

CHIRPP INJURY BRIEF

Canadian Hospitals Injury Reporting and Prevention Program



INJURIES associated with wheeled shoes ('Heelys')

CHIRPP, 2002-2006, all ages

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 wheeled shoes, or 'Heelys' (2002-2006, all ages, 554,390 records total) was conducted. Please note that 2006 was not a complete year at the time of the report. Records in which the narrative contained a relevant text string such as: "HEELIE", "HEELY", "HEALY", "WHEELED", "ROLLERSHOE", "HEELYZ" or "HEALYZ" were retained. This data set was then reviewed manually and mis-coded or incidental cases 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. *Injuries associated with wheeled shoes ("Heelys")*: Canadian Hospitals Injury Reporting and Prevention Program (CHIRPP) database, 2002-2006, all ages, 131 records.

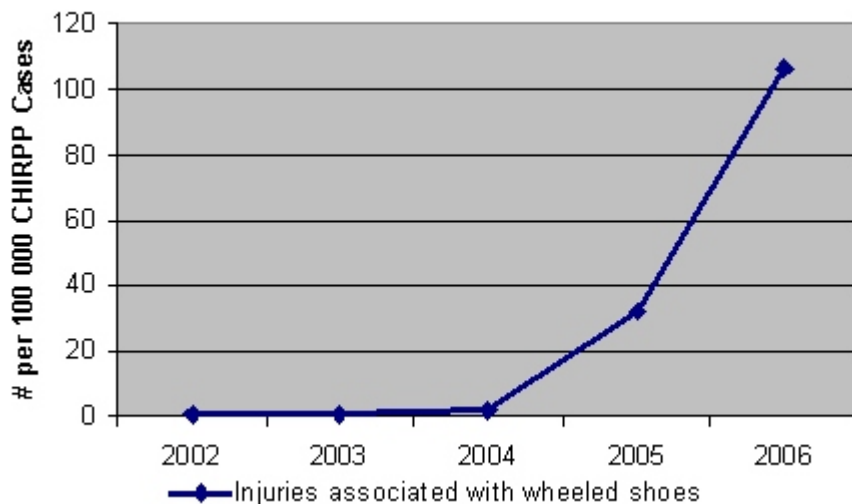
FOR MORE INFORMATION

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

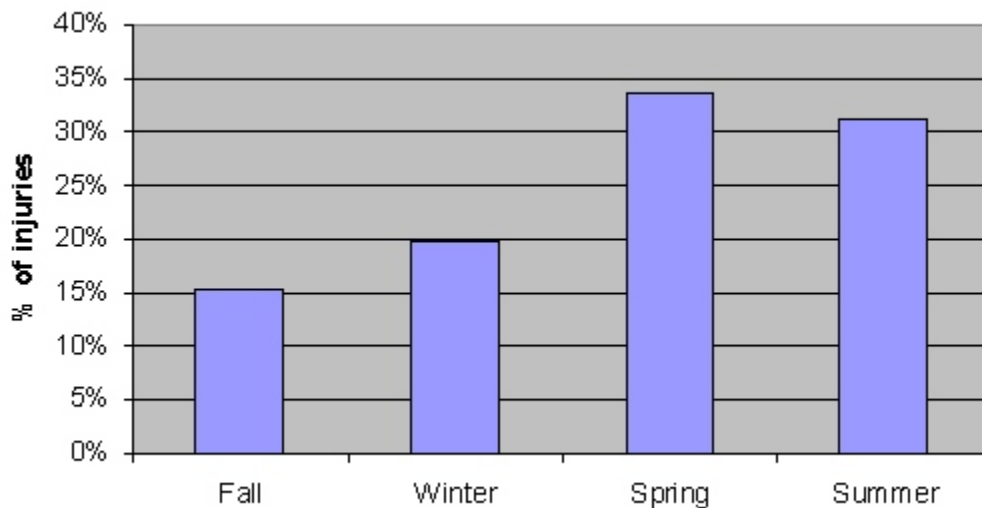
Wheeled shoes (common brand name “Heelys”), are shoes that contain one or more wheels in the heel of the shoe. This design allows for transition from walking or running to rolling, by shifting of weight to engage the wheel. Since coming on the market in 2000, the shoes have increased in popularity. Figure 1 illustrates the increase in injuries associated with wheeled shoes between 2002 and 2006. Numbers are adjusted to the total number of CHIRPP injuries in the given year. Figure 2 examines the number of injuries occurring by season.

Figure 1. Injuries associated with wheeled shoes over time, CHIRPP, 2002-2006*, all ages.



*2006 was not a complete year of data.

Figure 2. Injuries associated with wheeled shoes by season, CHIRPP, 2002-2006*, all ages.



*2006 was not a complete year of data.

Age and sex distribution

Table 1 provides details of the age and sex distribution. All cases retrieved involved patients between the ages of 5 and 19; however, the majority of cases were closely split between the 5 to 9 year old and 10-14 year old age groups. Overall, 58% of the cases involved females.

Table 1. Injuries associated with wheeled shoes, age and sex distribution, CHIRPP, 2002-2006*, all ages.

Age group (years)	# cases (%)	#/100,000 CHIRPP ¹	% male
5-9	69 (52.7)	64.3	36.2
10-14	60 (45.8)	41.9	46.7
15-19	2 (1.3)	3.1	100.0
Total	131 (100.0)	23.6	42.0

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

*2006 was not a complete year of data.

Circumstances

Table 2 describes the specific fall-related circumstances which led to the injury.

Table 2. Injuries associated with wheeled shoes, by circumstance, CHIRPP, 2002-2006*, all ages.

Circumstance of fall while wearing wheeled shoe	# cases (% of Total)
Fell, not further specified	56 (42.8)
Foot caught and fell	30 (22.9)
Lost balance/control and fell	31(23.7)
Wheel malfunction and fell	10 (7.6)
Ran into an object/person and fell	4 (3.0)
Total	131 (100.0)

*2006 was not a complete year of data.

Injuries

Table 3 provides a description of the main injuries sustained. Overall, the most commonly injured body region was the upper extremity (61.8%), and 68% of these were fractures.

Table 3. Injuries associated with wheeled shoes, CHIRPP, 2002-2006*, all ages.

Body Region Nature of Injury	# cases (%)
Head, face, neck	14 (10.7)
laceration	8
minor head injury and concussion	6
Upper extremity	81 (61.8)
forearm fracture	33
soft tissue	19
wrist fracture	13
hand/finger/thumb fracture	5
upper arm/elbow fracture	4
wrist sprain	3
abrasion	2
shoulder dislocation	1
unspecified nature of injury	1
Lower extremity	29 (22.1)
fracture	10
soft tissue	7
abrasion	4
sprain/strain	4
laceration	2
nerve/muscle	1
toe dislocation	1
Trunk	6 (4.6)
soft tissue	3
abrasion	2
sprain/strain	1
Unknown	1 (<1.0)
Total	131 (100.0)

*2006 was not a complete year of data.

Location

Table 4 describes the injury location; nearly 30% of injuries occurred at a private home, followed by 20% on the road/highway and 15% in a mall, restaurant or shop.

Table 4. Injuries associated with wheeled shoes by location, CHIRPP 2002-2006*, all ages.

Location	# cases (% of Total)
Own home/other home	37 (28.2)
Inside home	13
Driveway or sidewalk at home	11
Yard	6
Unspecified area in home	7
Road/highway	25 (19.1)
Paved road	8
Sidewalk	5
Unspecified road type	12
Mall/restaurant/shop	19 (14.5)
Park/sports facility	15 (11.5)
School	11 (8.4)
Other or unspecified	24 (18.3)
Total	131 (100.0)

*2006 was not a complete year of data.

Treatment in Emergency

About 55% of the patients were treated and released with medical follow-up required, 26% were treated with follow-up if necessary and 3% were admitted to hospital (compared to 6.8% for CHIRPP cases overall, all ages, 2002-2006).