



COVID-19 in Durham Region: Comparison of Waves

June 2023

This report summarizes COVID-19 activity in Durham Region across seven waves from the beginning of Wave 1 on February 28, 2020 to December 31, 2022, six months into Wave 7. The report presents information about confirmed cases that are residents of Durham Region based on data extracted from the Case and Contact Management (CCM) system. Each COVID-19 wave was distinctly different with factors such as vaccination and the introduction of more transmissible virus variants affecting case numbers, morbidity and mortality, and how the virus spread in our community. The date ranges were drawn from Public Health Ontario's wave definitions based on reported dates of cases in Ontario.¹ The start date of Wave 1 was modified slightly to account for the first case reported in Durham Region.

Summary

Wave 1

Wave 1 represented the start of the pandemic from February to August 2020. COVID-19 was a new disease that triggered high hospitalization and death rates and was particularly devastating for older people living in long-term care homes and retirement homes. The epidemiology of the disease was just starting to be understood.

Wave 2

Wave 2 occurred in the first winter of the pandemic from September 2020 to February 2021 and was characterized by high levels of testing for the virus and vaccination roll-out targeting residents of long-term care and retirement homes, and health care workers. While Wave 2 continued to have high morbidity and mortality, the new vaccine offered optimism that COVID-19 would be controlled; however, a new variant of concern was already replacing the original SARS-CoV-2 virus.

Wave 3

Wave 3 occurred in the second spring and summer of the pandemic from March to July 2021 and was typified by the emergence of multiple variants of the SARS Co-V-2 virus and peak vaccinations. Durham Region Health Department (DRHD) initiated their mass immunization clinics. Despite the spread of new variants of concern, public health restrictions and extraordinary vaccination efforts led to a decrease in cases and wastewater signal.

Wave 4

Wave 4 occurred over the second fall of the pandemic from August to mid-December 2021 and was characterized by low cases, low morbidity and mortality, the lowest percent positivity of laboratory tests, low wastewater signal, and the youngest cases; this was the calm before the advent of the Omicron variant. High vaccination coverage protected large segments of the population with the exception of children who were not yet eligible for vaccination (ages less than 5 years) or who became eligible later in the wave (ages 5 to 11). Lack of vaccination for children was reflected in large numbers of outbreaks in schools.

Summary

Wave 5

Wave 5, the shortest but largest wave, extended from mid-December 2021 to February 2022 and was driven by the newly emergent and highly contagious Omicron variant. The large increase in case numbers overwhelmed laboratory testing and public health systems, ultimately leading to PCR testing for high-risk individuals only and low reporting of confirmed cases. While high vaccination coverage did not often protect against contracting the disease, the vaccine did reduce hospitalization and death. Despite this, the sheer number of cases led to strain on the health care system.

Wave 6

Wave 6 occurred in the third spring of the pandemic from March to mid-June 2022 and was characterized by the continued prominence of Omicron and underestimated case numbers. Public health restrictions were removed during Wave 6 and vaccination numbers decreased, leading to a small surge in reported cases but low mortality, likely due to high population immunity through vaccination and/or contracting the disease. The wastewater signal indicated that COVID-19 was still widespread in the community.

Wave 7

Wave 7, which began in June 2022 and was still ongoing as of spring 2023, had the lowest testing rates, highest female ratio, and highest age of cases, likely related to PCR testing eligibility requirements which favoured testing of residents and staff in long-term care homes, retirement homes and hospitals. Breakthrough cases among vaccinated older people was possibly due to waning immunity six months after vaccination, particularly if people were not infected with COVID-19 during recent Omicron surges. Wastewater surveillance continued to show that COVID-19 was widespread in the community despite the smaller number of reported cases.

As of June 2023, residents in specific high-risk populations were recommended to receive a COVID-19 booster dose if it had been at least six months (168 days) since their last dose or confirmed COVID-19 infection. High-risk populations included those 65 years and older; residents of long-term care homes, retirement homes, elder care lodges and other congregate living settings for seniors; individuals 18 years and older living in congregate care settings for people with complex medical care needs; pregnant individuals; individuals 18 years and older moderately to severely immunocompromised; and individuals aged 55 years and older who identify as First Nations, Inuit or Métis and their non-Indigenous household members aged 55 years and older.



Table 1: Waves at a Glance

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7
Start date	Feb 28, 2020	Sep 1, 2020	Mar 1, 2021	Aug 1, 2021	Dec 15, 2021	Mar 1, 2022	Jun 19, 2022
End date	Aug 31, 2020	Feb 28, 2021	Jul 31, 2021	Dec 14, 2021	Feb 28, 2022	Jun 18, 2022	Ongoing: Dec 31, 2022 for this report
Total number of days	186	181	153	136	76	110	196
Week* of peak case counts	Apr 12, 2020	Jan 3, 2021	Apr 11, 2021	Dec 5, 2021	Jan 9, 2022	Apr 10, 2022	Jul 17, 2022
Total number of cases*	1,904	9,947	13,598	3,410	24,773	9,358	8,530
Average number of cases* per day	10 (Lowest)	55	89	25	326 (Highest)	85	44
Average number of tests per day	680	1,661 (Highest)	1,526	1,139	1,624	674	409 (Lowest)
Percent positivity	2% (Lowest)	3%	6%	2% (Lowest)	20% (Highest)	12%	11%
Total number of hospitalizations**	216	360	617 (Highest)	122 (Lowest)	319	203	217
Hospitalizations** per 1,000 cases	113.4 (Highest)	36.2	45.4	35.8	12.9 (Lowest)	21.7	21.0
Total number of deaths***	181 (Highest)	115	76	17 (Lowest)	80	26	36
Case fatality rate*** per 1,000 cases	95.1 (Highest)	11.6	5.6	5.0	3.2	2.8 (Lowest)	4.2
Percentage of female cases	59%	51%	50% (Lowest)	52%	55%	60%	65% (Highest)
Average age of cases	55 (Highest)	40	36	32 (Lowest)	38	44	54 (Highest)
Percentage of cases aged 65 or older	34%	11%	7%	7% (Lowest)	9%	18%	35% (Highest)
Predominant type of outbreak	Institutional	Workplace	Workplace	School	Institutional	Institutional	Institutional
Average viral signal in wastewater site of Corbett Creek	Not measured	Not measured	1.2	0.7 (Lowest)	1.8	1.7	1.9 (Highest)

Table 1: Waves at a Glance

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7
Predominant exposure sources	Outbreaks in institutions	Household	Household, Workplace, Other Close Contact	Household, Other Close Contact, Travel	Not captured	Not captured	Not captured
Predominant variants of concern	None	Alpha	Alpha Beta Gamma Delta	Delta	Omicron	Omicron	Omicron
Average number of vaccinations per day	0	181 (Lowest)	5,564 (Highest)	1,573	4,234	724	897
Total number of vaccinations administered	0	32,681 (Lowest)	851,324 (Highest)	213,912	321,803	79,609	175,889
Vaccination coverage of population aged 12+ at end of wave	0	Not available but minimal for total population	1st dose: 82% 2nd dose: 71%	1st dose: 91% 2nd dose: 89%	1st dose: 93% 2nd dose: 91% 3rd dose: 53%	1st dose: 93% 2nd dose: 91% 3rd dose: 56%	1st dose: 93% 2nd dose: 91% 3rd dose: 57%
Average viral signal in wastewater site of Corbett Creek	Not measured	Not measured	1.2	0.7 (Lowest)	1.8	1.7	1.9 (Highest)

* Based on reported date of case

** Based on hospital admission date

*** Based on date of death

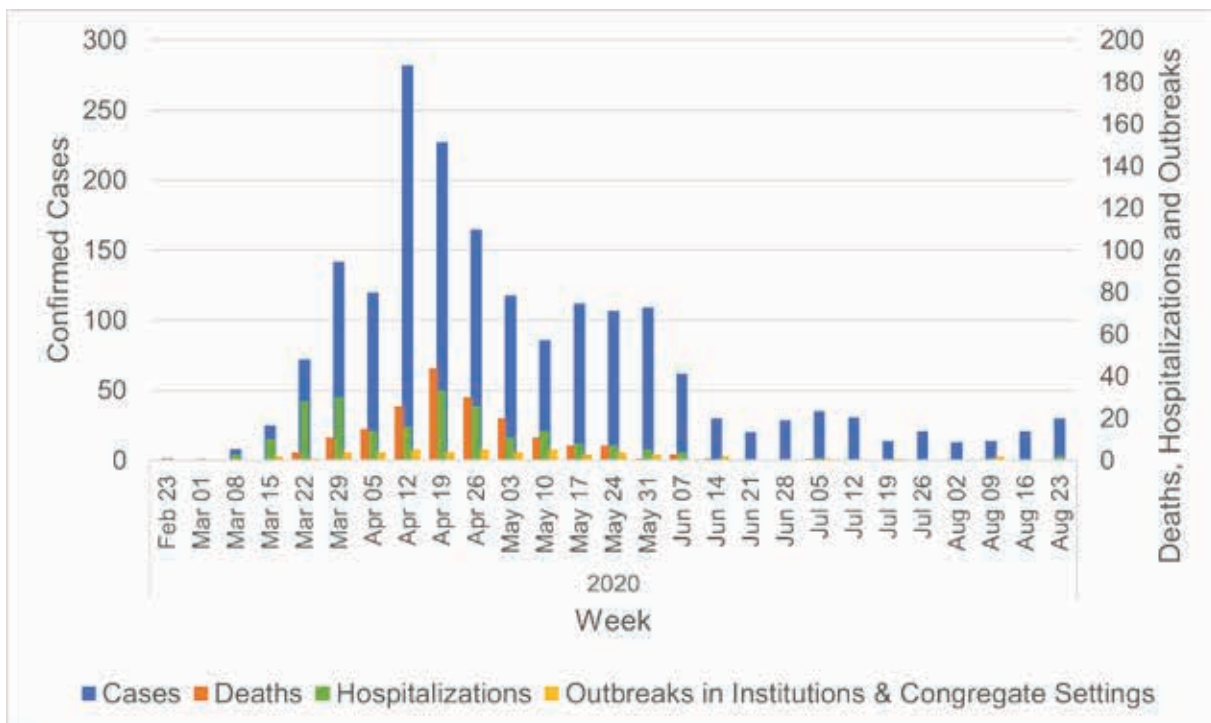
Wave Descriptions

Defining Feature: Pandemic arrival with high morbidity and mortality.

Wave 1

- Lasted 186 days from February 28, 2020 to August 31, 2020 with peak case counts the week of April 12, 2020.
- Ontario government declared a provincial state of emergency on March 17, 2020 resulting in schools and non-essential businesses closing with gradual reopening from May to July 2020 and remote learning for school children from March to June².
- Lowest total number of cases (1,904) and lowest average number of cases per day (10).
- Highest hospitalization rate (113.4 per 1,000 cases).
- Highest case fatality rate (95.1 deaths per 1,000 cases) and highest total number of deaths (181).
- Highest number of deaths in a single week occurred the week of April 19, 2020 with 44 deaths.
- Second highest percentage of cases 65 years and older (34%) and highest average age (55 years), likely due to higher COVID-19 exposure for residents in long-term care and retirement homes.
- Predominant exposure source was outbreak in an institution, accounting for 49% of cases.
- Vaccination not yet available.

Figure 1: Number of COVID-19 cases, deaths, hospitalizations and outbreaks in Durham Region during Wave 1



Note: Week refers to reported week for cases, date of death, date of hospital admission or outbreak declared date.

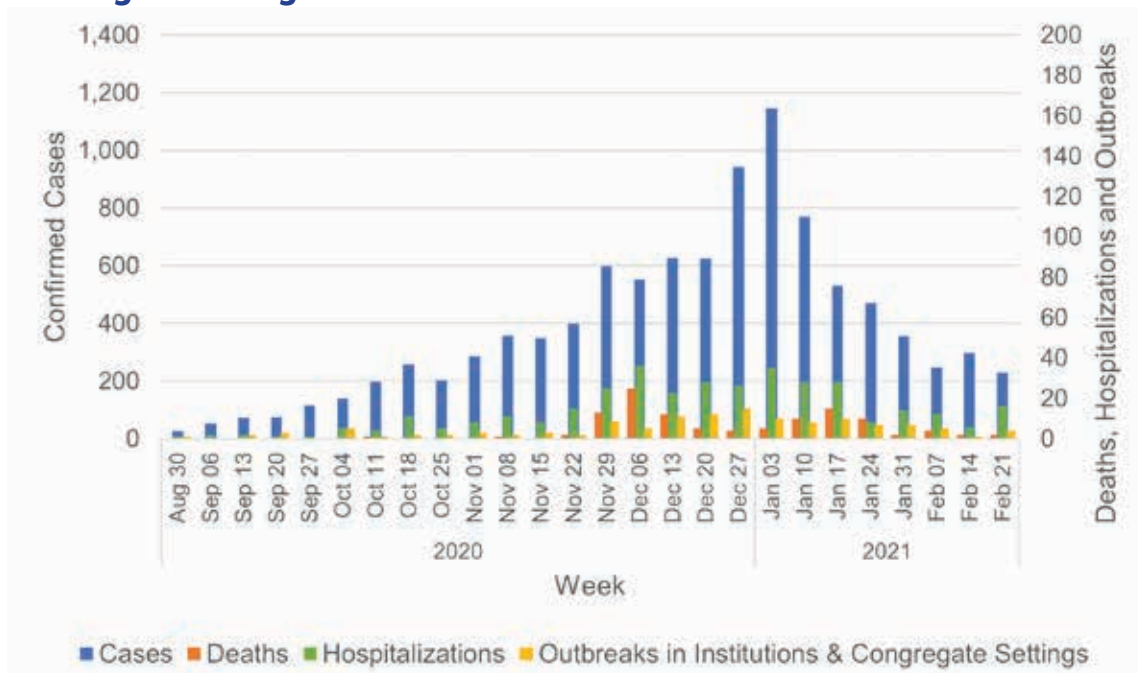
Wave Descriptions

Defining Feature: Targeted vaccine roll-out.

Wave 2

- Lasted 181 days from September 1, 2020 to February 28, 2021 with peak case counts the week of January 3, 2021.
- Ontario relaxed restrictions in summer 2020, but gradually introduced more public health interventions in the fall as case numbers grew, including mandating face masks in all indoor public spaces and limiting indoor gatherings.
- Durham Region elevated to red-control status on November 23, 2020 leading to more local restrictions.
- Ontario entered a second provincewide shutdown on December 26, 2020 and declared a provincial state of emergency on January 14, 2021, which expired on February 19, 2021².
- Second highest case fatality rate (11.6 per 1,000 cases) and second highest total number of deaths (115).
- Highest number of workplace outbreaks per day (5 outbreaks every 10 days).
- Predominant exposure source was a household contact, accounting for 39% of cases.
- Predominantly B.1.1.7 (Alpha) variant, with Alpha comprising 94% of cases with a known variant.
- Vaccination roll-out began in December 2020 but because of limited vaccine supply, Phase 1 focused only on residents of long-term care and retirement homes, health care workers, Indigenous communities and homebound patients. By February 7, 2021, most Durham Region residents in long-term care had completed their two-dose vaccine series.
- Lowest number of vaccines administered (32,681) and vaccinations per day (181) as the campaign had just begun.

Figure 2: Number of COVID-19 cases, deaths, hospitalizations and outbreaks in Durham Region during Wave 2



Note: Week refers to reported week for cases, date of death, date of hospital admission or outbreak declared date.

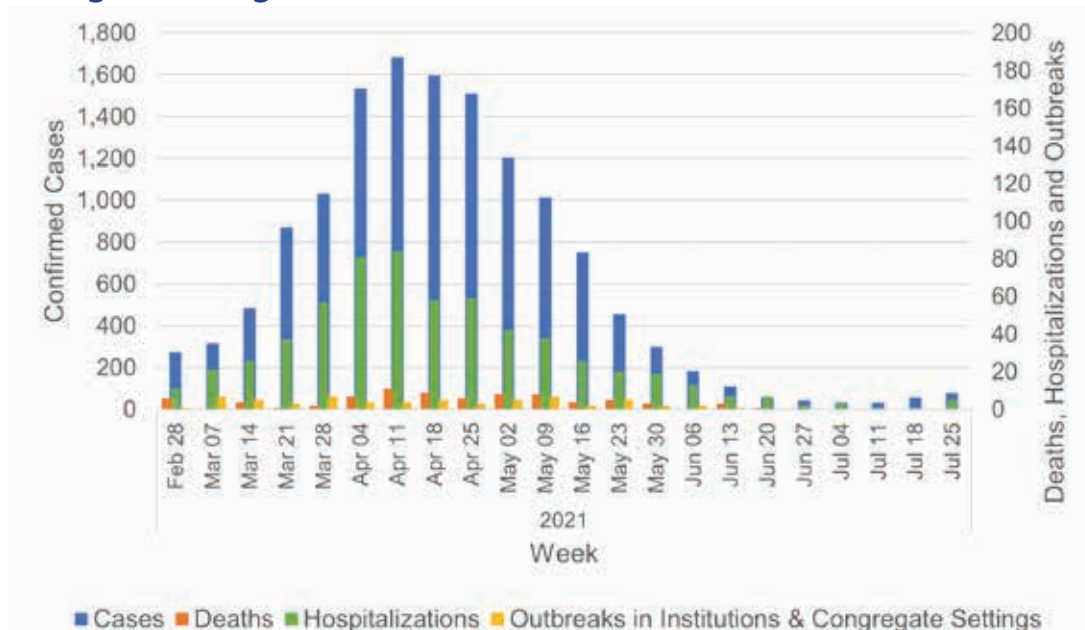
Wave Descriptions

Defining Feature: Widespread vaccination amidst new variants.

Wave 3

- Lasted 153 days from March 1, 2021 to July 31, 2021 with peak case counts the week of April 11, 2021.
- Although restaurants, bars and retail businesses were reopened on March 1, 2021, Ontario instituted an emergency brake lockdown on April 3, 2021 and declared the third provincial state of emergency on April 8, 2021 which expired on June 9, 2021².
- Highest number of hospital admissions in a single week occurred the week of April 11, 2021 with 84 hospitalizations.
- Highest number of childcare outbreaks per day (4.1 outbreaks every 10 days).
- Predominant exposure source was a household contact (40% of cases), followed by other close contact (15%).
- New variants of the SARS Co-V-2 virus circulated with the B.1.1.7 (Alpha) variant comprising 41% of cases with a known variant, B.1.617.2 (Delta) accounting for 25% and P.1 (Gamma) accounting for 25%.
- DRHD's mass immunization clinics began and Ontario's eligibility criteria gradually expanded as vaccine supplies increased, with pharmacies and primary care settings also joining the massive vaccination effort.
- Highest average number of vaccinations per day (5,564) and highest total number of vaccinations administered in a single week occurred the week of June 27, 2021 (72,847).
- By the end of Wave 3, 82% of Durham Region residents aged 12 or older were vaccinated with one dose and 71% with two doses.
- Surveillance of wastewater for fragments of the SARS Co-V-2 virus began at seven Durham Region sites in March 2021, with weekly averaged values showing moderately high viral signals in April that decreased in May and were at their lowest point in June 2021.

Figure 3: Number of COVID-19 cases, deaths, hospitalizations and outbreaks in Durham Region during Wave 3



Note: Week refers to reported week for cases, date of death, date of hospital admission or outbreak declared date.

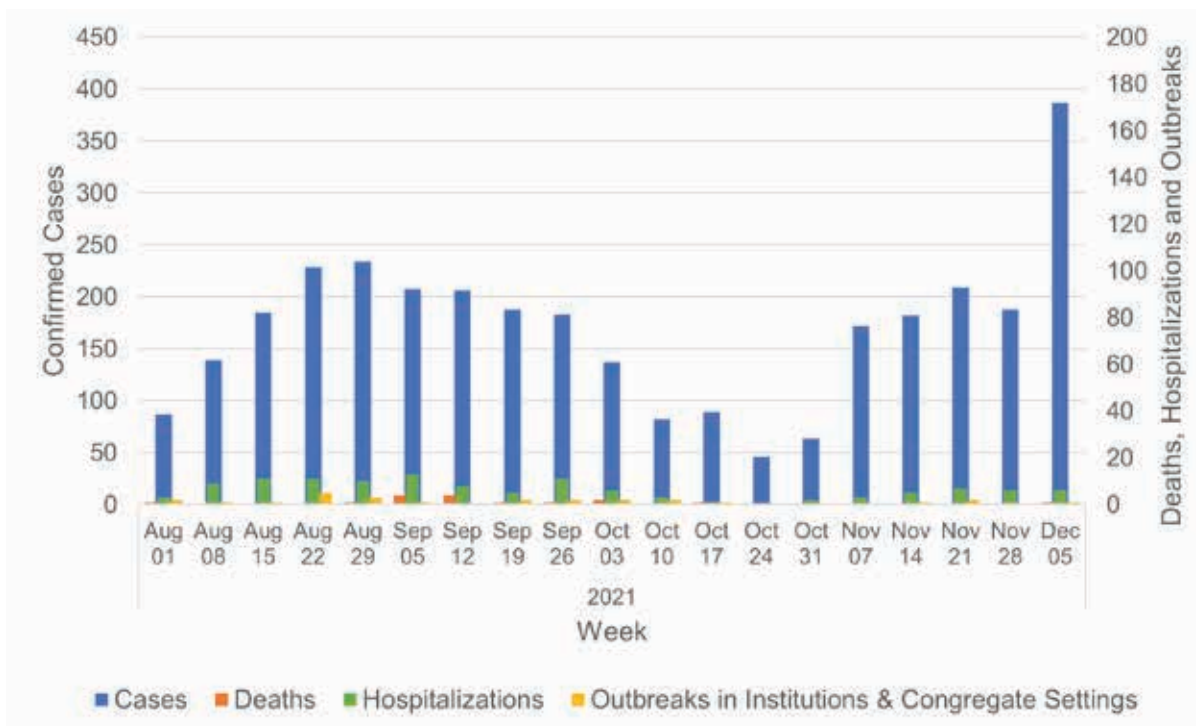
Wave Descriptions

Defining Feature: The calm before Omicron.

Wave 4

- Lasted 136 days from August 1, 2021 to December 14, 2021 with peak case counts the week of December 5, 2021.
- Proof of vaccination was required in Ontario in September 2021 for workers in high-risk settings and for the public in indoor public settings such as gyms, theatres, and restaurants with proof still required once capacity limits for weddings, funerals and religious services were lifted on October 25, 2021².
- Second lowest average number of cases per day (25.1).
- Lowest average age (32.0 years) and lowest percentage of cases 65 years and older (7%).
- Highest number of school outbreaks per day (4.1 outbreaks every 10 days).
- Predominant exposure source was household contact for 31% of cases, followed by other close contact for 23% of cases.
- Predominantly B.1.617.2 (Delta) variant, with Delta comprising 95% of cases with a known variant.
- Vaccination at mass immunization clinics and other sites continued as segments of the population were vaccinated with their third dose (booster) and children aged 5 to 11 became eligible for their first dose in late November 2021.
- By the end of Wave 4, 91% of residents aged 12 or older were vaccinated with one dose and 89% with two doses.
- Averaged wastewater signal for sentinel site of Corbett Creek lowest in Wave 4.

Figure 4: Number of COVID-19 cases, deaths, hospitalizations and outbreaks in Durham Region during Wave 4



Note: Week refers to reported week for cases, date of death, date of hospital admission or outbreak declared date.

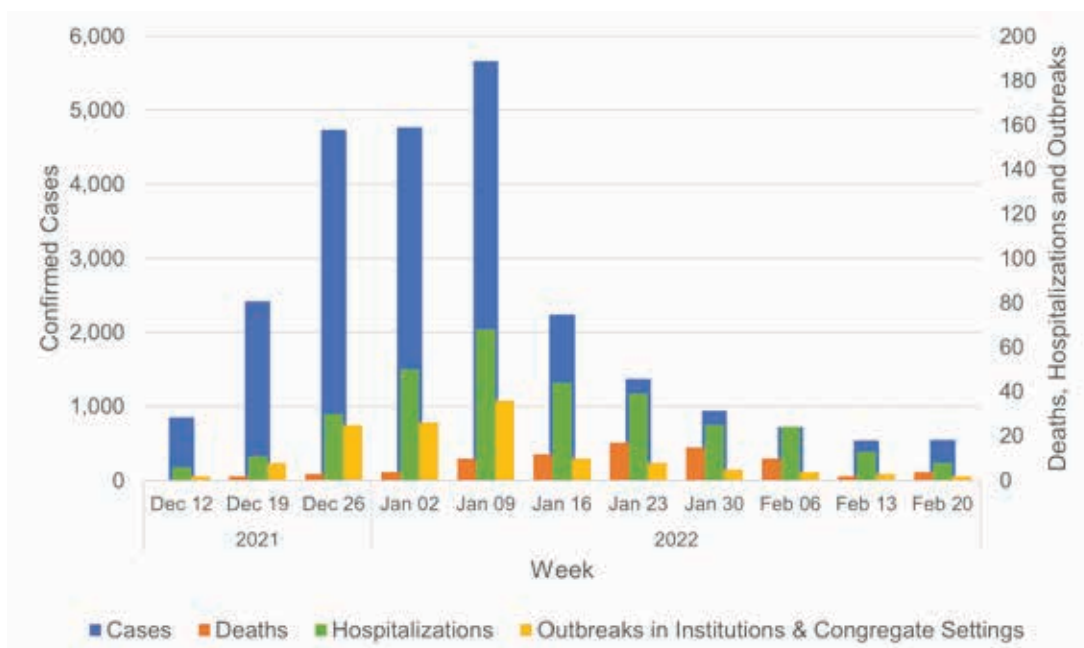
Wave Descriptions

Defining Feature: The onslaught of Omicron.

Wave 5

- Lasted 76 days from December 15, 2021 to February 28, 2022 with peak case counts the week of January 9, 2022.
- Ontario limited PCR laboratory testing to high-risk individuals on December 31, 2021, resulting in a drastic drop in reported cases following the peak week of January 9, 2022.
- Provincial changes resulted in case and contact management focused only on high-risk settings, minimal case follow-up in the general public and outbreaks no longer declared in schools, workplaces and child care centres.
- Ontario imposed gathering and capacity limits for businesses on January 5 and schools resumed virtual learning, delaying in-person classes until January 17.
- On February 17, Ontario initiated its Roadmap to Reopen plan².
- Highest total number of confirmed cases (24,773) and highest average number of cases per day (326).
- Lowest hospitalization rate (12.9 per 1,000 cases).
- Highest number of congregate setting outbreaks per day (7 outbreaks every 10 days), includes group homes, shelters, shared housing for farms with international workers, and other communal living facilities.
- Highest number of institutional outbreaks per day (10 outbreaks every 10 days), includes long-term care homes, retirement homes and hospitals.
- Variant B.1.1.529 (Omicron) arrived and quickly spread, comprising 95% of cases with a known variant.
- Second highest average number of vaccinations per day (4,234).
- By the end of Wave 5, 93% of residents aged 12 or older were vaccinated with one dose, 91% with two doses and 53% with three doses.
- Average weekly wastewater signals peaked in Wave 5, particularly in late December and early January. Although the signal decreased in February, it continued to be high, indicating that COVID-19 was widespread in the community.

Figure 5: Number of COVID-19 cases, deaths, hospitalizations and outbreaks in Durham Region during Wave 5



Note: Week refers to reported week for cases, date of death, date of hospital admission or outbreak declared date.

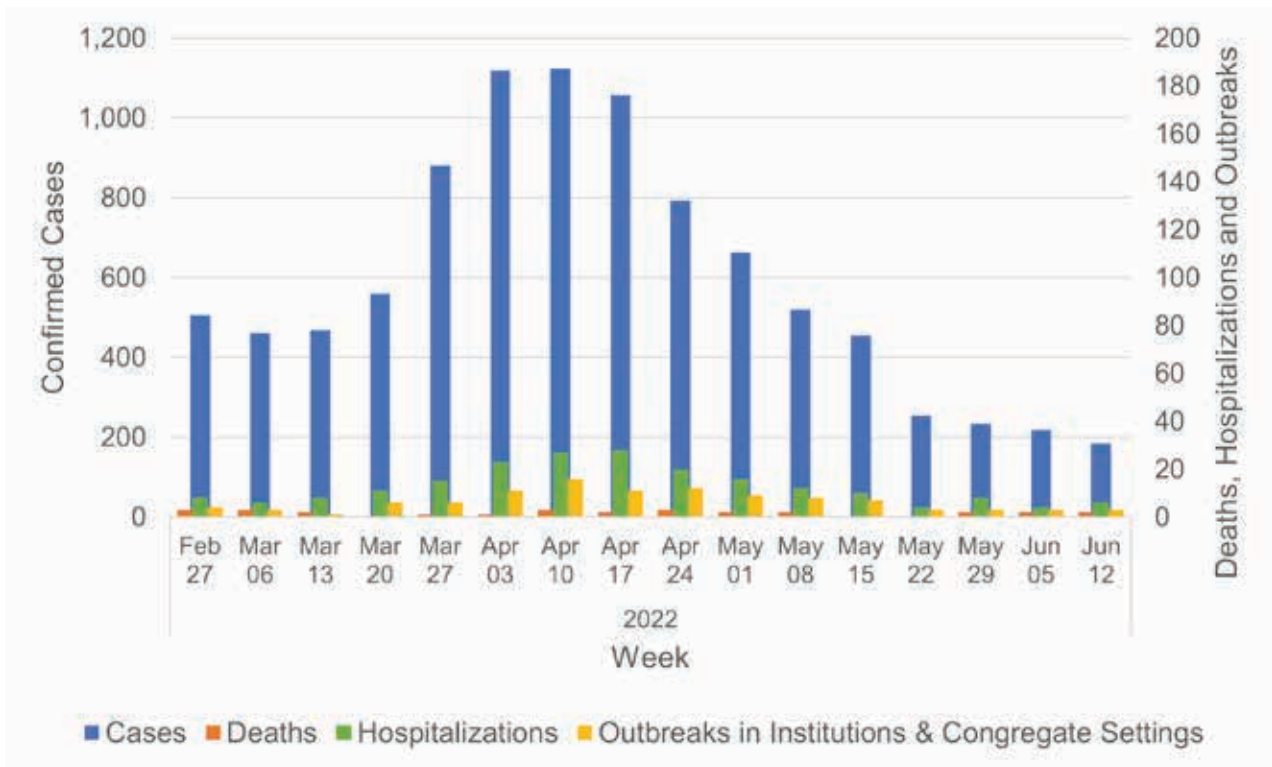
Wave Descriptions

Defining Feature: Spring surge amidst high immunity through vaccination and past infection.

Wave 6

- Lasted 110 days from March 1 to June 18, 2022 with peak case counts the week of April 10, 2022.
- Ontario lifted requirements for proof of vaccination, capacity limits and physical distancing for all non-essential services on March 1, 2022 with masking requirements removed from schools and most places on March 21, 2022, excluding higher-risk settings such as long-term care homes².
- Second highest average number of cases per day (85).
- Lowest case fatality rate (2.6 deaths per 1,000 cases).
- All cases with a known variant were B.1.1.529 (Omicron).
- Number of vaccinations administered decreased dramatically compared to the previous three waves.
- By the end of Wave 6, 93% of residents aged 12 or older were vaccinated with one dose, 91% with two doses and 56% with three doses.
- Weekly averaged wastewater signals over the seven sites continued to be elevated, particularly from mid-March to mid-May.

Figure 6: Number of COVID-19 cases, deaths, hospitalizations and outbreaks in Durham Region during Wave 6



Note: Week refers to reported week for cases, date of death, date of hospital admission or outbreak declared date.

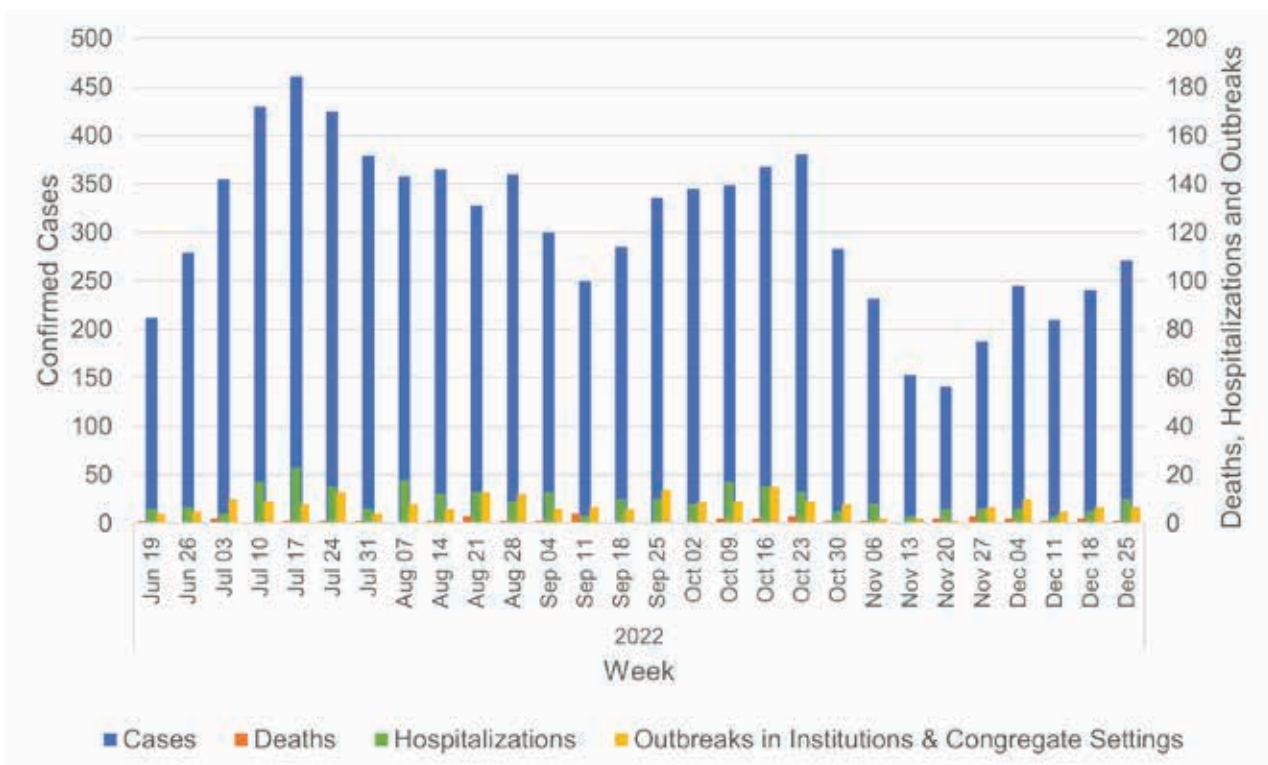
Wave Descriptions

Defining Feature: Holding steady with no definite peak and valley.

Wave 7

- Wave 7 is ongoing as of spring 2023; this report includes data from June 19, 2022 to December 31, 2022 (196 days) with peak case counts the week of July 17, 2022.
- Highest percentage of cases 65 years and older (36%) and highest average age (55 years).
- Highest percentage of cases that were female (65%), likely because those most likely to receive PCR testing were residents in long-term care and retirement homes and health care workers in institutions, who were disproportionately female.
- All cases with a known variant were B.1.1.529 (Omicron) variant.
- COVID-19 vaccine became available for children six months to five years in late July 2022.
- By the end of Wave 7, 93% of residents aged 12 or older were vaccinated with one dose, 91% with two doses and 57% with three doses.
- Weekly averaged wastewater signals over the seven sites continued to be elevated and fairly steady.

Figure 7: Number of COVID-19 cases, deaths, hospitalizations and outbreaks in Durham Region during Wave 7



Note: Week refers to reported week for cases, date of death, date of hospital admission or outbreak declared date.

Indicators by Week

Figure 8: Weekly number of confirmed COVID-19 cases in Durham Region by wave

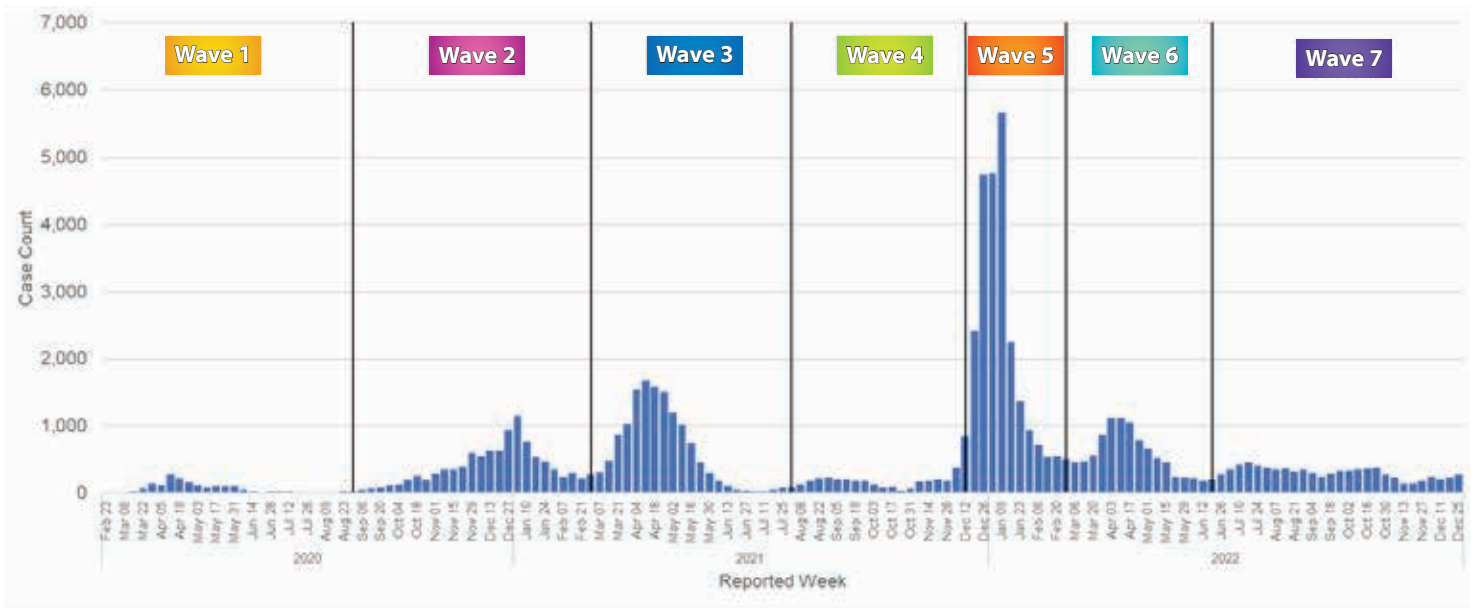


Figure 8 shows the number of confirmed cases of COVID-19 that occurred among Durham Region residents by the week the case was reported to public health. The trend of case counts over time in Durham Region was similar to the Ontario trend.³

Figure 9: Weekly number of hospitalized COVID-19 cases in Durham Region residents by wave

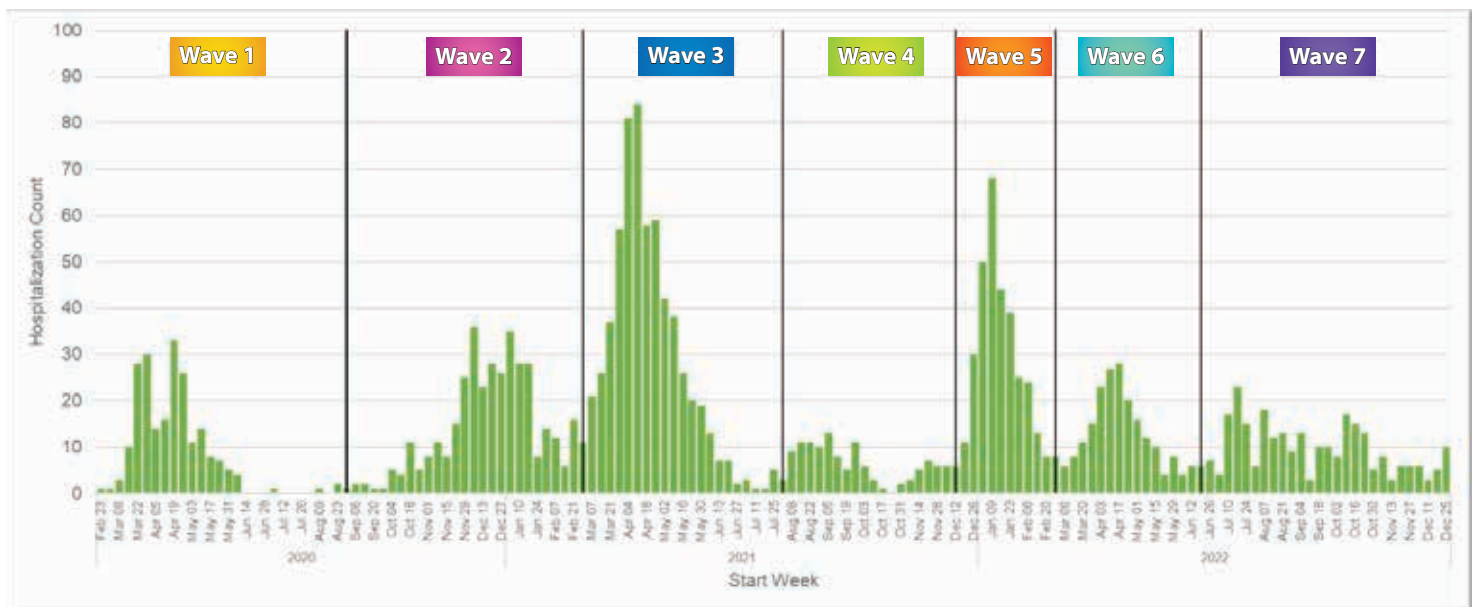


Figure 9 shows the number of hospitalizations among Durham Region residents who were hospitalized because of COVID-19 by the week of hospital admission. The trend of hospitalizations over time in Durham Region residents was similar to the Ontario trend.³

Indicators by Week

Figure 10: Weekly number of Durham Region deaths from COVID-19 by wave

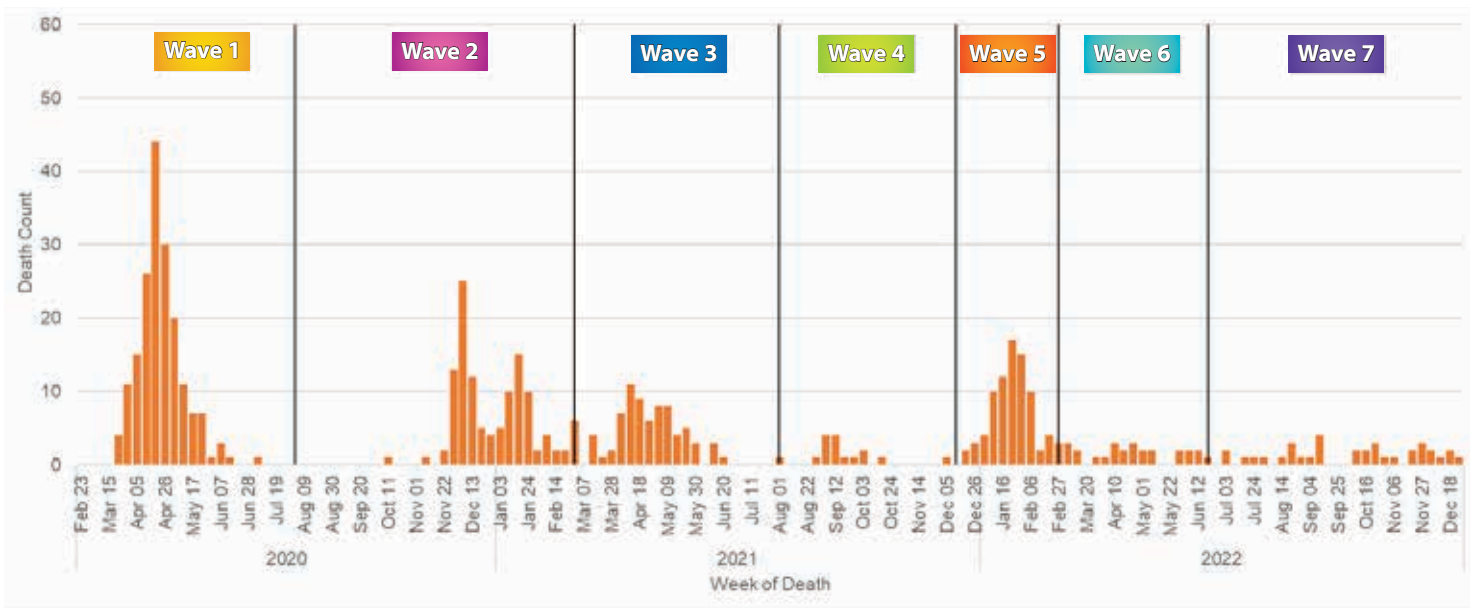


Figure 10 shows the number of COVID-19 related deaths that occurred among Durham Region residents by the week the death occurred. The trend of death counts over time in Durham Region was similar to the Ontario trend; however, the peaks in Wave 2 and Wave 5 were relatively higher at the provincial level with peaks counts almost as high as in Wave 1 for both.³

Figure 11: Weekly COVID-19 case fatality rate in Durham Region by wave

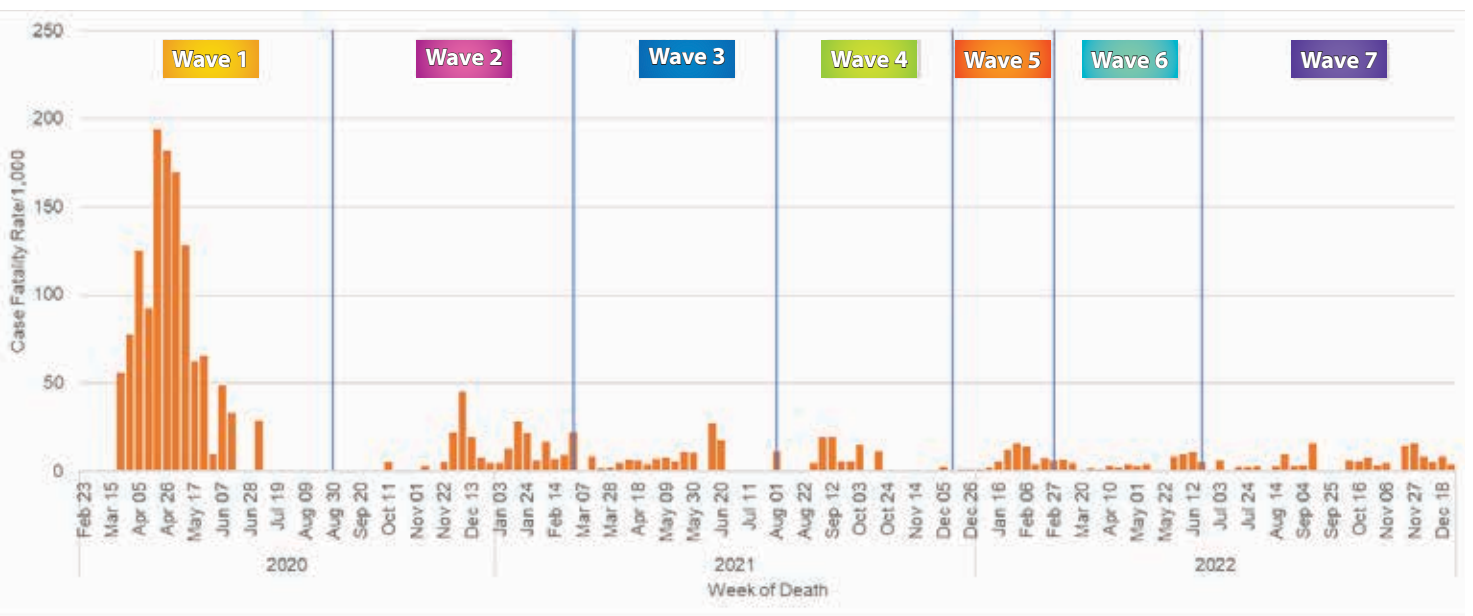


Figure 11 shows the number of COVID-19 related deaths that occurred per 1,000 cases among Durham Region residents by the week the death occurred.

Indicators by Week

Figure 12: Weekly number of COVID-19 outbreaks in institutions and congregate living settings in Durham Region by wave

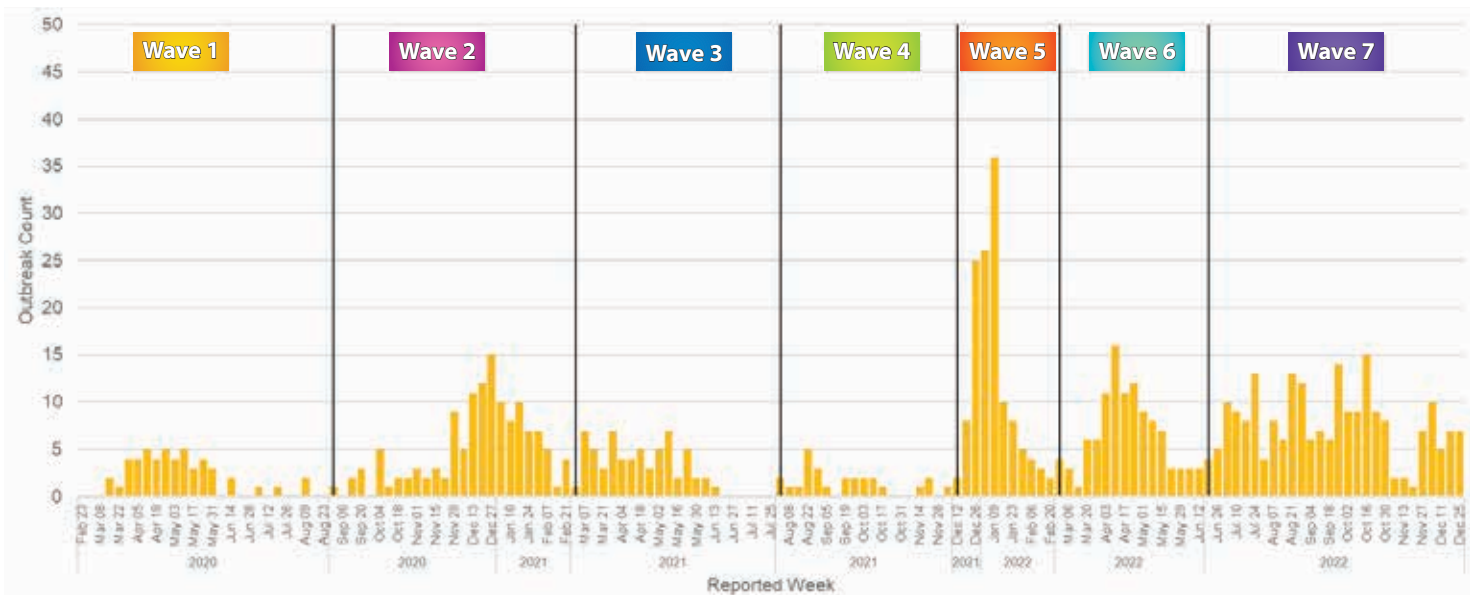


Figure 12 shows the number of COVID-19 outbreaks in hospitals, long-term care homes, retirement homes and congregate living settings such as group homes, shelters and farms with international workers by outbreak reported week. The trend of outbreak counts over time in Durham Region was similar to the Ontario trend.³

Figure 13: Weekly number of COVID-19 vaccinations administered in Durham Region by wave

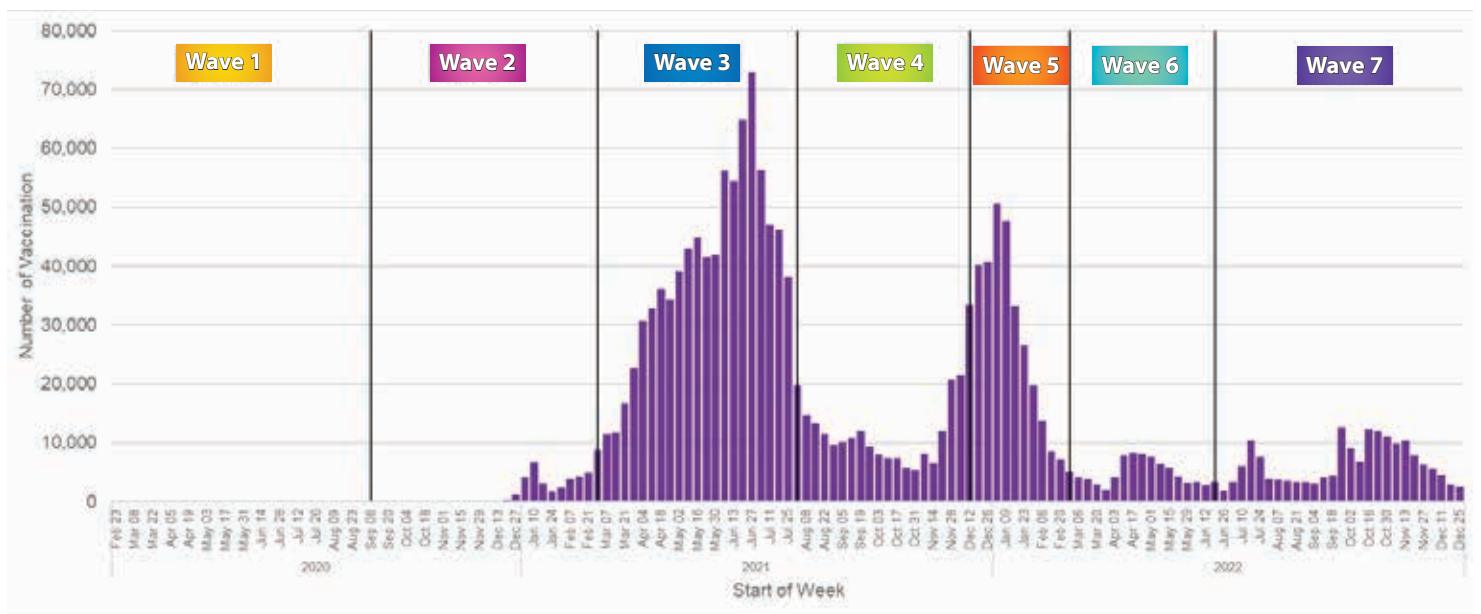


Figure 13 shows the total number of COVID-19 vaccines administered by the Health Department, Lakeridge Health, pharmacies, primary care providers, workplaces and provincial mobile clinics to people who live or work in Durham Region. The trend of vaccines administered over time in Durham Region was very similar to the Ontario trend.³

Indicators by Week

Figure 14: Weekly COVID-19 wastewater signals in Durham Region by wave

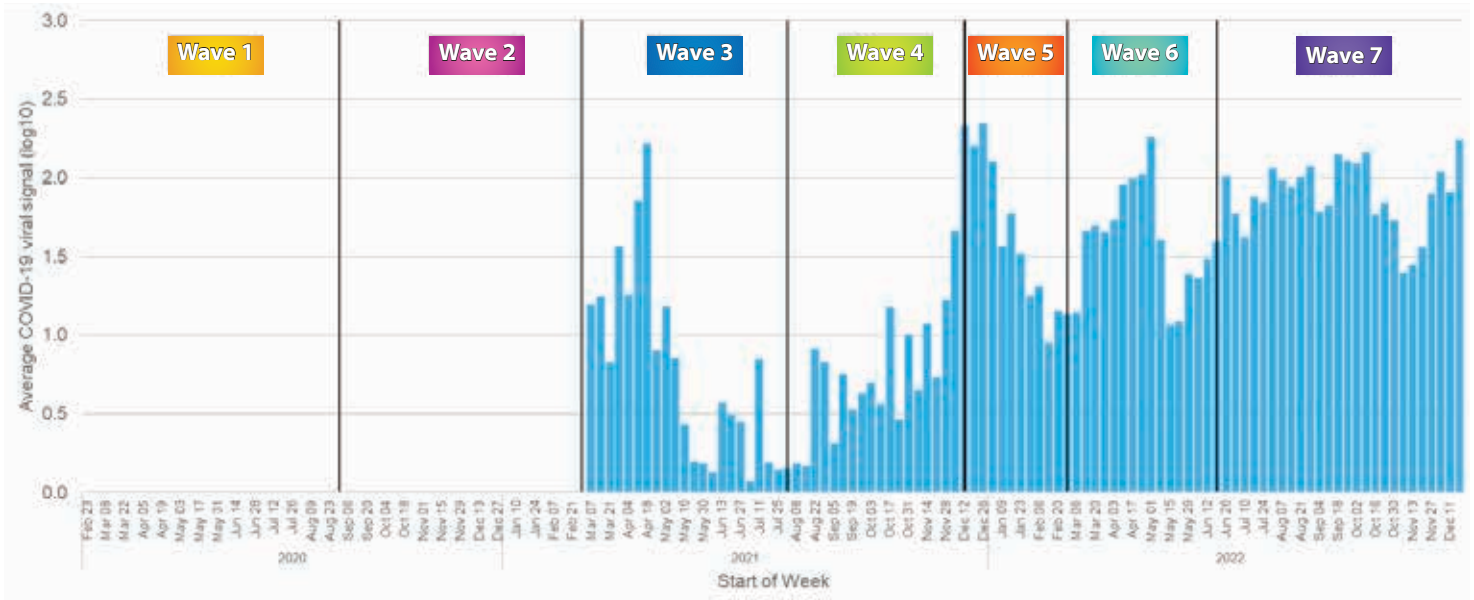


Figure 14 shows the average log10 COVID-19 viral signal across all seven wastewater sampling locations in Durham Region for each week. Wastewater surveillance for COVID-19 did not begin in Durham Region until March 2021, during Wave 3.



Corbett Water Pollution Control Plant



Port Darlington Water Pollution Control Plant



Indicators by Wave

Figure 15: Number of confirmed COVID-19 cases by wave

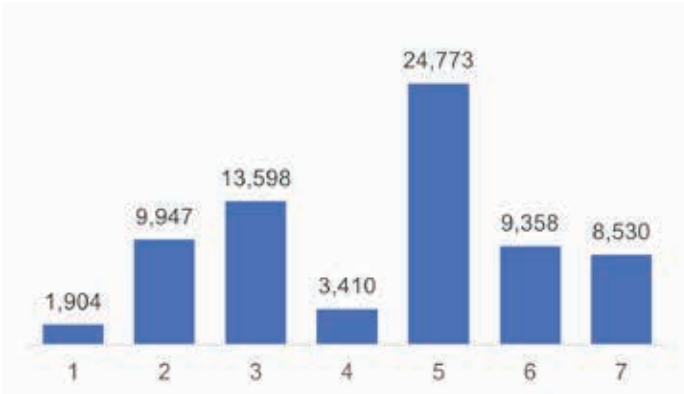


Figure 16: Number of confirmed COVID-19 cases per day by wave

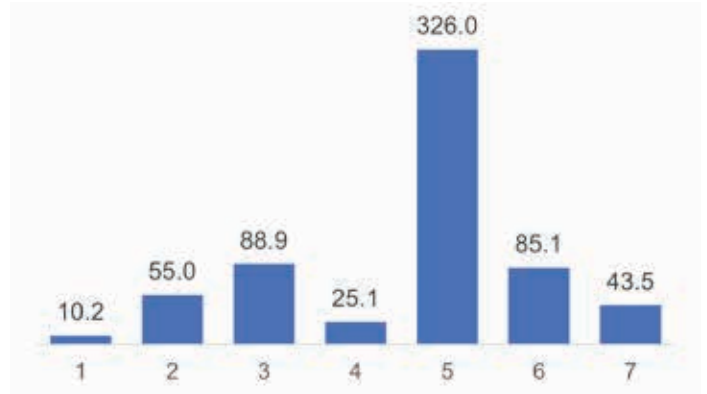


Figure 17: Average number of COVID-19 tests per day by wave

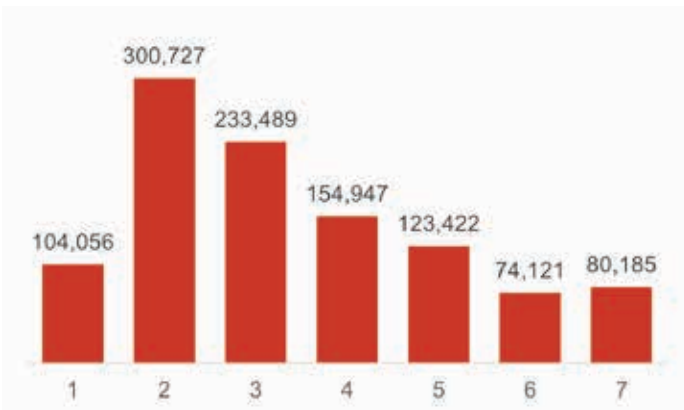


Figure 18: Percent positivity of COVID-19 laboratory tests by wave

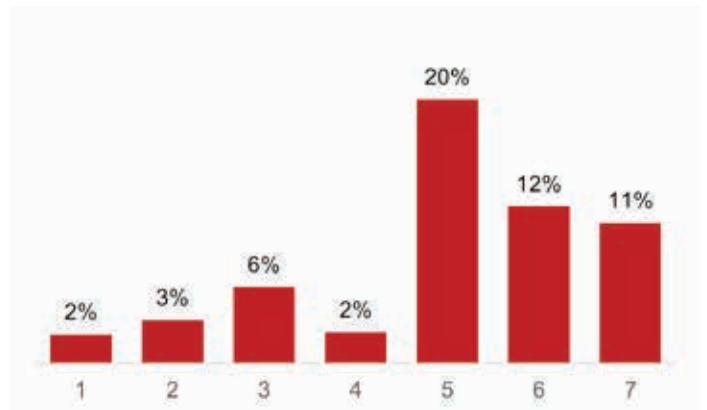


Figure 19: Number of COVID-19 hospitalizations by wave

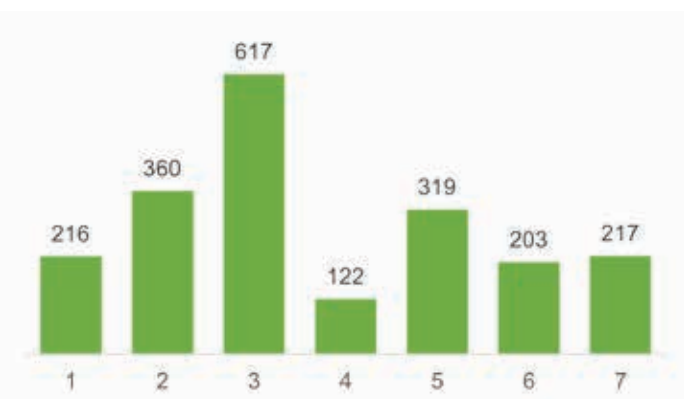
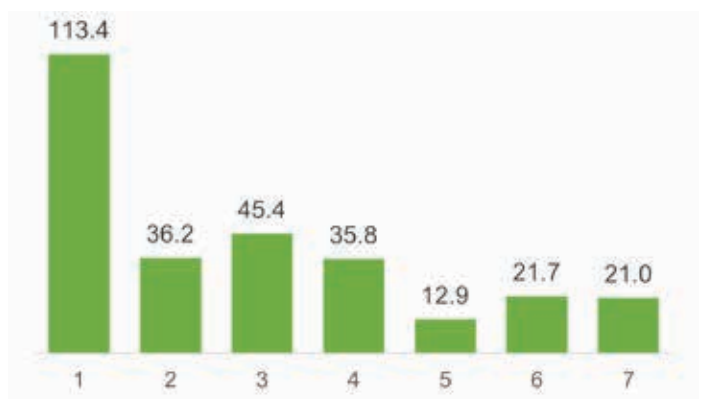


Figure 20: COVID-19 hospitalizations per 1,000 cases by wave



Indicators by Wave

Figure 21: COVID-19 deaths by wave

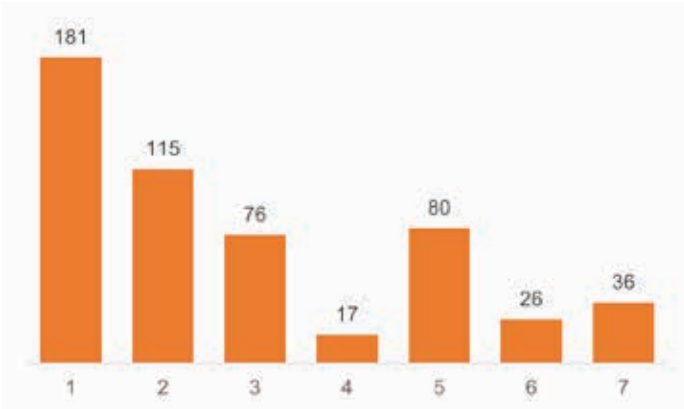


Figure 22: COVID-19 cases fatality rate (deaths per 1,000 cases) by wave

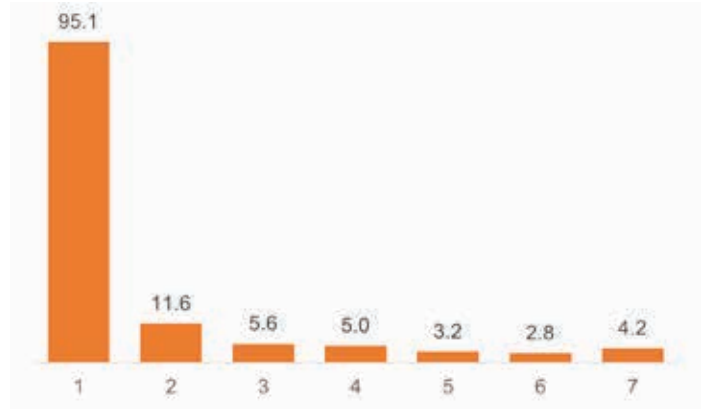


Figure 23: Average age of confirmed COVID-19 cases by wave

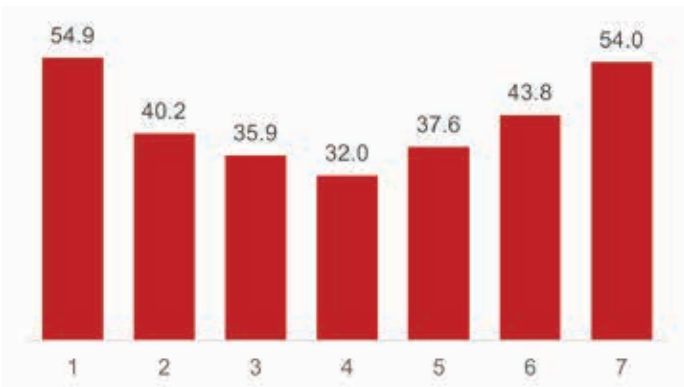
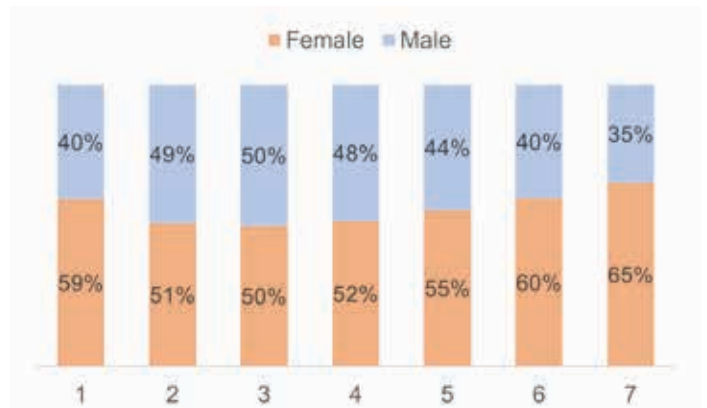
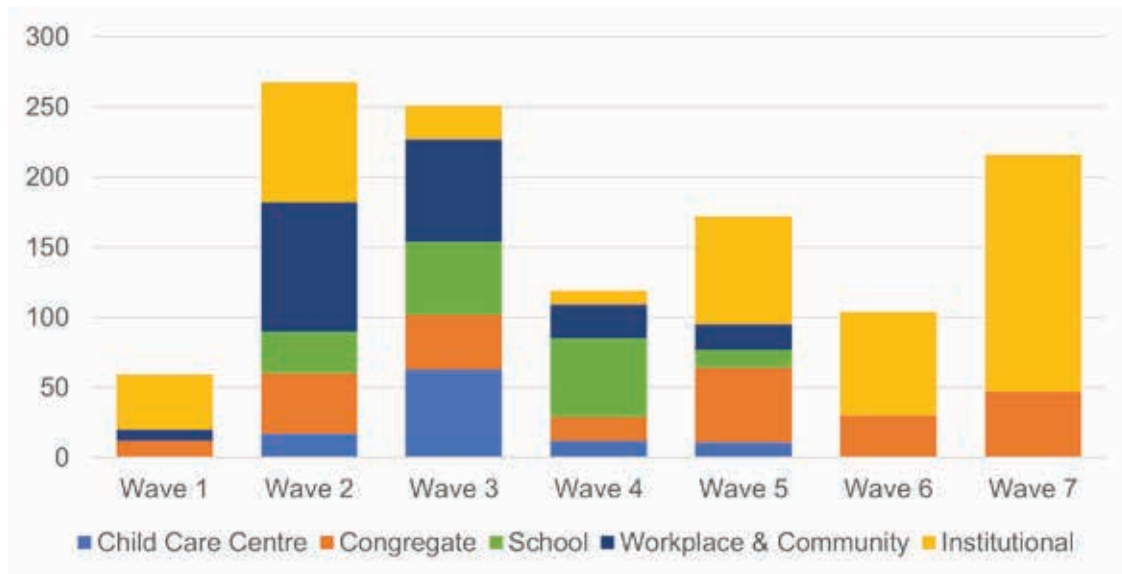


Figure 24: Male and female breakdown of confirmed COVID-19 cases by wave



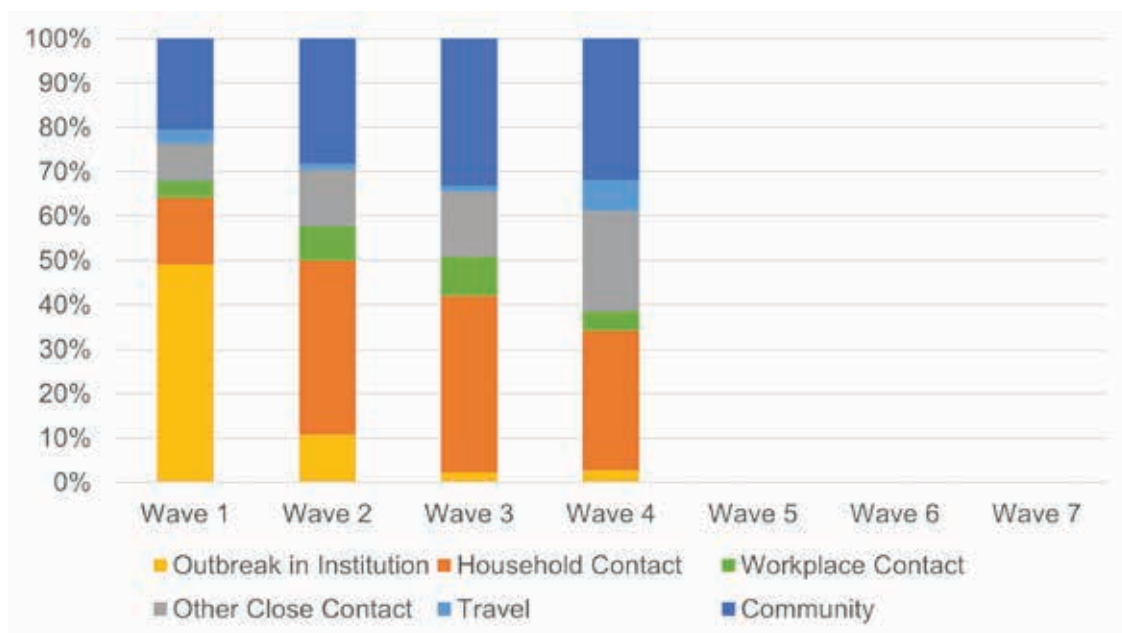
Indicators by Wave

Figure 25: Number of COVID-19 outbreaks by outbreak location by wave



Note: Institutional outbreaks include outbreaks in hospitals, long-term care homes and retirement homes. Congregate outbreaks include outbreaks in congregating settings such as group homes, shelters and farms with international workers. In January 2022 (midway in Wave 5), changes in provincial guidance resulted in COVID-19 outbreaks no longer being declared in schools, workplaces and child care centres.

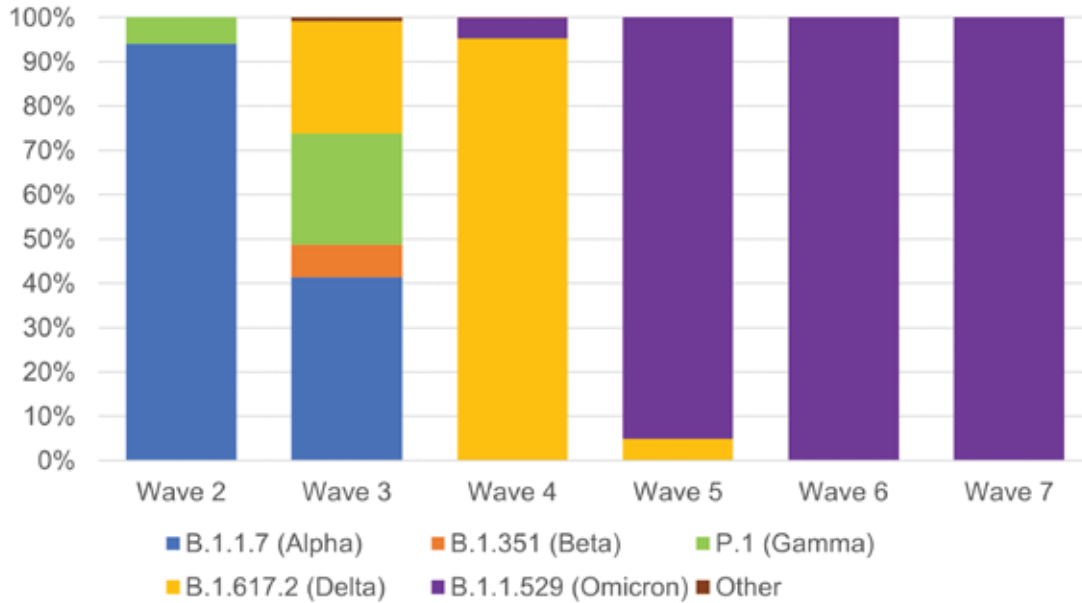
Figure 26: Percentage of confirmed COVID-19 cases by recorded exposure source by wave



Note: Starting midway in Wave 5 onward, exposure source was not documented for most cases due to provincial policy changes to requirements for case management.

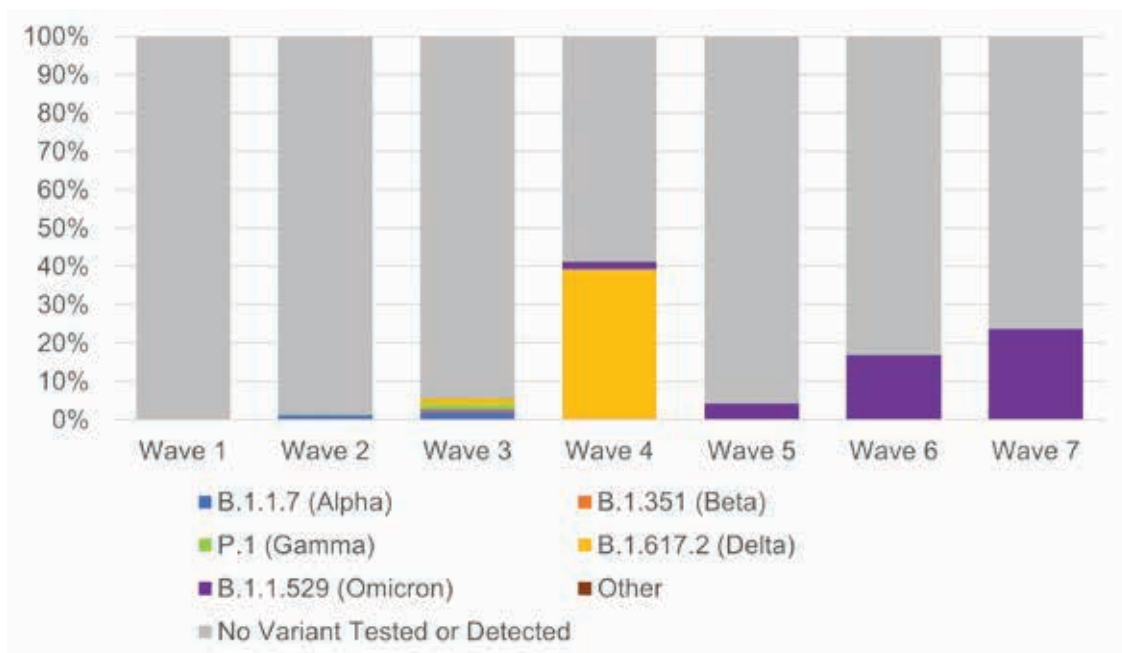
Indicators by Wave

Figure 27: Percentage of confirmed COVID-19 cases with a variant of concern by variant by wave



Note: Includes only cases with completed testing for a variant of concern.

Figure 28: Percentage of confirmed COVID-19 cases by variant of concern by wave



Indicators by Wave

Figure 29: Average number of COVID-19 vaccinations administered per day in Durham Region by wave

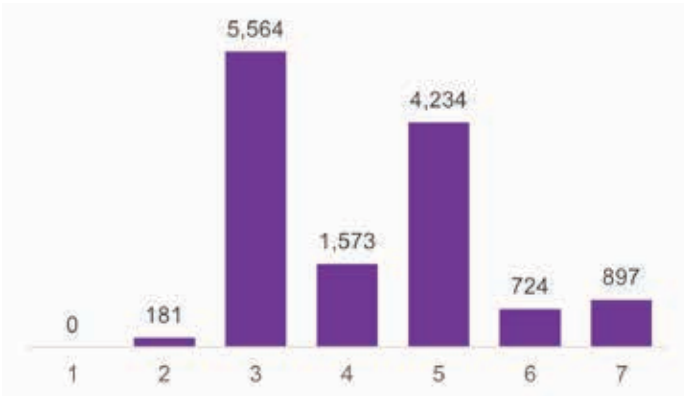


Figure 30: Total number of COVID-19 vaccinations administered in Durham Region by wave

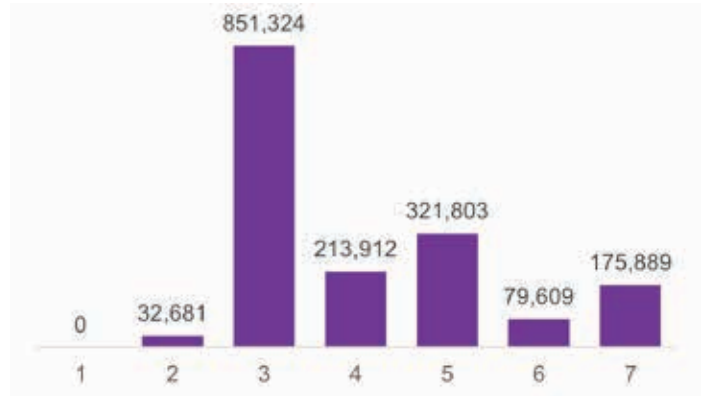


Figure 31: Percentage of Durham Region population aged 12+ who had received a COVID-19 vaccine by the end of each wave by dose

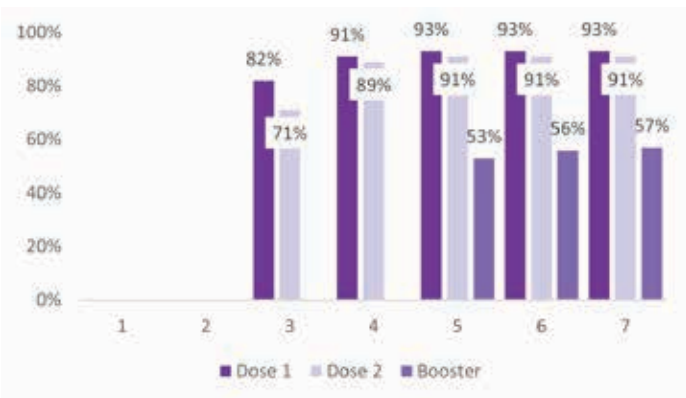
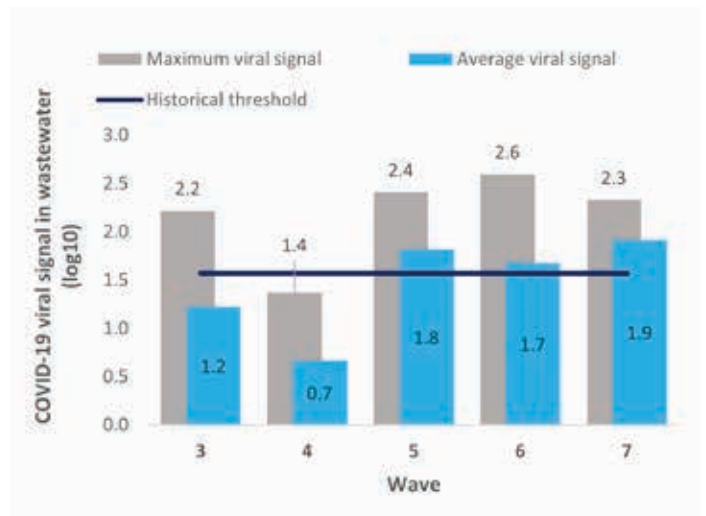


Figure 32: Average and maximum COVID-19 wastewater signals (log₁₀) for the Corbett Creek sampling location by wave



Note: The historical threshold was the value used to determine if viral signal was moderate (below the line) or high (above the line).

Data Notes

Data Sources

COVID-19 cases, outbreaks, hospitalizations, deaths: Public Health Case and Contact Management (CCM) system, Durham Region Health Department, extracted on March 1, 2023.

Vaccination data: COVaxON Reporting System, Durham Region Health Department, IntelliHealth Ontario, extracted on March 1, 2023.

Vaccination coverage rates at the end of each wave: Ontario Ministry of Health, [COVID-19 Vaccine Data in Ontario](https://data.ontario.ca/en/dataset/covid-19-vaccine-data-in-ontario), extracted on May 15, 2023. Available at: <https://data.ontario.ca/en/dataset/covid-19-vaccine-data-in-ontario>

Laboratory testing and percent positivity: Ontario Laboratories Information System (OLIS) as reported by the Ministry of Health SAS Visual Analytics dashboard, extracted on February 28, 2023.

Wastewater data: Ontario Tech University and Ontario Wastewater Surveillance Initiative viral SARS-CoV-2 RNA detection, March 18, 2021 to December 31, 2022.

Definitions

Confirmed case

A Durham Region resident who tested positive for COVID-19 infection based on a PCR or rapid molecular laboratory test.

Date of death

The date that the COVID-19 death occurred. This date is used in information about number of deaths and case fatality rate by wave or week.

Date of hospitalization

The date that the COVID-19 case was admitted to hospital. This date is used in information about number of hospitalizations and hospitalization rate per 1,000 by wave or week.

Death from COVID-19

A confirmed case and resident of Durham Region who died and where COVID-19 was determined to be the underlying cause of death, or COVID-19 contributed to but was not the underlying cause of death or for whom type of death was unknown. Deaths where the cause of death was unrelated to COVID-19 were excluded.

Exposure source

The exposure source was the most likely source of the disease that a confirmed case of COVID-19 reported to public health based on case interview. Possible exposure sources were institutional outbreak, household contact, workplace contact, other close contact, travel or community. Community was designated for cases that did not meet the other exposure source categories, was unknown and assumed to be acquired somewhere in the community. Exposure source was reported by wave for Durham Region residents based on the date the case was reported to public health. Exposure source was not documented for most cases from Wave 5 onward due to provincial policy changes to requirements for case management.

Hospitalized case

A confirmed COVID-19 case who was hospitalized (or had their hospital stay extended) because of COVID-19 and who were Durham Region residents hospitalized in any Ontario hospital. Due to limited case management after January 2022, the number of hospitalized cases were likely under-reported if the case was in a hospital outside of the Lakeridge Health hospital network.

Institutional Outbreak

An outbreak in a hospital, long-term care home or retirement home. Outbreak definitions changed throughout the pandemic. The current definition for an outbreak in a long-term care or retirement home is two or more residents with a common epidemiologic link (e.g., same unit or floor), each with a positive COVID-19 test result confirmed by polymerase chain reaction (PCR), rapid molecular test or rapid antigen test, within a 7-day period, where both cases have reasonably acquired their infection in the home. Before April 8, 2021, only one case of COVID-19 occurring in a resident or staff was needed for an outbreak to be declared. For hospitals, a confirmed outbreak is defined as two or more patients with a common epidemiological link, both with positive results from a PCR test, rapid molecular test or rapid antigen test within a 7-day period where both cases have reasonably acquired their infection in the acute care facility.

Reported date

The date the case was reported to public health.

Vaccines administered

COVID-19 vaccines administered in Durham Region by Durham Region Health Department, Lakeridge Health, pharmacies, primary care providers, workplaces and provincial mobile clinics to people who live or work in Durham Region.

Wastewater signal

The average log₁₀ COVID-19 viral signal across all seven wastewater sampling locations in Durham Region for each week or in the sentinel site of Corbett Creek Water Pollution Control Plant.

References

1. Ontario Agency for Health Protection and Promotion (Public Health Ontario). [Ontario COVID-19 hospital admissions and deaths by age from waves 1-7](#). Toronto, ON: King's Printer for Ontario; 2023
2. Canadian Institute for Health Information. [Canadian COVID-19 Intervention Timeline — Data Tables](#). Ottawa, ON: CIHI; October 13, 2022.
3. Ontario Agency for Health Protection and Promotion (Public Health Ontario). [Ontario COVID-19 Data Tool](#).