

Child Injuries in Ontario: At home, at play, & on the road

Understanding the Issue

In 2015, there were almost 290,000 emergency department visits and over 10,000 hospitalizations for child injuries in Ontario.

These figures average out to 25 children being hospitalized and over 750 children visiting an emergency department (ED) each day.

Children are a unique population of focus for injury prevention for several reasons, including the following¹:

- A child's vulnerability to specific types of injury is closely linked to their stage of development (physical, psychosocial, and behavioural).
- A child's risk of injury is related to a variety of social determinants.
- Interventions to reduce or prevent child injury must focus both on children and their adult caregivers.

With 2016 marking the 20th year of Parachute Safe Kids Week, an awareness week addressing preventable child injuries, it is an appropriate time to visit the status of child injuries in Ontario. This issue of the *Ontario Injury Compass* uses ED visit and hospital discharge data to present child injury counts and rates, leading causes of injury, and key resources for injury prevention. A special focus on Parachute Safe Kids Week is also included. For the purposes of this report, a child is defined as being 14 years of age or younger.

Trends

Figures 1 and 2 show trends in child injury ED visits and hospitalizations

FIGURE 1. Injury-related ED visits, counts and rates, ages 0-14, NACRS, Ontario, 2006-2015

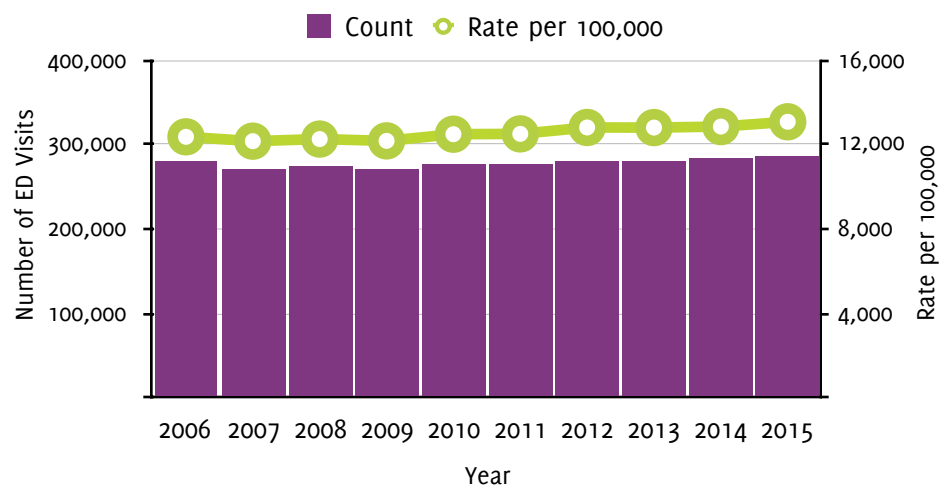
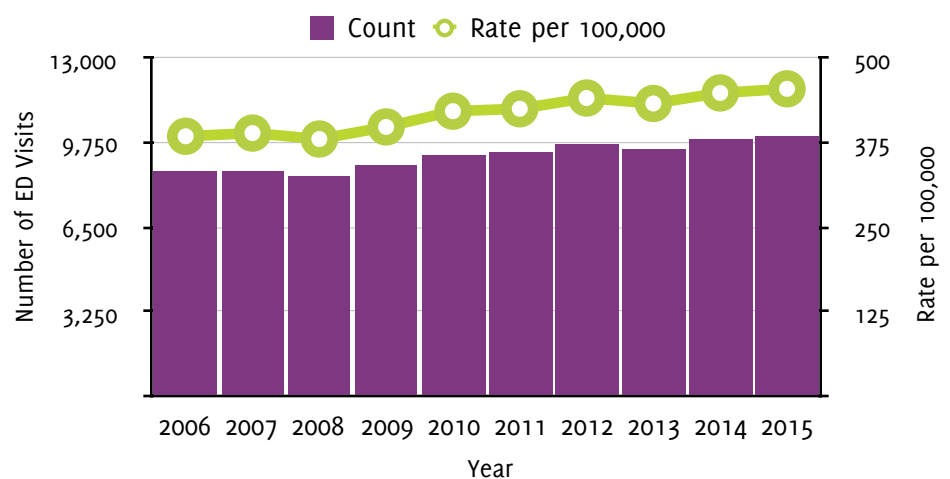


FIGURE 2. Injury-related hospitalizations, counts and rates, ages 0-14, HMDB, Ontario, 2006-2015



over a 10-year period. There were 279,016 ED visits in 2006 and 288,462 visits in 2015, marking a 3.3% increase. The ED visit rate ranged from 12,370.3

per 100,000 in 2006 to 13,083.4 per 100,000 in 2015. Hospitalizations showed a 13.5% increase, from 8,660 cases in 2006 to 10,013 cases in 2015.

The hospitalization rate was 383.9 per 100,000 in 2006 compared to 454.1 per 100,000 in 2015.

Trends by age group

Figures 3 and 4 show trends in rates for ED visits and hospitalizations over a ten-year period, specific to three age groups. ED visit rates were consistently highest for 10-14 year olds in the period between 2006 and 2015. The 2006 rate for this age group was 14,395.5 per 100,000 while the 2015 rate was 15,086.7 per 100,000. The next highest rates were among children up to 4 years old. The rate in 2006 was 12,449.1 per 100,000 and in 2015 was 13,292.7 per 100,000. The lowest rates for ED visits were among 5-9 year olds. The rates for these ages ranged from 9,996.8 per 100,000 in 2006 to 10,884.6 in 2015.

From 2006 through 2015, hospitalization rates were highest for children up to 4 years of age. For this group, the rate ranged from 490.7 per 100,000 in 2006 to 614.0 per 100,000 in 2015. For 10-14 year olds, the 2006 hospitalization rate was 347.9 per 100,000 and the 2015 rate was 383.7 per 100,000. As with injury-related ED visits, hospitalization rates were consistently lowest among 5-9 year olds, ranging from 323.7 per 100,000 in 2006 and 368.7 per 100,000 in 2015.

Causes

Considering children up to age 14 as a group, major causes of injury leading to ED visits in 2015 included:

- falls (102,561)
- sport/recreation incidents (26,074)
- bicycling (6,760)
- poisoning (4,070) (Table 1)

For hospitalized injuries in 2015, the leading causes were:

- falls (2,319)
- poisoning (285)
- bicycling (220)
- sport/recreation incidents (220) (Table 2)

FIGURE 3. Injury-related ED visits, age-specific rates, by age group, ages 0-14, NACRS, Ontario, 2006-2015

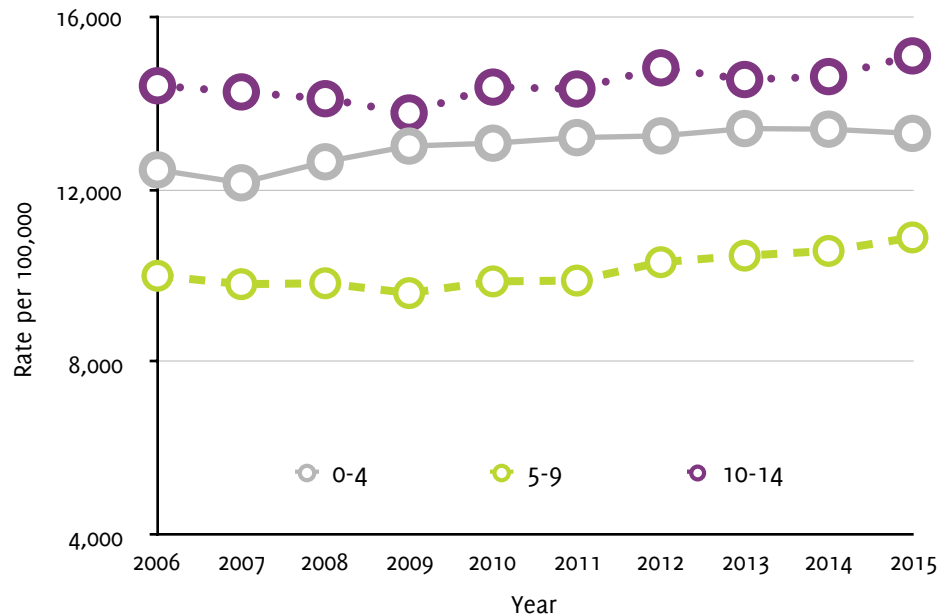
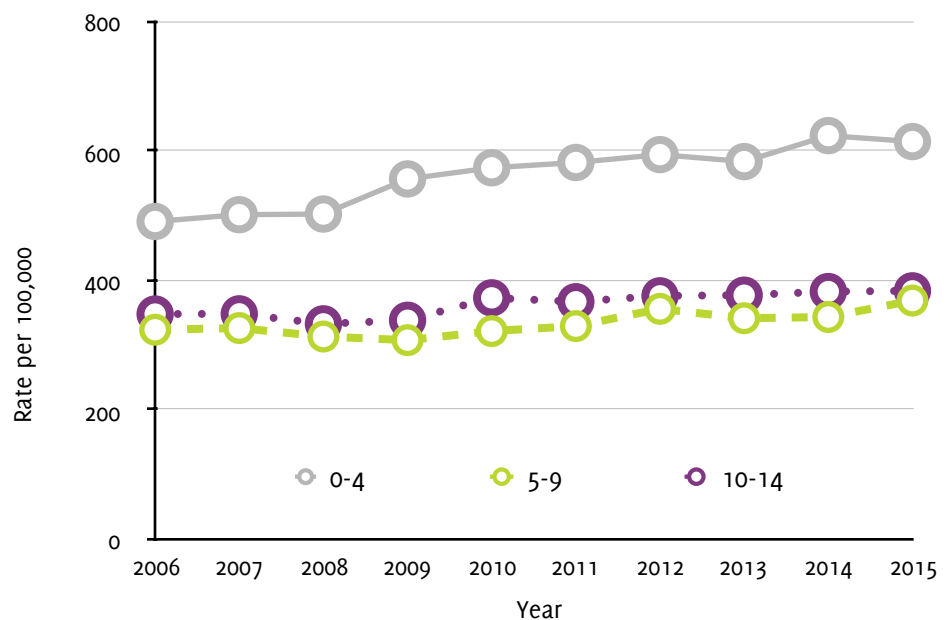


FIGURE 4. Injury-related hospitalizations, age-specific rates, by age group, ages 0-14, HMDB, Ontario, 2006-2015



Organizing the data according to three age groups reveals similarities and differences in top injury causes by age.

Children up to 4 years old

Falls were the leading cause of injury-related ED visits and hospitalizations in 2015 for the youngest age group. There were 38,864 ED visits and 760 hospitalizations for fall injuries among 0-4 year olds. The second and third leading

causes were poisoning and burns/scalds. There were 2,954 ED visits and 195 hospitalizations for unintentional poisonings in 2015. There were 2,242 ED visits and 170 hospitalizations for burns/scalds.

5-9 year olds

There were 31,036 ED visits and 946 hospitalizations for falls in 2015, making it the leading cause of treated in-

jury for this age group. For ED visits, falls were followed by sport and recreation (5,270) and bicycling (2,475) incidents as leading causes of injury. Bicycling was also a top cause of hospitalization (95 cases), followed by poisoning (45 cases).

10-14 year olds

As in the other age groups, the greatest number of ED visits and hospitalizations for 10-14 year olds were related to falls. There were 32,661 ED visits and 613 hospitalizations for falls in 2015. Falls were followed by incidents related

to sport and recreation and bicycling. Sport and recreation-related ED visits totalled 20,144 and hospitalizations amounted to 165 cases. For bicycling there were 3,750 ED visits and 107 hospitalizations.

TABLE 1. Major causes of injury-related ED visits., by age group, ages 0-14, NACRS, Ontario, 2015

Age Group	0-4		5-9		10-14		TOTALS	
	Count	Rate per 100,000	Count	Rate per 100,000	Count	Rate per 100,000	Count	Rate per 100,000
Fall*	38,864	5,378.3	31,036	4,179.3	32,661	4,416.2	102,561	4,651.7
Sport/Recreation*	660	91.3	5,270	709.6	20,144	2,723.7	31,894	1,446.6
Bicycling	535	74.0	2,475	333.1	3,750	507.0	6,759	306.6
Poisoning	2,954	408.8	624	84.0	492	66.5	4,070	184.6
Burn/Scald	2,242	310.3	580	78.1	513	69.4	3,335	151.3
MVC	784	108.5	971	130.8	1,056	142.8	2,811	127.5
Pedestrian	122	16.9	178	24.0	335	45.3	635	28.8
Breathing Incident	190	26.3	42	5.7	37	5.0	269	12.2

*Note: For this table, falls occurring during sport or recreational activities are included in both the fall and sport/recreation categories.

TABLE 2. Major causes of injury-related hospitalizations., by age group, ages 0-14, HMDB, Ontario, 2015

Age Group	0-4		5-9		10-14		TOTALS	
	Count	Rate per 100,000	Count	Rate per 100,000	Count	Rate per 100,000	Count	Rate per 100,000
Fall*	760	105.2	946	127.4	613	82.9	2,319	105.2
Poisoning	195	27.0	45	6.1	45	6.1	285	12.9
Bicycling	18	2.5	95	12.8	107	14.5	220	10.0
Sport/Recreation*	24	3.3	94	12.7	318	43.0	436	19.8
Burn/Scald	170	23.5	22	3.0	15	2.0	207	9.4
Breathing Incident	87	12.0	20	2.7	11	5.0	118	5.4
MVC	33	4.7	32	4.3	36	4.9	102	4.6
Pedestrian	11	1.5	23	3.1	27	3.7	61	2.8

*Note: For this table, falls occurring during sport or recreational activities are included in both the fall and sport/recreation categories.

Parachute Safe Kids Week

Parachute Safe Kids Week aims to raise awareness about preventable injury, which remains the leading cause of death among Canadian children. The 20th Anniversary of Parachute Safe Kids Week will be held in communities across the country. Over the past 20 years, Canada has had a decreasing trend in injury-related deaths and hospitalizations². Yet, injuries remain a leading cause of child fatalities in Canada and an issue in need of continued attention.

The 20th Anniversary of Parachute Safe Kids Week, taking place May 30 - June 5, 2016, will highlight the importance of preventing the top childhood injuries *At Home, At Play, and On The Road*. Practitioner resources are available to support local initiatives. Learn more at parachute.ca/safekidsweek

Safe Kids Week: Issues at a Glance (Ontario)

At Home Childhood falls

40% of falls sending children to EDs happen at home* (2006-2015).

*in cases where fall location was specified.

Common types of falls in the home

6,890 ED visits for falls from furniture



2,856 ED visits for injuries from slips and trips

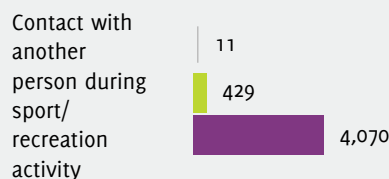
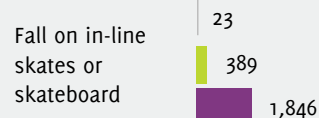
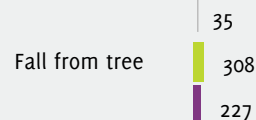
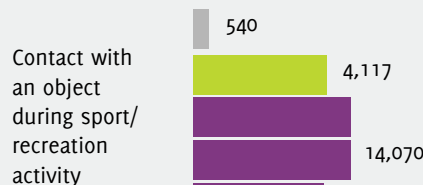
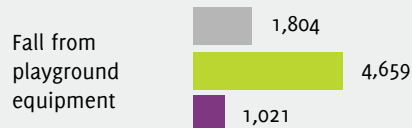
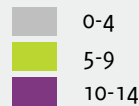
2,191 ED visits resulting from falls on stairs



All data included here are from 2015 unless otherwise indicated.

At Play Sport, recreation & play

ED visit counts

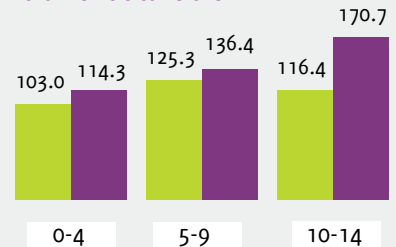


On the Road Transport injury rates by sex

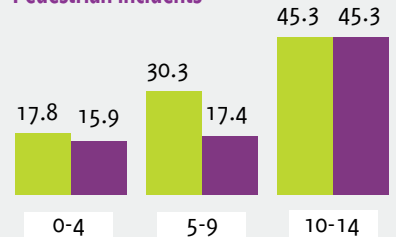
ED visit rates per 100,000



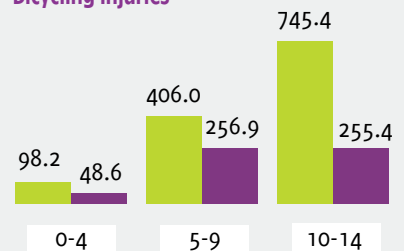
Motor vehicle collisions



Pedestrian incidents



Bicycling injuries



Additional Child Injury Data

Resources with recent child injury data available at parachute.ca:

- Canadian Atlas of Child & Youth Injury Prevention
- Bicycle-Related ED Visits in Ontario: A focus on children and youth *Ontario Injury Compass*
- Drowning-Related ED Visits in Ontario: A focus on infants, children and youth, *Ontario Injury Compass*
- Fall & Transport Injury Trends in Children 2004 and 2010

Key Resources for Child Injury Prevention

There are many evidence-informed resources addressing child injury prevention practices and messaging. These resources include:

- Parachute's Introduction to Child Injury Prevention e-learning course
- Parachute's Child Safety Good Practice Guide
- Parachute's Safe Kids Week resources
- Canadian Paediatric Society Injury Prevention Position Statement [Position Statements](#)
- [Prevent Child Injury](#) website
- OIPRC's [Evidence-Informed Practice Recommendations](#)
- Best Start Resource Centre's [Newborn Safety Key Messages](#)

Methodology

ED visit data were obtained from the National Ambulatory Care Reporting System (NACRS) and hospitalization data from the Hospital Morbidity Database (HMDB) at CIHI for calendar years 2006-2015 (January 1 through December 31). Data were accessed through the Ministry of Health and Long-Term Care's IntelliHEALTH ONTARIO system. ICD-10-CA coding was used to isolate injury cases and identify external causes. Causes were grouped according to the following codes:

V01-V09	Pedestrian	W65-W74	Drowning
V10-V19	Bicycling	W75-W84	Breathing incident
V40-V79	Occupant of car, van, pickup truck or bus	X00-X19	Burn/ scald
W00-W19	Fall	X40-X49	Poisoning
W02, W21.0-W22.07, W51.0-W51.07	Sport/recreation		

Rates were calculated based on population estimates and projections accessed through IntelliHEALTH ONTARIO.

References

1. Parachute. (2011). [Child Safety Good Practice Guide: Good investments in unintentional child injury prevention and safety promotion - Canadian Edition](#). Toronto: Parachute.
2. Parachute. (n.d.). *Safe Kids Week 2016*. Retrieved from: <http://www.parachute.ca/safekidsweek>.

Suggested citation: Cowle, S. (2016). Child Injuries in Ontario: At home, at play, & on the road. *Ontario Injury Compass, Issue 12, May 2016*. Toronto: Parachute.