

CHIRPP INJURY BRIEF

Canadian Hospitals Injury Reporting and Prevention Program



Home improvement-related INJURIES

CHIRPP, 2003, 15 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 home improvement tasks (2003, patients ages 15 years and older, 33,838 records total) was conducted. Specifically, any record with the context code for do-it-yourself tasks around the home (73) or a case in which the narrative contained a relevant text string such as: LADDER, RENOVATION, INSTALL, CUTTING, WORKING, SAWING, BUILD, FIX, PAINTING, DRILLING, LADDER, SANDING, ROOF, REPAIR, REPARER, CONSTRUCT, TOIT, ECHELLE. Cases associated with electrical work, plumbing work, farm work, yard work or work for pay, were excluded. This data set was then reviewed manually to classify each case as a home renovation project or a home maintenance project. Home renovation category was defined as a larger scale project, where hiring a contractor or tradesperson would be a reasonable option. Home maintenance projects were typically smaller home repair projects, simple installations and home decorating. 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. *Home improvement-related injuries: Canadian Hospitals Injury Reporting and Prevention Program (CHIRPP) database, 2003, ages 15 years and older, 615 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, home improvement-related injuries accounted for 1.8% of all CHIRPP cases over the same time frame and age range.

Home improvement tasks were broken into two main types: larger home renovation projects and smaller home maintenance tasks. Table 1 shows the type of home improvement task, and the circumstance which was associated with the injury. Home renovation projects, such as basement renovations, roof repairs, and window installations, accounted for 83.4% of all home improvement injury events. Home maintenance tasks such as changing light bulbs, repairing doors or small installation jobs such as a ceiling fan, accounted for 16.6% of events.

Table 1. Home improvement-related injuries, by circumstance, CHIRPP, 2003, Ages 15 years and older

Type of home improvement project Circumstance	# cases (% of Total)
Home renovation projects	513 (83.4)
Using power tools	152 (29.6)
Using non-powered tools (e.g. hammer, exacto knife, screwdriver)	101 (19.7)
Fell from ladder	56 (11.0)
Injured by small particle debris	53 (10.3)
Injured by construction materials (e.g. lumber)	36 (7.0)
Injured by nails/screws/hardware etc.	31(6.0)
Fell from roof	22 (4.3)
Hit against/cut by materials	13 (2.5)
Overexertion, lifting and carrying	11(2.1)
Slipped/tripped	11(2.1)
Other and unknown	27 (5.3)
Total	513 (100%)
Home maintenance (odd jobs, repairs and painting around the home)	102 (16.6)
Fell from ladder	23 (22.6)
Hit against/cut by materials	18 (17.7)
Slipped/tripped	11 (10.8)
Injured by nails/screws/hardware etc.	10 (9.8)
Injured by construction materials	8 (7.8)
Using non-powered tools	9 (8.8)
Overexertion, lifting and carrying	8 (7.8)
Injured by small particle debris	4 (3.9)
Using power tools	3 (2.9)
Other and unknown	8 (7.8)
Total	102 (100.0)
Total	615 (100.0)

Age and sex distribution

Table 2 provides details of the age and sex distribution. Over half of the cases of home improvement-related injuries occurred in adults between the ages of 36 and 65 years (55.6%) . Overall, the median age was 42 years. There was a preponderance of males (89.1%).

Table 2. Home improvement-related injuries, age and sex distribution, CHIRPP database, 2003, ages 15 years and older.

Age group (years)	# cases (%)	#/100,000 CHIRPP ¹	% male
15-19	44 (7.2)	334.1	86.4
20-25	41 (6.7)	1,040.1	90.2
26-35	117 (19.0)	2,788.4	89.7
36-65	342 (55.6)	3,716.2	88.6
65 and over	71 (11.5)	2,507.1	91.6
Total	615 (100.0)	1,844.4	89.1

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

Injuries

Table 3 provides the main injuries sustained; almost 44% were lacerations. Over a half of the incidents involved the upper extremity, and of these, 6 (1.0%) were finger amputations.

Table 3. Home improvement-related injuries, CHIRPP, 2003, Ages 15 years and older

Body Region Nature of Injury	# cases (%)
Head, face, neck	136 (22.1)
foreign body in eye	67
eye injury	35
laceration	18
minor head injury and concussion	5
intracranial	1
fracture	1
other (bruise, abrasion, soft tissue)	9
Upper extremity	333 (54.2)
laceration	217
fracture	39
foreign body	16
traumatic amputation (fingers)	6
soft tissue	21
other (bruise, abrasion)	34

Lower extremity	100 (16.3)
laceration	34
soft tissue	22
fracture	19
nerve/muscle	9
sprain/strain	7
other (bruise, abrasion)	9
Trunk	37 (6.0)
soft tissue	14
fracture (thorax, lower back, pelvis)	6
spinal fracture	3
sprain/strain	6
nerve/muscle	6
other (bruise, abrasion)	2
Other (multiple, systemic)	2 (0.3)
Unknown	7 (1.1)
Total	615 (100.0)

Treatment in Emergency

About 45% of the patients were treated and released with medical follow-up required and 7.2% were admitted to hospital (compared to 11.2% for CHIRPP cases overall, ages 15 years and over). Of the 44 admitted cases, 95% of these were associated with the renovation category.