

Injuries among Youth

Every two minutes in Ontario, one youth visits an emergency department and every hour one youth is hospitalized with an injury. Males have numbers and rates of injury about twice as high as females.

Results

In Ontario, during the 2005/06 fiscal year, there were a total of 264,095 emergency department visits and 8,207 hospitalizations among youth 15-24 years of age. Among both males and females, the lowest number of injuries was seen among those 24 years of age and the highest number was seen among 15-19 year olds. These patterns were observed for both emergency department visits and hospitalizations (Figures 1 & 2). The overall provincial rate of youth injury for emergency department visits was 15,760.4 per 100,000 population and the injury hospital rate was 489.8 per 100,000 (Table 2). The highest rates were seen among those 24 years of age and the lowest rates were observed among those 15-19 years.

Unintentional falls were the leading external cause of youth injury for emergency department visits, followed by transport incidents and unintentionally being struck by an object or person during sport or recreation activities. For hospitalizations, the leading cause of injury was transport incidents, followed by self-inflicted injuries and unintentional falls. The most common type of fall was a slip or trip on the same level. The most frequent persons injured in transport incidents are motor vehicle occupants. Motor vehicle occupants were most frequently injured in transport incidents. Being struck by or bumping into another person in hockey was the most common type of sport and recreation collision, and poisoning was the most frequent type of self-inflicted hospitalization.

About 92% of youth who visited an emergency department were discharged to their place of residence. For hospitalized cases, about 87% were discharged home and 7% were discharged to another facility that provides inpatient hospital care (e.g., rehabilitation hospital). Fewer than 1% of youth died after arrival in the emergency department or after hospital admission. The 8,207 hospitalized cases accounted for more than 34,000 days in acute care hospitals with an average length of stay of 4.2 days.

FIGURE 1. Injury-related emergency department visits among youth 15-24 years, by age and sex (Ontario, 2005/2006)

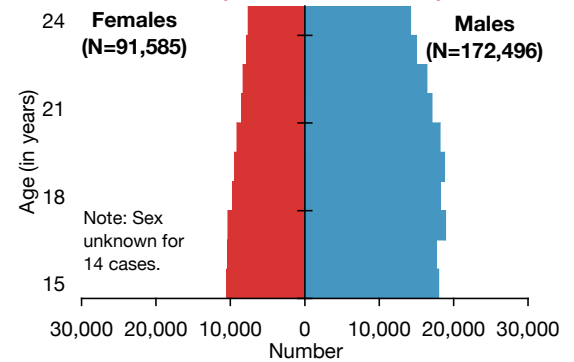


FIGURE 2. Injury-related hospitalizations among youth 15-24 years, by age and sex (Ontario, 2005/2006)

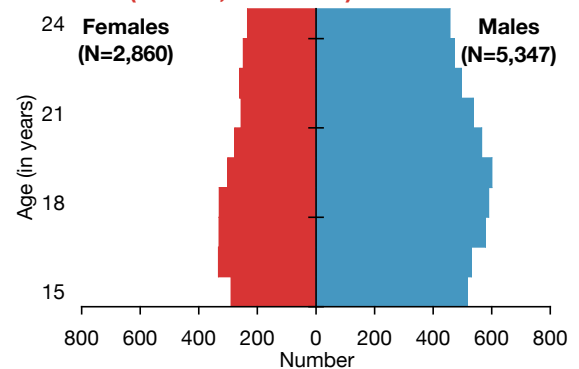


TABLE 1. Top 3 causes of injury among youth 15-24 years (Ontario, 2005/2006)

	Number	(% of total)
Emergency Department Visits		
1. Falls (e.g., slip or trip on the same level)	42,220	(16%)
2. Transport (e.g., motor vehicle occupant)	29,668	(11%)
3. Sport/recreation collision (e.g., collision with another person in hockey)	27,050	(10%)
Hospitalizations		
1. Transport (e.g., motor vehicle occupant)	1,919	(23%)
2. Self-inflicted (e.g., self-inflicted poisoning)	1,623	(20%)
3. Falls (e.g., slip or trip on the same level)	1,208	(15%)

TABLE 2. Regional comparison of youth injuries (Ontario, 2005/06)

	South West	Central South	Central West	Central East	Toronto	East	North	Ontario
Emergency Department Visits								
Number	43,983	30,452	39,837	47,485	30,695	38,423	28,896	264,095
Rate per 100,000 ^a	19,850.1	18,716.1	12,274.3	15,793.7	9,380.6	17,481.0	24,247.3	15,760.4
% male	66	65	67	66	65	64	65	65
Hospitalizations								
Number	1,234	994	1,316	1,275	1,065	1,081	1,082	8,207
Rate per 100,000 ^a	556.9	610.9	405.5	424.1	325.5	491.8	907.9	489.8
% male	66	67	65	64	69	64	61	65

a. Age-specific rate per 100,000 population. Notes: Region of residence unknown/outside of Ontario for 4,324 emergency department visits and 160 hospitalizations. Sex unknown for 14 emergency department visits.



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TABLE 3. Regional comparison of youth injuries by age group (Ontario, 2005/06)

	South West	Central South	Central West	Central East	Toronto	East	North	Ontario
Emergency Department Visits								
Number								
15-19 years	23,643	16,302	20,790	26,852	14,361	21,694	16,168	141,883
20-24 years	20,340	14,150	19,047	20,633	16,334	16,729	12,728	122,212
Rate per 100,000^a								
15-19 years	21,340.5	19,884.1	12,906.0	17,043.7	9,753.3	19,856.3	26,162.2	17,103.6
20-24 years	18,333.9	17,529.7	11,651.8	14,417.6	9,075.7	15,133.3	22,184.7	14,443.6
Hospitalizations								
Number								
15-19 years	652	516	740	726	488	593	606	4,403
20-24 years	582	478	576	549	577	488	476	3,804
Rate per 100,000^a								
15-19 years	589.3	629.4	459.4	460.8	331.4	542.8	980.6	530.8
20-24 years	524.6	592.2	352.4	383.6	320.6	441.5	829.7	449.6

a. Age-specific rate per 100,000 population. Note: Region of residence unknown/outside of Ontario for 4,324 emergency department visits and 160 hospitalizations.

By region, the lowest overall injury rates were observed in the Toronto region and the highest rates were seen in the North region (Table 2). This pattern was seen for both emergency department visits and hospitalizations. Regional variations were seen in the numbers and rates of injury by age group (Table 3).

Discussion

This Compass highlights patterns of injury for youth who visit an emergency department or are admitted to an acute care hospital in Ontario. Several Canadian analyses have examined youth injuries.¹⁻⁶ A recent Canadian study reported that death and hospitalization rates for youth 15-19 years have decreased substantially for all injuries and unintentional injuries but smaller scale decreases or even slight increases for females were noted for self-inflicted injuries.¹

Many factors can help explain the remarkable progress in preventing injuries among youth. A study, by researchers at the Public Health Agency of Canada, explains the reason for the decline is multifactorial, including “educational campaigns, community safety programs, legislation and federal safety regulations, improved enforcement of rules and regulations, graduated driver licensing, increased use of seatbelts and helmets, improved road conditions, better vehicle design and maintenance, and increased use of residential smoke detectors.”¹

Despite these successes, more prevention efforts are needed. Injuries remain the leading cause of death among youth, representing more than 75% of all deaths among Canadians 15-19 years.¹

References

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3. Pickett W. Injuries. In: Boyce W, ed. *Young People in Canada: Their Health and Well-being*. Cat. No. H39-498/2004E. Ottawa, ON: Health Canada, 2004.
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Managing the risk

Youth can be injured in a wide range of ways. Here are some best practices for preventing youth injuries:

Motor vehicle occupant injuries

- ❖ Graduated Driver Licensing that includes priorities identified by the Traffic Injury Research Foundation (e.g., no time discount for completing beginner driver education).

Sport/recreation collisions

- ❖ Promoting use of appropriate gear for the activity (e.g., helmets, eye protection, mouth guards).

Self-inflicted poisonings

- ❖ Restricting access to drugs (e.g., prescription and package size limits for medications).

Cross-cutting best practices

- ❖ Many risk factors are common to several types of injuries. For example, substance use is a contributing factor not only for motor vehicle collisions but also for many other injury types, such as falls, self-inflicted injuries, violence, and drowning. School-based and multi-faceted community-based alcohol and substance use prevention programs are examples of effective interventions for preventing these types of injury.

For Further Information

Ontario Injury Prevention Resource Centre (refer to previous issues of the Ontario Injury Compass on related topics)

www.OnInjuryResources.ca

ThinkFirst Foundation of Canada

www.thinkfirst.ca

Centre for Suicide Prevention

www.suicideinfo.ca

Traffic Injury Research Foundation

www.trafficinjuryresearch.com

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Methods

Emergency department data were obtained from the National Ambulatory Care Reporting System and data for acute care hospitalizations were obtained from the Discharge Abstract Database at the Canadian Institute for Health Information for the 2005/06 fiscal year. All cases for youth 15-24 years of age were included in this analysis. Causes of injury were classified according to available International Classification of Diseases, 10th revision (ICD-10) codes. Note that some persons were seen in an emergency department and then admitted to hospital; however, persons can be admitted to hospital without visiting an emergency department. Deaths occurring outside of the hospital setting are not included in this analysis. Regions were defined according to place of residence using the Ontario Ministry of Health Region Codes.