

CHIRPP INJURY BRIEF

Canadian Hospitals Injury Reporting and Prevention Program



GO-CART RELATED INJURIES CHIRPP, 2000-2002, 5 years and older

SOURCE OF THE STATISTICS

Injury data were obtained from the database of the Canadian Hospitals Injury Reporting and Prevention Program (CHIRPP). CHIRPP is an injury surveillance system operating in the emergency departments of 10 pediatric and 4 general hospitals in Canada. Data collection began in April 1990 at the pediatric hospitals and between 1991 and 1995 in the general hospitals. CHIRPP is a program of the Injury and Child Maltreatment Section of the Health Surveillance and Epidemiology Division, Center for Health Promotion, Public Health Agency of Canada.

Briefs and reports are updated when there is reason to believe the injuries or circumstances surrounding the injuries have changed. For example, the report of injuries associated with a specific product would be updated if the manufacturing regulations for the product are changed to include a new safety element. There is no need to update reports on a regular basis because the data collection sites are not a representative sample of all Canadian hospitals. Frequent updates would simply increase the number of records included in the report but not necessarily result in any change in the patterns and distributions found.

LIMITATIONS

It is important to note that the injuries described do not represent all injuries in Canada, but only those seen at the emergency departments of the 14 hospitals in the CHIRPP network. Since most of the data comes from the pediatric hospitals, which are in major cities, injuries suffered by the following people are under-represented in the CHIRPP database: older teenagers and adults, who are seen at general hospitals; native people; and people who live in rural areas. Fatal injuries are also under-represented in the CHIRPP database because the emergency department data do not capture people who died before they could be taken to hospital or those who died after being admitted.

INCLUSION AND EXCLUSION CRITERIA

A search of the CHIRPP database for injuries related to Go-carts (between 2000-2002, patients ages 5 years and older, 273,278 records total) was conducted. Specifically, any record with the code for Go-carts (2032) in any of the six CHIRPP factor code fields or a case in which the narrative contained any of the following text strings: 'GO-CART', 'GO-KART', 'GO CART', 'GO KART', 'MINI TRUCK', 'BOITE A SAVON', were identified. This data set was then reviewed manually and mis-coded cases (e.g. bumper cars, ATVs, dune buggies) and incidental cases (e.g. 'TRIPPED OVER GO-CART IN GARAGE') were deleted.

RECOMMENDED CITATION

Injury briefs and reports and data from them may be copied and circulated freely provided that the source is acknowledged. The following citation is recommended:

Health Surveillance and Epidemiology Division, Public Health Agency of Canada. *Go-cart related injuries*: Canadian Hospitals Injury Reporting and Prevention Program (CHIRPP) database, 2000-2002, ages 5 years and older, 134 records.

FOR MORE INFORMATION

Please contact the Injury and Child Maltreatment Section, Health Surveillance and Epidemiology Division, by PHONE at (613) 957-4689, by FAX at (613) 941-9927 or visit our website at <http://www.phac-aspc.gc.ca/inj-bles/>

Overall Pattern

Overall, Go-cart injuries accounted for 0.05% of all CHIRPP cases and 0.1% of all sports and recreation injuries over the same time frame and age range.

Location

Table 1 shows the distribution of locations. Two-thirds of the cases occurred in an organized setting at a Go-cart track or raceway/speedway. A smaller proportion (22.4%) occurred in an informal setting, some of which involved homemade Go-carts.

Table 1. Go-cart related injuries, Location, CHIRPP, 2000-2002, Ages 5 years and older

Location	# cases (%)
Go-cart track, raceway, speedway	92 (68.6)
Other (home, road, park)	30 (22.4)
Unknown	12 (9.0)
Total	134 (100.0)

Age and sex distribution

Table 2 provides details of the age and sex distribution. The age-specific proportion of Go-cart related injuries was highest among children 10-14 years (75.6 cases per 100,000 same-aged CHIRPP cases). Overall, the median age was 12.0 years and the interquartile range (25th to 75th percentiles) was 10 years to 14.3 years. There was a preponderance of males (67.9%).

Table 2. Go-cart related injuries, age and sex distribution, CHIRPP database, 2000-2002, ages 5 years and older.

Agegroup (years)	# cases (%)	#/100,000 CHIRPP ¹	% male (% male SPAR) ²
5-9	33 (24.6)	45.1	81.8 (59.8)
10-14	71 (53.0)	75.6	57.8 (66.4)
15-19	22 (16.4)	50.0	72.7 (72.0)
20+	8 (6.0)	12.8	87.5 (71.4)
Total	134 (100.0)	49.0	67.9 (66.2)

¹ Because CHIRPP collects information from ten children's hospitals and only five of the general hospitals, there is a high number of young children in the database. Using cases per 100,000 within an age group (instead of percentage by age group) adjusts for this uneven distribution

² The percentage of males in all sports and recreation cases (SPAR), for the given age group.

Circumstances

Table 3 shows the distribution of specific circumstances of the injury event.

Table 3. Circumstances of Go-cart related injuries, CHIRPP, 2000-2002, Ages 5 years and older

Circumstance	# cases (%)
Collision with fixed object ¹	44 (32.8)
Collision with other go-cart	32 (23.9)
Ejection/rollover	31 (23.1)
Pedestrian	6 (4.5)
Burn, contact with engine/exhaust	5 (3.7)
Other, unknown	16 (11.9)
Total	134 (100.0)

¹ includes walls, posts, tire walls and guardrails

Injuries

Table 4 depicts the main injuries sustained. Almost two-thirds of the incidents involved the head, face and neck or the upper extremity. There were 3 (2.2%) finger amputations and 1 internal injury.

Table 4. Go-cart related injuries, CHIRPP, 2000-2002, Ages 5 years and older

Body Region Nature of Injury	# cases (%)
Head, face, neck minor closed head injury, concussion facial laceration neck sprain, strain scalp laceration eye injury dental injury other (bruise, abrasion, soft tissue)	43 (32.1) 9 9 5 2 1 1 16
Upper extremity fracture burn traumatic amputation (fingers) crushing injury other (bruise, abrasion, soft tissue, sprain, strain)	43 (32.1) 16 5 3 2 17
Lower extremity fracture sprain, strain laceration other (bruise, abrasion, soft tissue)	27 (20.1) 8 8 4 7
Trunk back sprain, strain internal injury to abdominal organ other (bruise, abrasion, soft tissue)	17 (12.7) 4 1 12
Other (multiple, systemic)	4 (3.0)
Total	134 (100.0)

Helmet and seat belt/harness use

Table 5. Helmet and seatbelt/harness use, Go-cart injuries, CHIRPP, 2000-2002, Ages 5 years and older

Safety Device	# cases (%)
Helmet	55 (41.0)
Seatbelt	33 (24.6)
Helmet and seatbelt	26 (19.4)
None	6 (4.5)
Unknown	66 (49.3)

Treatment in Emergency

About 34% of the patients were treated and released with medical follow-up required and 6.0% were admitted to hospital.