



Impact of COVID-19 on Accidental Falls in Canada



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Table of contents

Introduction	4
Key findings	4
Larger percentage decrease in ED visits compared with hospitalizations	4
Larger decreases in April and May	5
Larger decreases in younger age groups	6
Substantial decreases in falls in schools and athletics areas	7
Jurisdictional variation	8
Discussion	9
Notes and limitations	9
Acknowledgements	9
Appendix	10
Text alternatives for figures	10
References	13

Introduction

The COVID-19 pandemic has had an unprecedented effect on the lives of Canadians.¹ Restrictions such as school and workplace closures, as well as behavioural changes like wearing masks and avoiding surfaces (including handrails), may have affected the number of injuries that occurred due to falls. Understanding this impact can help to better inform policy and planning.

In this analysis, we provide preliminary information on emergency department (ED) visits and hospitalizations for accidental falls that happened between March 1 and September 30, 2020. We also explore the locations and types of falls, as well as patient characteristics and measures of health equality. This analysis includes 2 types of data collected by the Canadian Institute for Health Information (CIHI): ED data, which covers approximately 50% of the Canadian population, and hospitalization data, which includes all provinces and territories except Quebec.

Key findings

Overall, there was a decrease in admissions for accidental falls to both the ED and hospital. This was likely due to a combination of factors: pandemic interventions such as school closures, changes in how and when people seek care, and increased use of virtual care and other alternatives to hospital services to help people find care elsewhere.

Larger percentage decrease in ED visits compared with hospitalizations

Between March 1 and September 30, 2020, there were 95,000 fewer **ED visits** for accidental falls — a 24% decrease compared with the same period in 2019, consistent with the overall reduction in ED care. There was a larger reduction in ED visits for falls for less-urgent and non-urgent conditions (as measured by their Canadian Triage and Acuity Scale [CTAS]) score,² and fewer visits for minor injuries to the ankle, leg and arm. After receiving care in the ED, most patients (81%) were sent home without any additional support, and 12% were admitted to hospital.

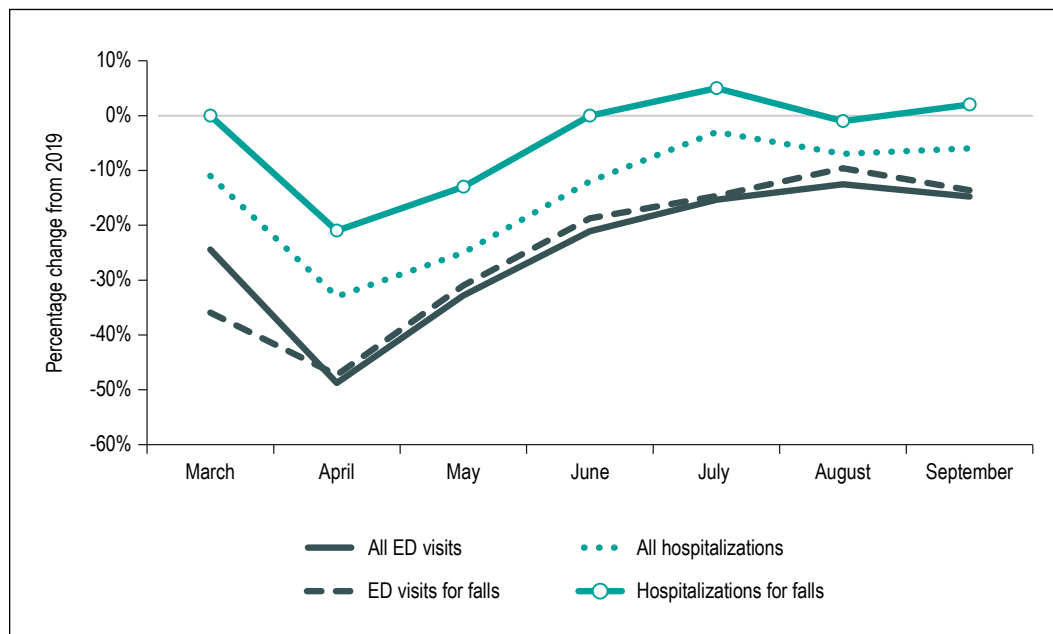
Compared with 2019, there were over 2,000 fewer **hospitalizations** for accidental falls in 2020. This represents a 4% decrease, much less than the overall decline in hospitalizations for any reason (14%). The pandemic did not affect the average length of hospital stays for falls (approximately 2 weeks) or the diagnoses and treatments, which were often related to injuries and fractures of the hip, femur, ankle, head and spine.

Larger decreases in April and May

The largest decreases in both ED visits and hospitalizations were in April and May, which coincides with restrictions and interventions implemented across provinces and territories, such as school closures and stay-at-home orders (Figure 1).³

By September, when COVID-19 case counts were lower, ED visits for falls remained about 15% lower than usual, while hospitalizations for falls had returned to typical levels.

Figure 1 Percentage change in ED visits and hospitalizations for falls, by month, March to September 2020 compared with March to September 2019



Notes

Full regional coverage is available for emergency departments (EDs) in Ontario, Alberta and Yukon.

Partial regional coverage is available for Prince Edward Island, Nova Scotia and Saskatchewan.

Combined, these regions represent about 50% of Canadian ED visits.

Hospitalization data for Quebec was not available at the time of analysis.

Reflects data from March to September 2020, submitted as of January 1, 2021.

Data for 2020–2021 is provisional; for more information, see the Notes to readers tab in the [companion data tables](#).

Sources

National Ambulatory Care Reporting System and Discharge Abstract Database, 2018–2019, 2019–2020 and 2020–2021, Canadian Institute for Health Information.

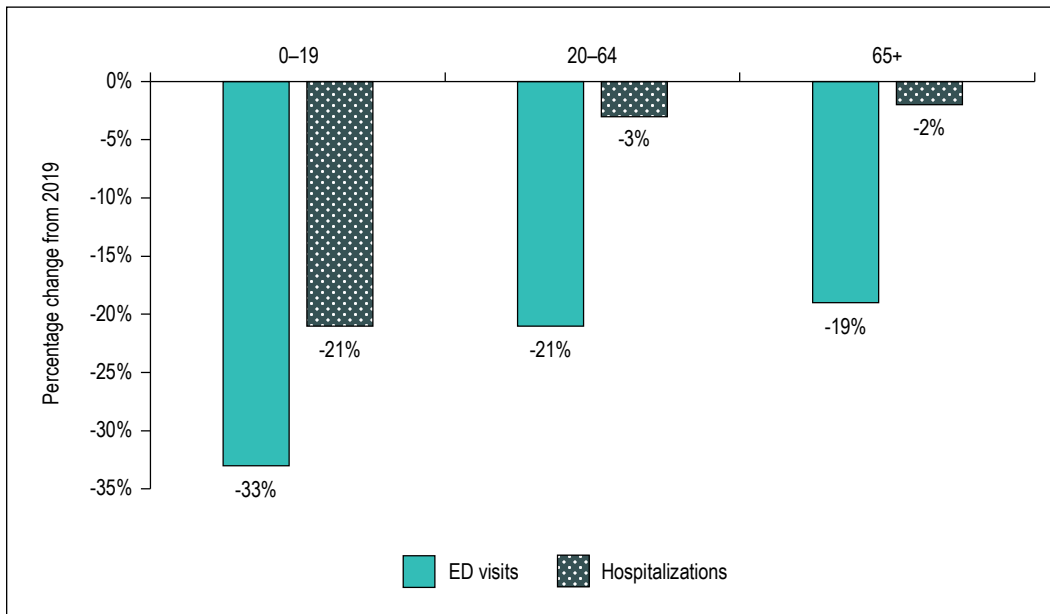
Larger decreases in younger age groups

The greatest decrease in both ED visits and hospitalizations for falls was for those age 0 to 19. ED visits for falls decreased by 33% and hospitalizations by 21% among this age group. Older age groups saw smaller decreases, especially for hospitalizations (Figure 2).

The most common cause of injury among older Canadians is falls,⁴ some of which occur in long-term care and result in admission to hospital. During the pandemic, transfers from long-term care for falls decreased by 10%, and a similar decrease was observed in discharge back to long-term care at the end of the hospitalization. This may indicate that falls occurred less frequently or, given the significant impact the pandemic had on those facilities, that these patients were transferred to a lesser extent and were treated on site.

The pandemic's impacts on ED visits and hospitalizations for falls were similar for men and women, for urban and rural patients and for those with different income levels.

Figure 2 Percentage change in ED visits and hospitalizations for falls, by age group, March to September 2020 compared with March to September 2019



Notes

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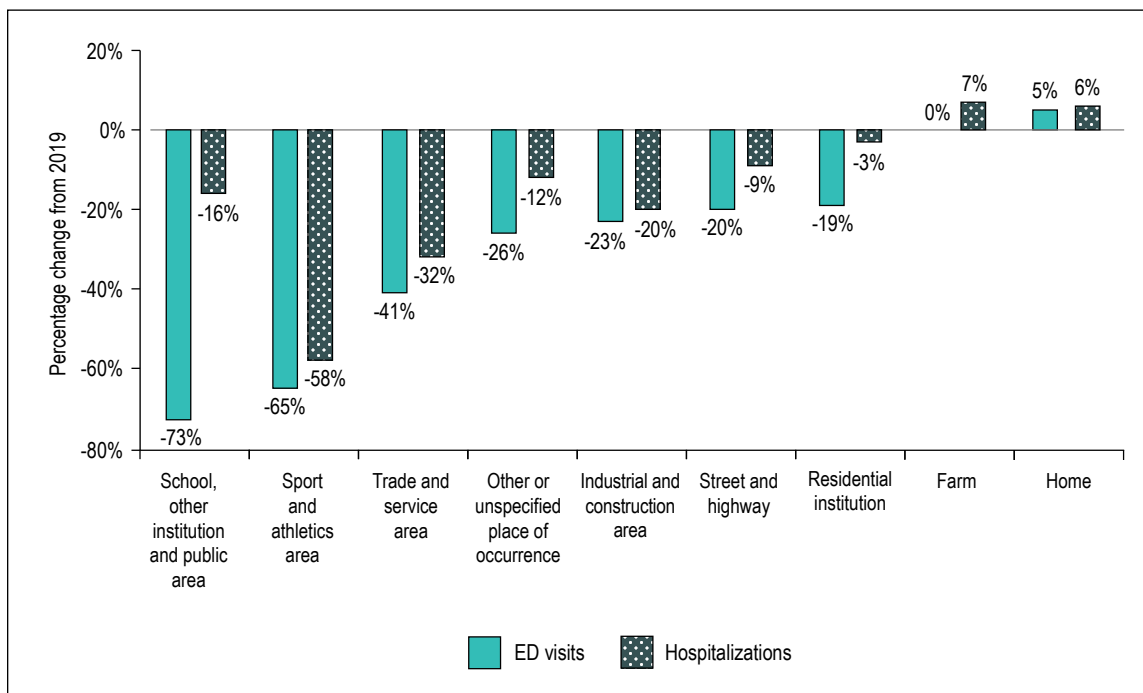
Sources

National Ambulatory Care Reporting System and Discharge Abstract Database, 2018–2019, 2019–2020 and 2020–2021, Canadian Institute for Health Information.

Substantial decreases in falls in schools and athletics areas

For children and youth, the large decrease in care for falls corresponded to the changes in where falls happened. In particular, there was a notable reduction in ED visits for falls that took place in schools and public areas (73%), as well as in sport and athletics areas (65%). Hospitalizations showed similar reductions, with the greatest decrease occurring for falls in sport and athletics areas (58%). On the other hand, there was an increase in ED visits and hospitalizations for falls that occurred at home (5% and 6%, respectively), likely due to where and how people were spending their time during the pandemic (Figure 3).

Figure 3 Percentage change in ED visits and hospitalizations for falls, by place of occurrence, March to September 2020 compared with March to September 2019



Notes

Full regional coverage is available for emergency departments (EDs) in Ontario, Alberta and Yukon. Partial regional coverage is available for Prince Edward Island, Nova Scotia and Saskatchewan. Combined, these regions represent about 50% of Canadian ED visits. Hospitalization data for Quebec was not available at the time of analysis. Reflects data from March to September 2020, submitted as of January 1, 2021. Data for 2020–2021 is provisional; for more information, see the Notes to readers tab in the [companion data tables](#).

Sources

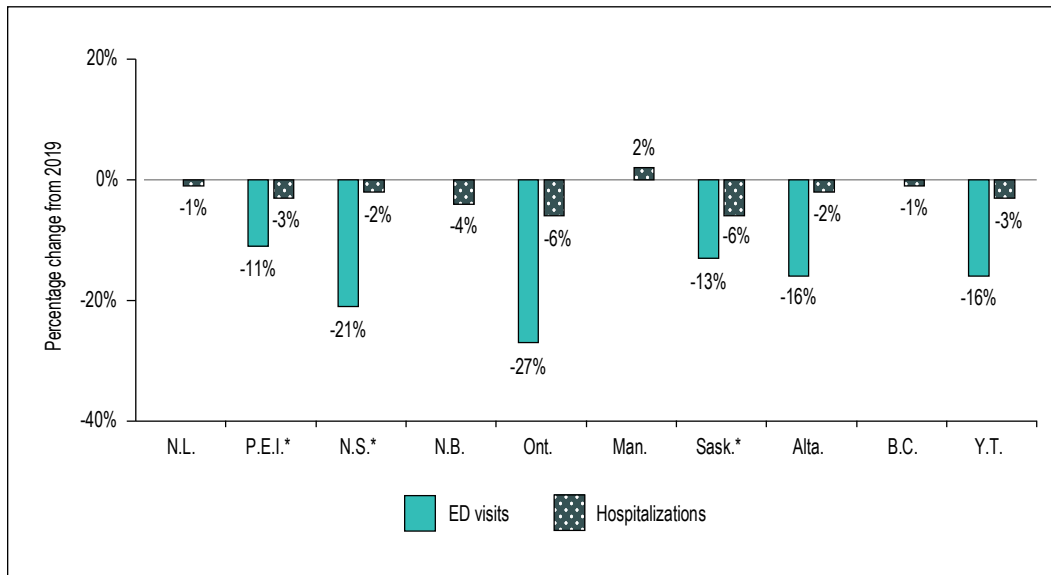
National Ambulatory Care Reporting System and Discharge Abstract Database, 2018–2019, 2019–2020 and 2020–2021, Canadian Institute for Health Information.

Jurisdictional variation

ED visits for falls decreased across all jurisdictions (from -11% to -27%), with the greatest decrease seen in Ontario. There was less variation for hospitalizations for falls (from -6% to 2%); all jurisdictions except Manitoba showed small decreases during the pandemic (Figure 4).

The differences observed across the country could be a result of several factors, including how services are arranged and provided, differences in population health and social determinants of health that influence the likelihood of falls, and differences in the severity and enforcement of interventions related to the pandemic.

Figure 4 Percentage change in ED visits and hospitalizations for falls, by jurisdiction, March to September 2020 compared with March to September 2019



Notes

* Full regional coverage is available for emergency departments (EDs) in Ontario, Alberta and Yukon. Partial regional coverage is available for Prince Edward Island, Nova Scotia and Saskatchewan. Combined, these regions represent about 50% of Canadian ED visits.

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Discussion

The COVID-19 pandemic has had a dramatic effect on people's daily lives, where they spend their time and which activities they are able to participate in. These behavioural changes likely contributed to the decrease in ED visits and hospitalizations for falls, particularly among children and youth. It could also reflect a hesitancy to seek care in hospital, especially for less-severe falls, or changes in how health care was provided during the pandemic (e.g., increased use of virtual care that may address concerns and avoid the need for care in hospital).

These findings are consistent with other Canadian studies, as well as those of other countries.^{5, 6} While it appears that the COVID-19 pandemic has had a positive effect on reducing accidental falls, it is important to consider the other impacts of these changes. Increased time spent at home may have negative health consequences as a result of a lack of outdoor physical activity and less time spent socializing. This may impact children in particular, given the importance of physical activity for their development.⁷

Notes and limitations

- This analysis is based on provisional data. Provisional data refers to any preliminary data received and used before the official annual submission deadline, or closing date, for a data holding. Prior to this closing date, data collection, submission and data quality activities are ongoing. Provisional data is therefore not final and results should be interpreted with caution.
- This study applied the same ICD-10-CA diagnosis codes as those used in CIHI's [Injury and Trauma Emergency Department and Hospitalization Statistics](#) to identify patients who visited an ED or received inpatient care for accidental falls.
- This analysis does not distinguish between patients who were transferred from one facility to another or who had another admission during the study period. It represents the number of ED visits and hospitalizations, not the number of patients.

Acknowledgements

The Canadian Institute for Health Information (CIHI) would like to acknowledge and express our gratitude to the experts from the Centre for Surveillance and Applied Research, Public Health Agency of Canada; provincial ministries of health; Ontario Health; and Shared Health Manitoba for their insights and experience that contributed to the development of this report.

Please note that the analyses and conclusions in the present document do not necessarily reflect those of the organizations mentioned above.

Appendix

Text alternatives for figures

Text alternative for Figure 1

Table: Percentage change in ED visits and hospitalizations for falls, by month, March to September 2020 compared with March to September 2019

Month	Percentage change in all ED visits	Percentage change in ED visits for falls	Percentage change in all hospitalizations	Percentage change in hospitalizations for falls
March	-24%	-36%	-11%	0%
April	-49%	-47%	-33%	-21%
May	-33%	-31%	-25%	-13%
June	-21%	-19%	-12%	0%
July	-15%	-15%	-3%	5%
August	-13%	-10%	-7%	-1%
September	-15%	-14%	-6%	2%

Notes

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Text alternative for Figure 2**Table: Percentage change in ED visits and hospitalizations for falls, by age group, March to September 2020 compared with March to September 2019**

Age group	Percentage change in ED visits	Percentage change in hospitalizations
0–19	-33%	-21%
20–64	-21%	-3%
65+	-19%	-2%

Notes

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Text alternative for Figure 3**Table: Percentage change in ED visits and hospitalizations for falls, by place of occurrence, March to September 2020 compared with March to September 2019**

Place of occurrence	Percentage change in ED visits	Percentage change in hospitalizations
School, other institution and public area	-73%	-16%
Sport and athletics area	-65%	-58%
Trade and service area	-41%	-32%
Other or unspecified place of occurrence	-26%	-12%
Industrial and construction area	-23%	-20%
Street and highway	-20%	-9%
Residential institution	-19%	-3%
Farm	0%	7%
Home	5%	6%

Notes

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Text alternative for Figure 4**Table: Percentage change in ED visits and hospitalizations for falls, by jurisdiction, March to September 2020 compared with March to September 2019**

Place of occurrence	Percentage change in ED visits	Percentage change in hospitalizations
N.L.	n/a	-1%
P.E.I.*	-11%	-3%
N.S.*	-21%	-2%
N.B.	n/a	-4%
Ont.	-27%	-6%
Man.	n/a	2%
Sask.*	-13%	-6%
Alta.	-16%	-2%
B.C.	n/a	-1%
Y.T.	-16%	-3%

Notes

* Full regional coverage is available for emergency departments (EDs) in Ontario, Alberta and Yukon. Partial regional coverage is available for Prince Edward Island, Nova Scotia and Saskatchewan. Combined, these regions represent about 50% of Canadian ED visits.

n/a: Not available.

Hospitalization data for Quebec was not available at the time of analysis.

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Sources

National Ambulatory Care Reporting System and Discharge Abstract Database, 2018–2019, 2019–2020 and 2020–2021, Canadian Institute for Health Information.

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