

# Technical Notes

**Data retrieved from database daily at 8:00 a.m.; dashboard is updated daily at 1:30 p.m. Data source: Waterloo Region COVID-19 information database and Provincial Salesforce CCM database (as of August 13, 2020)**

The dashboard summarizes information on all positive COVID-19 cases within Waterloo Region. It is updated daily at 1:30 p.m. with data that are current as of 11:59 p.m. the previous day. Four buttons at the top of the dashboard (*Epi-curves*, *Characteristics*, *Outbreaks and Map*) can be used to view different sections. The 'Change date field' button in the top right of the Epi-curve tab can be used to display cases 'by episode date' or 'by reported date' (the default). In some cases, additional information, such as counts or rates, is available when you move your mouse over the graphic. Data reported in this dashboard is subject to ongoing data quality initiatives, and may differ from other sources due to differences in when data was extracted.

## Technical Notes

Term	Definition
Positive Cases	Individuals reported to the Region of Waterloo Public Health (Public Health) as a confirmed COVID-19 case, as defined by the <a href="#">Ontario Ministry of Health case definition</a> . Positive cases are included where the Region of Waterloo Public Health is the diagnosing health unit (DHU). DHU refers to the case's public health unit of residence at the time of diagnosis and not necessarily the case's location of exposure. The DHU is also known as the Permanent Health Unit in the Provincial Salesforce CCM database.
Resolved Cases	The following cases are classified as resolved: Cases of illness that are reported as 'recovered', cases that are not hospitalized and are 10 days past their episode date, or cases that are currently hospitalized or immunocompromised, but are 20 days past their symptom onset or specimen collection date.
Active Cases	The total number of positive COVID-19 cases which are currently symptomatic or infectious. Active cases are all those not classified as resolved or deceased.
Cumulative Cases	The total number of positive COVID-19 cases over time. The cumulative case count includes all positive cases, both outbreak-related and community cases.
Deaths	The total number of outbreak-related and community positive cases where COVID-19 was a direct or contributing cause of death.

# Technical Notes

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Total Tests	The cumulative number of known COVID-19 tests conducted in Waterloo Region. Test count data is obtained from the Ontario Laboratories Information System (OLIS) and is assigned to Waterloo Region based on the address on the Health Card. The numbers in this report may underestimate testing volumes because some records are missing Health Card Number (HCN), some labs do not report to OLIS, and from January to March, there were technical issues that prevented some tests from being accepted into OLIS. Test counts are updated on the dashboard on Tuesday and Fridays.
Active Outbreaks	The number of long-term care homes (LTC) or retirement homes (RH), congregate living settings, schools, colleges/universities, childcare centres (licensed), hospitals or workplaces/facilities which currently have an active COVID-19 outbreak. Note that individuals who do not live in Waterloo Region are still counted in the overall outbreak totals for outbreaks occurring in Waterloo Region. However, these out of region residents are not included in the total case counts for Waterloo Region and their case management is done by another public health unit.
Outbreak-related Case	Outbreak-related cases are positive COVID-19 cases associated with an outbreak in either a congregate living setting, long-term care home, retirement home, school, college/university, licensed child care centre, hospital or workplace/facility.
Non-outbreak Case	Non-outbreak cases are those not associated with a specific outbreak. The transmission type may be close contact with another case, from travel, or from an unknown source.
Episode Date	Refers to the date symptoms first appeared, or if unknown, the date the test sample was collected. If both onset and collection date are unknown, it uses the date the case was reported to Public Health. Note that this field may change as new dates are added to the patient record during case follow-up.
Reported Date	The date the positive test result was reported to Public Health.

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Per Cent Positivity	<p>Per cent positivity is calculated as the daily number of positive tests divided by the daily number of tests performed.</p> <p>The data source for per cent positivity and test count data is the Ontario Laboratory System (OLIS) which may differ slightly compared to cases reported on the public dashboard. This is because test data is based on specimen collection date (instead of the reported or episode date that is used on the public dashboard). Further, OLIS assigns test results to Waterloo Region based on the address on the health card. As a result, test numbers could include tests done outside of our region if a resident chose to get tested elsewhere or if the address on the health card is incorrect. In addition, tests done on residents without health cards would not be included.</p>
Median effective reproduction estimate ( $R_e$ )	<p><math>R_e</math> represents the expected number of cases generated by one case in the susceptible population. This indicator can be used to assess whether the epidemic is growing, stable or slowing down in our community. An <math>R_e</math> of greater than one indicates that the epidemic is growing and that there is active community transmission. An <math>R_e</math> of approximately one indicates that the amount of illness in the community is stable, and an <math>R_e</math> of less than one indicates that the epidemic is slowing down.</p> <p>The lighter coloured band around the <math>R_e</math> estimate represents the “95% credible interval” which means that there is 95% probability that the <math>R_e</math> falls within this range.</p> <p><math>R_e</math> must be interpreted with caution when case numbers are low; as such, estimates prior to March 27 not reported due to low case volumes. In addition, <math>R_e</math> represents the average number of cases generated by each case but can easily be influenced by community outbreaks and may not accurately represent overall transmission in Waterloo Region.</p>
Current Case Status	<p>The current reported status of all positive confirmed COVID-19 cases within Waterloo Region, for both outbreak-related and community cases. If a positive case changes in status, their current case status will be updated to reflect the most recent data available.</p> <p>Individuals classified as ‘Not hospitalized’ may be self-isolating at home or in other settings such as hotels or institutions. This category also includes long-term care residents who have been decanted (moved) to a hospital as part of facility outbreak management, not due to the severity of their illness.</p>

# Technical Notes



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Ever Hospitalized	<p>Positive cases who have been hospitalized due to complications associated with COVID-19, including individuals currently hospitalized, discharged, or deceased. The proportion of individuals ever hospitalized is separated into two categories:</p> <ul style="list-style-type: none"> <li>• <b>ICU:</b> Individuals admitted to the intensive care unit (ICU) related to a COVID-19 infection, including individuals who are currently in the ICU, have been discharged, or are deceased.</li> <li>• <b>Non-ICU:</b> Individuals who were hospitalized due to a COVID-19 infection, excluding individuals admitted to ICU. This includes individuals who are currently hospitalized, have been discharged, or are deceased.</li> </ul>
Health Care Worker	An individual working in a health care setting who is involved in direct patient care.
Gender	The gender that the client identifies (not the biological sex as indicated on laboratory report).
Transmission Type	<p>For each positive case, the transmission type refers to the most probable source from which COVID-19 was contracted. Exposure can occur up to 14 days before symptoms arise, and can be classified into four main categories:</p> <ol style="list-style-type: none"> <li>1. <b>Close Contact:</b> Individuals who were exposed to a confirmed or probable COVID-19 case as a result of close contact, such as residing in the same household.</li> <li>2. <b>Community:</b> Individuals whose exposure source is not known.</li> <li>3. <b>Outbreak-related:</b> Individuals who were exposed to a confirmed or probable COVID-19 case associated with an outbreak setting (see definition of settings below).</li> <li>4. <b>Travel:</b> Individuals who were exposed to a confirmed or probable COVID-19 case during travel outside the province of Ontario.</li> </ol> <p>Where cases have more than one exposure, the most probable exposure is assigned so that Outbreak (institutional) is prioritized over Travel, which is prioritized over Close Contact, followed by Community/Unknown. Cases for whom transmission type is still under investigation are noted below the figure.</p>

# Technical Notes



<p>Outbreak Settings</p>	<p>Outbreak-related cases are classified into seven main outbreak settings, defined as follows:</p> <ol style="list-style-type: none"> <li>1. <b>LTC/RH:</b> Active outbreaks in long-term care and retirement homes. A facility outbreak is defined as one or more positive cases in resident(s) or staff.</li> <li>2. <b>Congregate Settings:</b> Active outbreaks with one or more cases in staff or residents in group homes, community supported living settings, and disability-specific congregate settings (does not include correctional facilities). Note that congregate setting data is aggregated to protect the privacy of individuals, as many facilities have a small number of residents and staff.</li> <li>3. <b>Workplace/facility Settings:</b> Active outbreaks in occupational or facility settings, separated into broad categories. These outbreaks are defined as those with two or more confirmed cases where the most likely source of exposure was associated with the workplace/facility. Outbreaks are aggregated by category to protect the privacy of individuals.</li> <li>4. <b>College/Universities:</b> Active outbreaks in post-secondary institutions are defined as two or more confirmed cases in On-Campus Housing, Learning Sites or Workplace associated with the post-secondary institution with an epidemiological link, within a 14-day period, where at least one case could have reasonably acquired their infection in the post-secondary institution.</li> <li>5. <b>Schools:</b> Active outbreaks in schools are defined as two or more confirmed cases in a school with an epidemiological link, within a 14-day period, where at least one case could have reasonably acquired their infection in the school (including transportation and before/after school care).</li> <li>6. <b>Licensed child care centre settings:</b> Active outbreaks in congregate settings that provide child care. Outbreaks in these settings are defined as two or more confirmed cases in children, staff/providers or other visitors with an epidemiological link where at least one case could have been infected in the child care setting.</li> <li>7. <b>Hospitals:</b> Hospital outbreaks as declared by area hospitals in consultation with Public Health.</li> </ol>
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Cases per 100,000 Population	<p>Rates (number of cases per 100,000 population) are calculated as:</p> $\frac{\text{Number of positive COVID-19 cases}}{\text{Population size}} * 100,000$ <p>The rate is based on the home residence of positive cases and not necessarily where exposure occurred. Home residence is usually based on the address found on an individual’s health card or their normal place of residence.</p> <p>Population sizes for the region, municipalities and neighbourhoods are consistent with the Region of Waterloo year-end 2019 estimate (found in this <a href="#">Community Planning report</a>). However, Region of Waterloo Planning, Development and Legislative Services has provided adjustments to include population growth to mid-year 2020 and to adjust for post-secondary attendance as a result of COVID-19 (updated population for Waterloo Region = 588,878).</p> <p>The number of positive cases in each municipality or neighbourhood may be skewed based on testing guidance that prioritizes groups and settings at greater risk, including long-term care and retirement homes.</p>
Pending	<p>A characteristic for a positive case which is not currently available from existing data. Individual records with pending characteristics are updated on an ongoing basis where possible as data becomes available.</p>

# Technical Notes



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Neighbourhood	<p>Neighbourhoods refer to a custom level of geography developed by Region of Waterloo staff in coordination with area municipalities, local service providers and community members. These neighbourhoods are often used for service planning.</p> <p>There are 45 neighbourhoods in Waterloo Region. These neighbourhoods do not necessarily represent neighbourhood association boundaries.</p> <p>Cases are matched to neighbourhoods based on the postal code of the home address and does not necessarily reflect where exposure occurred. Cases with missing or invalid postal codes are excluded from the neighbourhood mapping because they cannot be assigned to a neighbourhood.</p> <p>Neighbourhoods with counts less than or equal to five cases have been suppressed to protect personal health information.</p> <p>In some rural areas, the postal code and neighbourhood boundaries do not align perfectly, which can result in some cases being assigned to the wrong neighbourhood.</p>

# Technical Notes

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## Contact information

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Alternate formats of this document are available upon request. Please contact the Coordinator, Health Communications at [publichealth@regionofwaterloo.ca](mailto:publichealth@regionofwaterloo.ca) to request an alternate format.

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