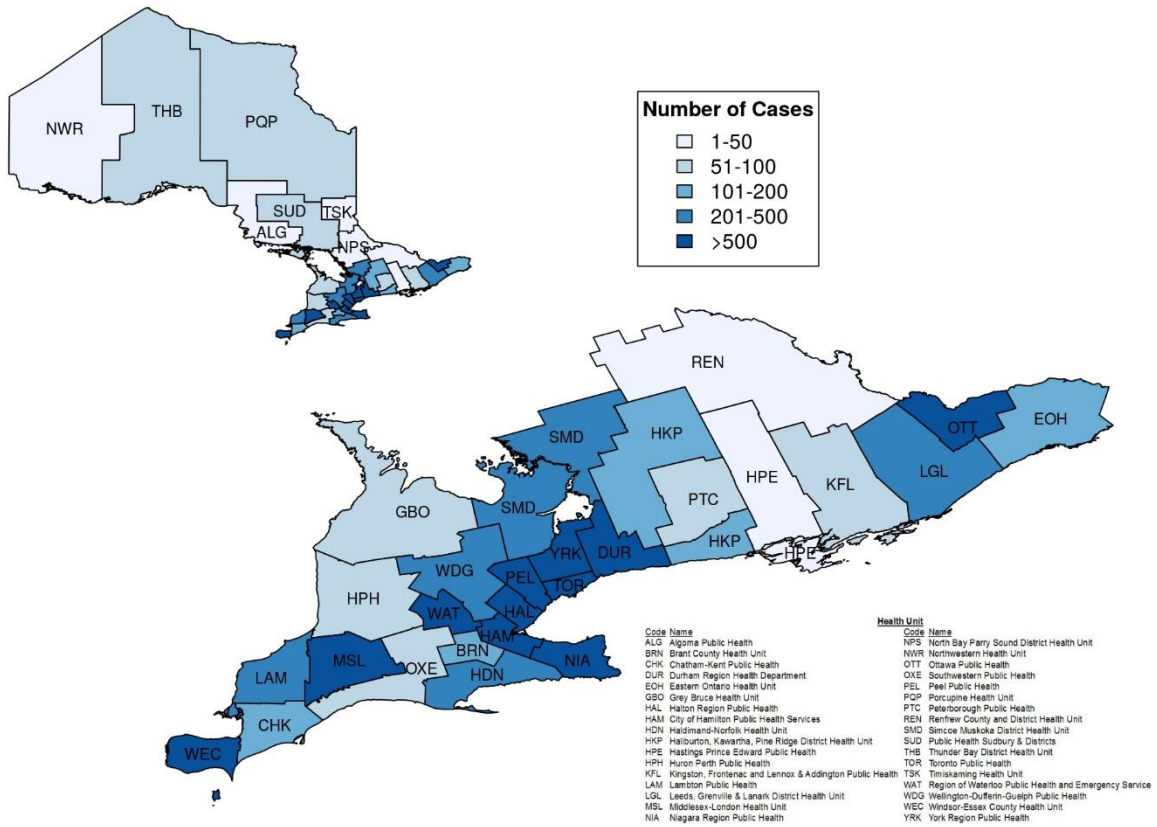
¹ These refer to all hospitalized or ICU admitted cases, not cases that are currently hospitalized or in ICU.

² Cases that are 14 days past symptom onset (if available) or 14 days past the episode date are classified as resolved for non-fatal cases that are not currently listed as hospitalized. Cases are also classified as resolved if the case is reported as “recovered” in iPHIS.

Data Source: integrated Public Health Information System (iPHIS) database, Coronavirus Rapid Entry System (CORES) database, The COVID-19 Ottawa Database (The COD), COVID-19 Case and Contact Management tool (CCMtool).

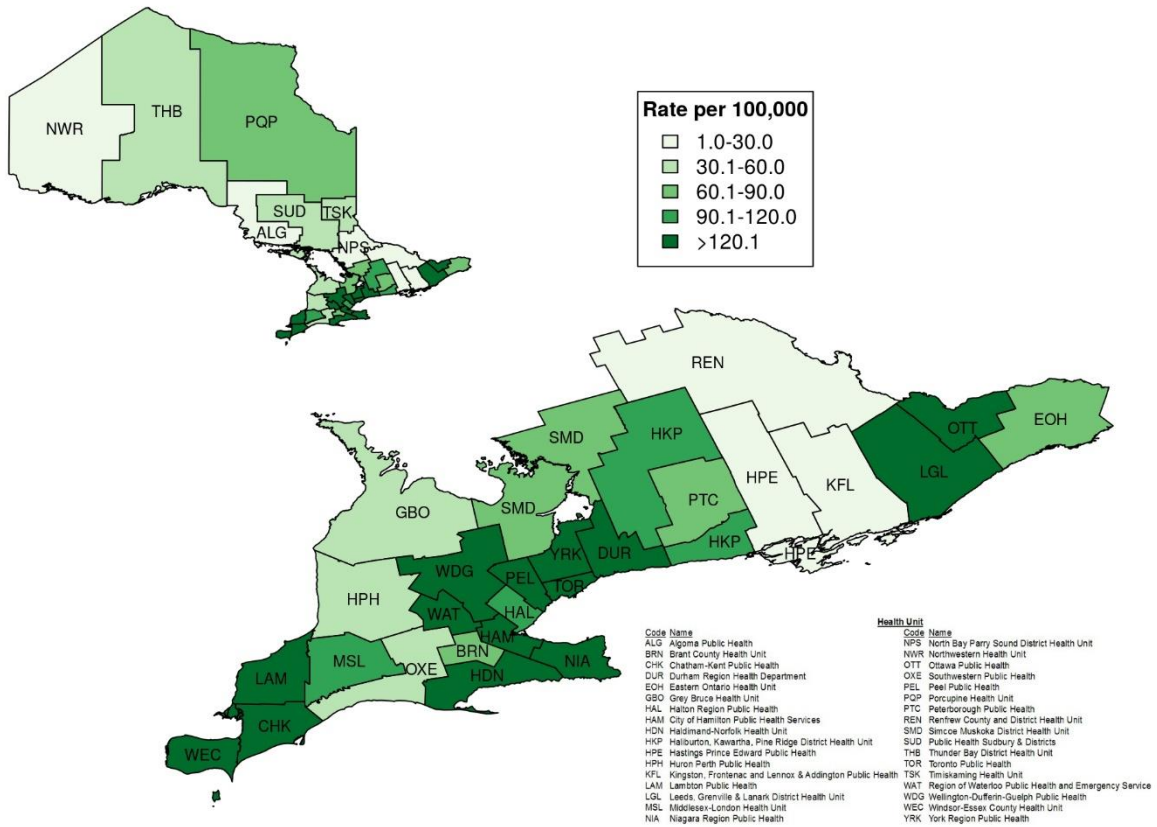
Geography

Figure 5. Confirmed cases (n=29,747) of COVID-19 by public health unit: Ontario, January 15, 2020 to June 4, 2020



Data Source: integrated Public Health Information System (iPHIS) database, Coronavirus Rapid Entry System (CORES) database, The COVID-19 Ottawa Database (The COD), COVID-19 Case and Contact Management tool (CCMtool).

Figure 6. Rate of confirmed cases of COVID-19 by public health unit: Ontario, January 15, 2020 to June 4, 2020



Data Source: integrated Public Health Information System (iPHIS) database, Coronavirus Rapid Entry System (CORES) database, The COVID-19 Ottawa Database (The COD), COVID-19 Case and Contact Management tool (CCMtool).

Outbreaks in Institutions and Public Hospitals

Table 4a. Confirmed COVID-19 outbreaks reported in long-term care homes, retirement homes and hospitals by status: Ontario, January 15, 2020 to June 4, 2020

Institution type	Number of ongoing outbreaks ¹	Cumulative number of outbreaks reported
Long-term care homes	166	310
Retirement homes	81	147
Hospitals	46	86

¹ Includes all outbreaks that are 'Open' in iPHIS without a 'Declared Over Date' recorded.

Data Source: integrated Public Health Information System (iPHIS) database.

Table 4b. Confirmed cases of COVID-19 in long-term care homes⁶: Ontario, January 15, 2020 to June 4, 2020

Indicator	Number	Percentage
Cases among long-term care home residents ^{1,2,3}	5,222	17.6% of all cases
Cases among health care workers ^{2,3,4} , associated with long-term care outbreaks	1,883	6.3% of all cases
Deaths ⁵ reported for residents in long-term care homes ^{1,2,3}	1,519	64.0% of all deaths
Deaths ⁵ reported for health care workers ^{2,3,4} in long-term care homes	5	0.2% of all deaths

¹ Includes cases that reported '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 factor 'Resident of nursing home or other chronic care facility'.

² Excludes cases that reported 'Yes' to both risk factors: 'Resident of nursing home or other chronic care facility' and 'health care worker'.

³ There is a lag between when cases are reported and when risk factors are updated.

⁴ Health care worker includes cases that reported 'Yes' to any of the occupations health care worker, doctor, nurse; and for health care workers associated with a long-term care outbreak those reported to be part of an outbreak assigned as a long-term care home (via the outbreak number or case comments field).

⁵ Deaths are determined by using the outcome field. Any case marked 'Fatal' is included in the deaths data. Deaths are included whether or not COVID-19 was determined to be a contributing or underlying cause of death as indicated in iPHIS or local case management systems.

⁶ Counts of cases and deaths for long term care home residents and staff are now being calculated using individual level data as opposed to aggregate data. As a result, they are being reported separately from the aggregate counts in table 4c.

Data Source: integrated Public Health Information System (iPHIS) database, Coronavirus Rapid Entry System (CORES) database, The COVID-19 Ottawa Database (The COD), COVID-19 Case Contact Management tool (CCMtool).

Table 4c. Aggregate case counts (confirmed and epidemiologically linked) reported for COVID-19 outbreaks in retirement homes and hospitals:¹ Ontario, January 15, 2020 to June 4, 2020

Indicator	Retirement Homes	Hospitals
Total number of cases ^{2,3,4} reported as part of the confirmed COVID-19 outbreaks	1,194	815
Cases reported among residents/patients	789	393
Cases reported among staff	405	410
Total number of deaths ^{2,3,4} reported as part of the confirmed COVID-19 outbreaks	167	75
Deaths reported among residents/patients	167	75
Deaths reported among staff	0	0

¹ Counts of cases and deaths for long term care home residents and staff are now being calculated using individual level data as opposed to aggregate data. These are available in table 4b.

² Includes all outbreak-related cases and deaths reported in aggregate outbreak summary counts, regardless of whether the case was laboratory confirmed (deaths among non-laboratory confirmed cases reported here are not included in Table 3).

³ May include cases and deaths other than residents/patients or staff, such as volunteers. As a result, the total number of cases and deaths may be greater than the number of cases and deaths reported in residents or staff.

⁴ Counts may fluctuate from previous reports due to updates made by health units as additional information about the outbreak is reported.

Data Source: integrated Public Health Information System (iPHIS) database.

Technical Notes

Data Sources

- The data for this report were based on:
 - Information extracted from the Ontario Ministry of Health (MOH) integrated Public Health Information System (iPHIS) database, as of **June 4, 2020 at 4 p.m.**
 - Information successfully uploaded to the Ministry from Local Systems: Toronto Public Health (Coronavirus Rapid Entry System) CORES, The Ottawa Public Health COVID-19 Ottawa Database (The COD) and Middlesex-London COVID-19 Case and Contact Management Tool (CCMtool) as of **June 4, 2020 at 2 p.m.**
- iPHIS, CORES, The COD and COVID-19 CCMtool are dynamic disease reporting systems, which allows ongoing updates to data previously entered. As a result, data extracted from iPHIS 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 Ontario Ministry of Health, IntelliHEALTH Ontario. Data were extracted on November 26, 2019.
- COVID-19 test data were based on information from The Provincial COVID-19 Diagnostics Network, reported by member microbiology laboratories.

Data Caveats:

- The data only represent cases reported to public health and recorded in iPHIS and the Local Systems (e.g., CORES, The COD, COVID-19 CCMtool). 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.
- Lags in iPHIS and Local Systems data entry due to reduced holiday and 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 [COVID-19 case definition](#) are included in the report counts from iPHIS the Local Systems.
- 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 public health.
- 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

- Likely source of acquisition is determined by examining the exposure and risk factor fields from iPHIS and local systems to determine whether a case travelled, was associated with an 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. Cases with multiple exposures or 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 > sporadic community transmission > information missing or unknown
 - For cases with an episode date *before* April 1, 2020: Travel > outbreak-associated > close contact of a confirmed case > sporadic community transmission > information missing or unknown
- Deaths are determined by using the outcome field in iPHIS or Local Systems. Any case marked 'Fatal' is included in the deaths data. Deaths are included whether or not COVID-19 was determined to be a contributing or underlying cause of death as indicated in the iPHIS field Type of Death.
 - The date of death is determined using the outcome date field for cases marked as 'Fatal' in the outcome field.
- iPHIS cases for which the Disposition Status was reported as ENTERED IN ERROR, DOES NOT MEET DEFINITION, DUPLICATE-DO NOT USE, or any variation on these values have been excluded.
- To provide a measure of the impact of COVID-19 on long-term care homes and hospitals, the number of outbreaks and the associated cases are reported. To obtain the case and deaths data for these outbreaks, the aggregate counts recorded by public health units in the outbreak's summary counts section of iPHIS is used. This information is presented in Table 4.
 - Previously only a select number of persons in institutional outbreaks would be tested for COVID-19, and there could still be circumstances where not all individuals end up being tested (e.g., the person dies before they can be tested).
 - These counts may not be updated as frequently as the information for laboratory-confirmed cases.
 - The information in the aggregate counts can not necessarily be reconciled with the laboratory-confirmed case data.

Appendix A

Table 1. Confirmed cases (n=29,747) of COVID-19 by public health unit: Ontario, January 15, 2020 to June 4, 2020

Public Health Unit Name	Cases	Rate per 100,000 population
Northwestern Health Unit	22	25.1
Thunder Bay District Health Unit	83	55.3
TOTAL NORTH WEST	105	44.2
Algoma Public Health	21	18.4
North Bay Parry Sound District Health Unit	27	20.8
Porcupine Health Unit	65	77.9
Public Health Sudbury & Districts	64	32.2
Timiskaming Health Unit	18	55.1
TOTAL NORTH EAST	195	34.9
Ottawa Public Health	1,987	188.4
Eastern Ontario Health Unit	151	72.3
Hastings Prince Edward Public Health	44	26.1
Kingston, Frontenac and Lennox & Addington Public Health	62	29.1
Leeds, Grenville & Lanark District Health Unit	351	202.7
Renfrew County and District Health Unit	27	24.9
TOTAL EASTERN	2,622	136.1
Durham Region Health Department	1,525	214.1
Haliburton, Kawartha, Pine Ridge District Health Unit	182	96.3
Peel Public Health	4,795	298.6

Public Health Unit Name	Cases	Rate per 100,000 population
Peterborough Public Health	90	60.8
Simcoe Muskoka District Health Unit	478	79.7
York Region Public Health	2,561	208.9
TOTAL CENTRAL EAST	9,631	214.9
Toronto Public Health	10,926	350.2
TOTAL TORONTO	10,926	350.2
Chatham-Kent Public Health	147	138.3
Grey Bruce Health Unit	91	53.6
Huron Perth Public Health	54	38.6
Lambton Public Health	267	203.9
Middlesex-London Health Unit	548	108.0
Southwestern Public Health	74	35.0
Windsor-Essex County Health Unit	988	232.6
TOTAL SOUTH WEST	2,169	128.3
Brant County Health Unit	120	77.3
City of Hamilton Public Health Services	712	120.2
Haldimand-Norfolk Health Unit	375	328.7
Halton Region Public Health	665	107.4
Niagara Region Public Health	704	149.0
Region of Waterloo Public Health and Emergency Services	1,128	193.0
Wellington-Dufferin-Guelph Public Health	395	126.6
TOTAL CENTRAL WEST	4,099	143.9
TOTAL ONTARIO	29,747	200.1

Disclaimer

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Citation

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Epidemiologic summary: COVID-19 in Ontario – January 15, 2020 to June 4, 2020. Toronto, ON: Queen's Printer for Ontario; 2020.

For Further Information

For more information, email cd@oahpp.ca.

Public Health Ontario

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