

Incidental impacts of COVID-19 series: Mental health and addictions outpatient visits

Health indicator report

Background

- The COVID-19 pandemic has had incidental impacts on health and well-being. These impacts may be related to fear of exposure to COVID-19, the diversion of healthcare or public health resources, or measures to curtail viral transmission or harm (e.g., school and business closures, online learning, physical distancing requirements).
- According to the Public Health Agency of Canada, feelings of loneliness and isolation due to social distancing and lockdown measures can increase levels of anxiety and depression.¹
- The purpose of this health indicator report is to provide information about mental health and addiction-related outpatient visits to physicians (i.e., primary care providers, psychiatrists and paediatricians) among Halton and Ontario residents.
- This health indicator report uses data from ICES.² Data from January 2019 to December 2021 was available for analysis. These were divided into the **pre-COVID-19** period (January 2019 to March 2020) and **COVID-19** period (April 2020 to December 2021).

Key findings

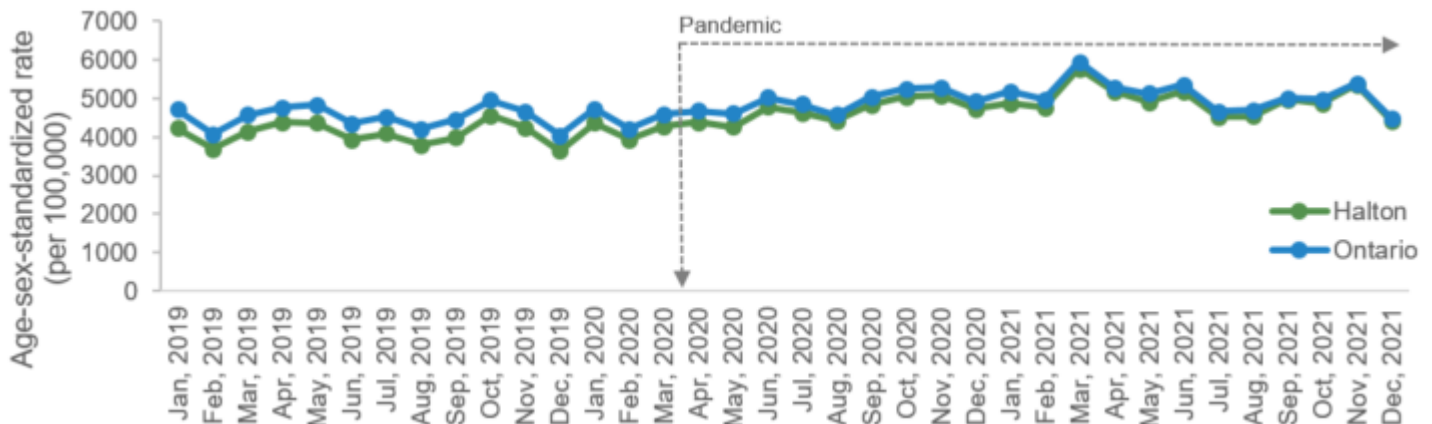
- For both Halton and Ontario residents, the monthly rate of outpatient visits for mental health or addictions was higher during the COVID-19 pandemic than prior to the pandemic.
- The rate of outpatient visits for mental health or addictions was lower in Halton residents compared to Ontario residents for most months between January 2019 and December 2021.
- Both during and prior to the COVID-19 pandemic, the monthly rate of outpatient visits for mental health or addictions in Halton residents was higher for females, those aged 18-29, those in the lowest neighbourhood income quintile, and those living in regions with the lowest ethnic diversity.



Mental health and addiction outpatient visits

Trends over time

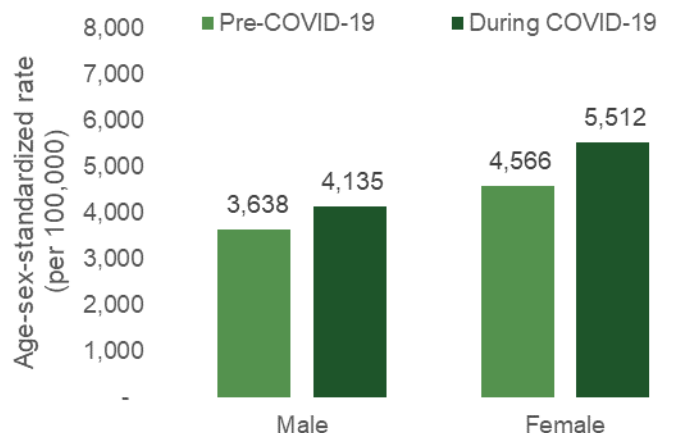
- For both Halton and Ontario residents, the monthly rates of outpatient visits for mental health or addictions were higher during COVID-19 compared to pre-COVID-19. These differences were **statistically significant**.
- The rate of outpatient visits for mental health or addictions was lower in Halton residents compared to Ontario residents for most months between January 2019 and December 2021. These differences were **statistically significant** except for September, November, and December of 2021.
- Between January 2019 and December 2021, there was an average of 27,506 outpatient visits for mental health or addictions per month among Halton residents, compared to 697,904 among Ontario residents (not shown).
- Appendices A and B show the rate of visits during COVID-19 and pre-COVID-19, and for each month between January 2019 and December 2021.



Age- and sex-standardized rate (per 100,000) of outpatient visits for mental health or addictions, by month, Halton Region and Ontario, 2019-2021

Sex

- In Halton, the monthly rate of outpatient visits for mental health or addictions was 4,135 visits per 100,000 males during COVID-19. This was higher than the pre-COVID-19 monthly rate of 3,638 visits per 100,000 males. This difference was **statistically significant**.
- In Halton, the monthly rate of outpatient visits for mental health or addictions was 5,512 visits per 100,000 females in Halton during COVID-19. This was higher than the pre-COVID-19 monthly rate of 4,566 visits per 100,000 females. This difference was **statistically significant**.



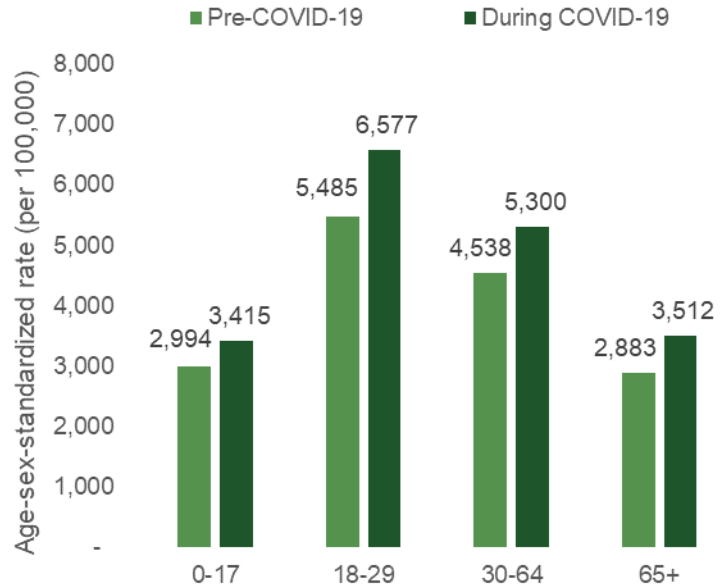
Age- and sex-standardized rate (per 100,000) of outpatient visits for mental health or addictions, pre-COVID-19 and during COVID-19, by sex, Halton Region



Mental health and addiction outpatient visits

Age

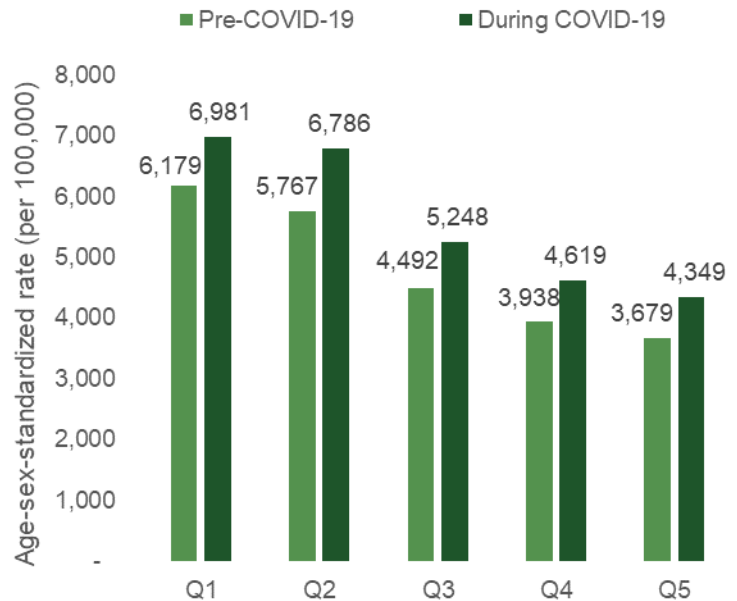
- In Halton, the monthly rate of outpatient visits for mental health or addictions was higher during COVID-19 compared to before COVID-19 for every age group. These differences were **statistically significant**.
- The monthly rate of outpatient visits for mental health or addictions was highest among residents ages 18-29. This was true before and during COVID-19.



Age-and sex-standardized rate (per 100,000) of outpatient visits for mental health or addictions, pre-COVID-19 and during COVID-19, by age group, Halton Region

Income

- In Halton, the monthly rate of outpatient visits for mental health or addictions was higher during COVID-19 compared to before COVID-19 for individuals living in all areas in Halton, regardless of the area's income. These differences were **statistically significant**.
- The monthly rate of outpatient visits for mental health or addictions decreased as the area's income increased. This was true before and during COVID-19. These differences were **statistically significant**.



Lowest>Highest

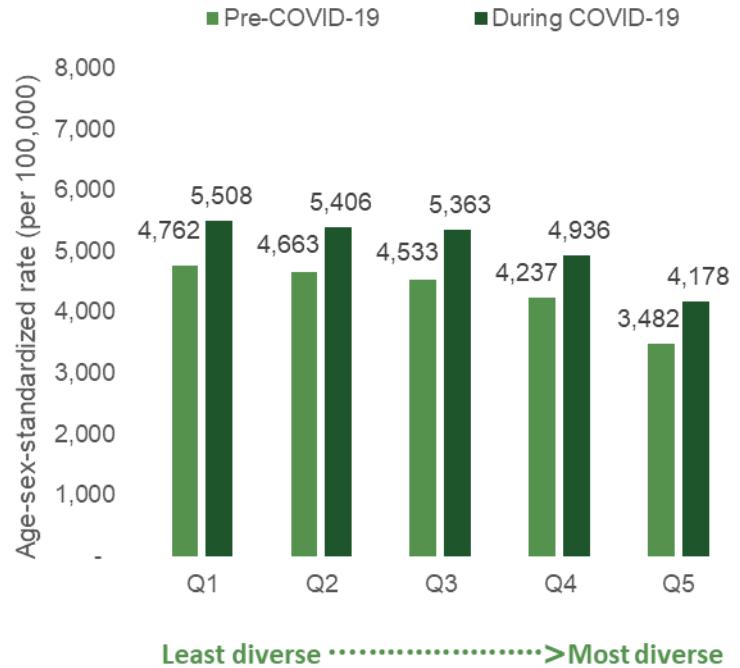
Age-and sex-standardized rate (per 100,000) of outpatient visits for mental health or addictions, pre-COVID-19 and during COVID-19, by area's income quintile, Halton Region



Mental health and addiction outpatient visits

Ethnic Diversity

- In Halton, the monthly rate of outpatient visits for mental health or addictions was higher during COVID-19 compared to before COVID-19 for individuals living in all areas in Halton, regardless of the area’s ethnic diversity. These differences were **statistically significant**.
- Both before and during COVID-19, rates generally decreased as the area’s ethnic diversity increased. These differences were **statistically significant** except when comparing quintiles one and two before COVID-19 and when comparing quintiles two and three during COVID-19.
- This pattern may be related, in part, to disparities in access to care or differences in health-seeking behavior, which research has shown can vary widely across ethnic groups.³



Age-and sex-standardized rate (per 100,000) of outpatient visits for mental health or addictions, pre-COVID-19 and during COVID-19, by area's ethnic diversity quintile, Halton Region

About These Data

This report uses data from a study conducted by the Institute for Clinical Evaluative Sciences (ICES),² which is funded by the Ontario Ministry of Health and Long-Term Care (MOHLTC). The opinions, results and conclusions are those of the authors and are independent from the funding source. No endorsement by ICES or the Ontario MOHLTC is intended or should be inferred. Parts of this material are based on data and/or information compiled and provided by CIHI. However, the analyses, conclusions, opinions and statements expressed in the material are those of the author(s), and not necessarily those of CIHI.

Data sources

- Ontario Health Insurance Plan Claims Database (OHIP)
- Registered Persons Database files (RPDB)
- Local Health Integration Network (LHIN)
- Ontario Marginalization Index (ONMARG)
- Postal Code Conversion File (PCCF)

See [ICES Data Dictionary](#) for detailed descriptions.

Data inclusions

OHIP-funded outpatient visits were included if they were held:

- With a psychiatrist
- With a primary care provider or paediatrician, and with an OHIP mental health diagnostic code listed below.
- With a paediatrician in an undefined location, with an OHIP mental health diagnostic code listed below, and one of the following fee codes: K122, K123, K704.
- OHIP mental health diagnostic codes: 291-292, 295-299, 300-304, 306-307, 309, 311, 313-315, 897-902, 904-906, 909
- At a Community Health Centre with an ICD-10-CA diagnostic code of F06-F99 to identify visits to physicians and nurse practitioners.

Data exclusions & limitations

Individuals were excluded from analyses if they were:

- Older than 105
- Non-Ontario resident
- Not alive on visit date
- Not eligible on visit date
- Date of last contact with the health care system is equal to or greater than 8 years from visit date

Outpatient visits do not include visits made by Halton or Ontario residents to providers outside of Ontario.

Data notes

Definitions:

Pre-COVID-19 period includes months from January 2019 to March 2020. **COVID-19 period** includes months from April 2020 to December 2021.

Dissemination areas (DAs) are small geographic units with a population of 400 to 700 persons. DAs are the smallest standard geographic area for which all census data are disseminated. All of Canada is divided into DAs. In the census year 2021, Halton was made up of 831 DAs.

Ethnic diversity was obtained from the ethnic concentration dimension of the Ontario Marginalization Index (ON-Marg).⁴ ON-Marg uses four dimensions to estimate marginalization, including residential instability, material deprivation, dependency, and ethnic concentration. As an area-based index, ON-Marg shows differences in marginalization between DAs. DAs with high ethnic diversity have a high concentration of people who are recent immigrants and/or visible minorities.

Income quintiles were calculated by taking the average single person equivalent income for each DA and ranking DAs within each census metropolitan area (CMA). The population within each CMA was then divided into fifths. Halton belongs to the census metropolitan area of Toronto. The average household income in a given income quintile will vary by region and two people with the same income may be in different income quintiles if they live in different CMAs.

Interpretation:

Age-sex-standardized rates are rates that have been adjusted to ensure that any differences in rates between populations are not due to differences in the age or sex distributions between the populations. Age-sex-standardized rates were calculated using the 2011 population of Canada as the standard population. **Age-sex-specific rates** are calculated by dividing the number of outpatient visits by the population in that sex and age group. **Statistical significance** between groups was determined using non-overlapping confidence intervals. Statistically significant differences are differences that are unlikely to be due to chance alone.

References:

1. Government of Canada. 2022. Mental illness during the pandemic: Survey on COVID-19 and mental health (Cycles 1 and 2). Accessed May 2023 from <https://health-infobase.canada.ca/covid-19/mental-health-survey/>
2. Kim, E., Plumtre, L., & Chiu, M. Mental health & addictions outpatient visits by public health unit. Applied Health Research Questions (AHRQ) # 2022 0950 133 000. Toronto: ICES 2022.
3. Chiu M, Amartey A, Wang X, et al. Ethnic differences in mental health status and service utilization: A population-based study in Ontario, Canada. Can J Psychiatry, 2018;63(7):481-91.
4. Matheson FI, Moloney G, van Ingen T, Public Health Ontario. 2022. 2016 Ontario marginalization index: User guide. 1st revision. Toronto, ON: Unity Health. Accessed June 2023 from <https://www.publichealthontario.ca/-/media/documents/O/2017/on-marg-userguide.pdf>

For more health indicator and health status reports, visit the Halton Health Statistics webpage at halton.ca.

Last updated: July 2023

Appendix A:

Age-sex-standardized rate (per 100,000) of outpatient visits for mental health or addictions, by month, Halton Region and Ontario, 2019-2021

Pre-COVID-19

	Age-sex standardized rate per 100,000 (95% confidence interval)	
	Halton	Ontario
Jan 2019	4,225 (4,173 – 4,278)	4,713 (4,702 – 4,724)
Feb 2019	3,683 (3,635 – 3,732)	4,071 (4,061 – 4,082)
Mar 2019	4,139 (4,087 – 4,191)	4,576 (4,565 – 4,588)
Apr 2019	4,385 (4,331 – 4,438)	4,771 (4,759 – 4,782)
May 2019	4,367 (4,314 – 4,420)	4,832 (4,820 – 4,843)
Jun 2019	3,945 (3,895 – 3,996)	4,361 (4,350 – 4,371)
Jul 2019	4,090 (4,039 – 4,142)	4,527 (4,516 – 4,538)
Aug 2019	3,786 (3,736 – 3,836)	4,203 (4,193 – 4,214)
Sep 2019	3,983 (3,932 – 4,034)	4,444 (4,433 – 4,455)
Oct 2019	4,560 (4,506 – 4,614)	4,957 (4,946 – 4,969)
Nov 2019	4,236 (4,183 – 4,288)	4,657 (4,646 – 4,668)
Dec 2019	3,643 (3,594 – 3,691)	4,039 (4,029 – 4,050)
Jan 2020	4,367 (4,314 – 4,420)	4,737 (4,726 – 4,749)
Feb 2020	3,946 (3,896 – 3,997)	4,206 (4,195 – 4,216)
Mar 2020	4,290 (4,237 – 4,342)	4,584 (4,573-4,595)

During COVID-19

	Age-sex standardized rate per 100,000 (95% confidence interval)	
	Halton	Ontario
Apr 2020	4,379 (4,326 – 4,432)	4,684 (4,673 – 4,696)
May 2020	4,260 (4,208 – 4,313)	4,611 (4,600 – 4,622)
Jun 2020	4,787 (4,732 – 4,842)	5,027 (5,016 – 5,039)
Jul 2020	4,627 (4,573 – 4,682)	4,853 (4,842 – 4,865)
Aug 2020	4,416 (4,363 – 4,469)	4,577 (4,566 – 4,588)
Sep 2020	4,830 (4,775 – 4,886)	5,039 (5,027 – 5,050)
Oct 2020	5,054 (4,997 – 5,111)	5,253 (5,241 – 5,265)
Nov 2020	5,085 (5,028 – 5,142)	5,279 (5,268 – 5,291)
Dec 2020	4,725 (4,671 – 4,780)	4,924 (4,912 – 4,935)
Jan 2021	4,875 (4,820 – 4,931)	5,183 (5,171 – 5,194)
Feb 2021	4,765 (4,710 – 4,820)	4,963 (4,951 – 4,974)
Mar 2021	5,782 (5,722 – 5,843)	5,948 (5,936 – 5,961)
Apr 2021	5,173 (5,116 – 5,230)	5,280 (5,268 – 5,292)
May 2021	4,911 (4,855 – 4,967)	5,131 (5,119 – 5,143)
Jun 2021	5,179 (5,122 – 5,237)	5,346 (5,335 – 5,358)
Jul 2021	4,514 (4,460 – 4,567)	4,653 (4,642 – 4,664)
Aug 2021	4,543 (4,489 – 4,597)	4,687 (4,676 – 4,698)
Sep 2021	4,973 (4,917 – 5,029)	5,006 (4,994 – 5,017)
Oct 2021	4,863 (4,808 – 4,919)	4,973 (4,961 – 4,984)
Nov 2021	5,344 (5,286 – 5,402)	5,387 (5,375 – 5,399)
Dec 2021	4,432 (4,379 – 4,485)	4,477 (4,466 – 4,488)

Appendix B:

Age-sex-standardized rate (per 100,000) of outpatient visits for mental health or addictions, pre-COVID-19 and during COVID-19, Halton Region and Ontario, by group

	Halton		Ontario	
	Age-sex standardized rate per 100,000 (95% confidence interval)		Age-sex standardized rate per 100,000 (95% confidence interval)	
	Pre-COVID-19	During COVID-19	Pre-COVID-19	During COVID-19
Sex†				
Female	4,566 (4,547 – 4,586)	5,512 (5,494 – 5,530)	4,825 (4,821 – 4,829)	5,583 (5,579 – 5,587)
Male	3,638 (3,621 – 3,656)	4,135 (4,119-4,150)	4,188 (4,184 – 4,192)	4,425 (4,422 – 4,428)
Age‡				
0-17	2,994 (2,971 – 3,018)	3,415 (3,393 – 3,436)	2,668 (2,663 – 2,673)	2,956 (2,952 – 2,961)
18-29	5,485 (5,444 – 5,527)	6,577 (6,539 – 6,615)	5,329 (5,321 – 5,337)	5,895 (5,888 – 5,901)
30-64	4,538 (4,518 – 4,558)	5,300 (5,282 – 5,318)	5,531 (5,526 – 5,535)	6,106 (6,102 – 6,110)
65+	2,883 (2,855 – 2,911)	3,512 (3,487 – 3,538)	2,943 (2,937 – 2,948)	3,422 (3,418 – 3,427)
Income				
Q1	6,179 (6,074 – 6,285)	6,981 (6,888 – 7,076)	5,758 (5,751 – 5,766)	6,232 (6,226 – 6,238)
Q2	5,767 (5,714 – 5,822)	6,786 (6,737 – 6,835)	4,708 (4,701 – 4,715)	5,201 (5,195 – 5,207)
Q3	4,492 (4,454 – 4,531)	5,248 (5,213 – 5,283)	4,156 (4,150 – 4,162)	4,647 (4,642 – 4,653)
Q4	3,938 (3,913 – 3,964)	4,619 (4,596 – 4,642)	3,882 (3,877 – 3,888)	4,379 (4,374 – 4,384)
Q5	3,679 (3,662 – 3,697)	4,349 (4,332 – 4,365)	4,039 (4,033 – 4,045)	4,603 (4,598 – 4,609)
Ethnic diversity				
Q1	4,762 (4,702 – 4,822)	5,508 (5,453 – 5,562)	4,127 (4,120 – 4,134)	4,530 (4,524 – 4,536)
Q2	4,663 (4,622 – 4,703)	5,406 (5,369 – 5,442)	4,644 (4,637 – 4,652)	5,079 (5,072 – 5,085)
Q3	4,533 (4,502 – 4,563)	5,363 (5,335 – 5,391)	5,244 (5,237 – 5,251)	5,777 (5,771 – 5,784)
Q4	4,237 (4,212 – 4,263)	4,936 (4,913 – 4,959)	5,067 (5,060 – 5,073)	5,634 (5,628 – 5,640)
Q5	3,482 (3,460 – 3,503)	4,178 (4,158 – 4,198)	3,717 (3,713 – 3,722)	4,246 (4,242 – 4,251)

†Rates by sex have been age-standardized only

‡Rates by age have been sex-standardized only