

CHIRPP INJURY BRIEF

Canadian Hospitals Injury Reporting and Prevention Program



Injuries associated with... Fireworks, Firecrackers and Sparklers

Cumulative from June 1998 to March 2004

SOURCE OF THE STATISTICS

Injury data were obtained from the database of the Canadian Hospitals Injury Reporting and Prevention Program. CHIRPP is an injury surveillance system operating in the emergency departments of 10 pediatric and 5 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 at Health 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 15 hospitals in the CHIRPP network. Since the bulk 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

In A search of the CHIRPP database for injuries entered into the system between June 1998 and March 2004 was conducted (all ages 1,623,404 records). Records were selected if *i*) any of the six factor code fields contained the code for fireworks and firecrackers (CHIRPP code 795) or *ii*) if the Injury Event Description contained any of the following text strings: "FIREWORK", "FIRECRACKER", "FEU D'ARTIFICE", "PETARD", "SKY ROCKET", "BOMBSHELL", "MORTAR", "FLARE", "SPARKLER", "ROMAN CANDLE", "CATHERINE WHEEL". Records were reviewed individually and irrelevant records were deleted. The search identified a total of 95 records.

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 (Health Canada). Injuries associated with Fireworks, Firecrackers and Sparklers: Canadian Hospitals Injury Reporting and Prevention Program (CHIRPP) database, June 1998 to March 2004, all ages, May 2004, 95 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.hc-sc.gc.ca/pphb-dgspsp/injury-bles/>



Table 1. Age and sex distribution of fireworks, firecracker and sparkler-related injuries, CHIRPP, June 1998 to March 2004

Age group (years)	# cases (%)	Number/100,000 CHIRPP cases ¹	% male	% male CHIRPP ²
< 1	1 (1.1)	4.83	100.0	53.7
2-4	12 (12.6)	12.14	50.0	57.3
5-9	17 (17.9)	13.54	76.5	58.3
10-14	42 (44.2)	26.61	76.2	61.7
15-19	16 (16.8)	22.55	81.3	63.2
20+	7 (7.4)	6.54	57.1	59.1
Total	95 (100.0)	15.24	72.6	59.4

¹ The number of injuries per 100,000 CHIRPP injuries of all types (admitted) within the age group indicated, over the same time period. 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 number per 100,000 within an age group (instead of overall percent by age group) adjusts for different age group distributions.

² Proportion of admitted males in the CHIRPP database for that age group, over the same time period.

Table 2. Type of firework involved

Type of firework	# (%) of cases
Fireworks, not further specified	47 (49.5)
Firecracker	26 (27.4)
Sparkler	18 (19.0)
Flare gun	3 (3.2)
Roman candle	1 (1.1)
Total	95 (100.0)

Table 3. Month of the year

Month	# (%) of cases
January	3 (3.2)
February	3 (3.2)
March	2 (2.1)
April	4 (4.2)
May	16 (16.8)
June	7 (7.4)
July	21 (22.1)
August	7 (7.4)
September	4 (4.2)
October	17 (17.9)
November	8 (8.4)
December	3 (3.2)
Total	95 (100.0)

Location, time of day and day of the week

Half (49.5%) of the incidents occurred at a private home; 10.5% occurred in a public park and 6.3% on a road.

Almost half (45.3%) of the injuries occurred between 8:00 pm and 11:59 pm and 45.3% occurred on the weekend.

Table 4. Body region and nature of injury

Body Region¹ Nature of Injury	# (%) of cases
Upper extremities	44 (46.3)
burn	37
amputation	3
other	4
Head, Face, and Neck	40 (42.1)
eye injury (incl. foreign body)	27
burn	11
other	2
Other	11 (11.6)
Total	95 (100.0)

¹ Up to three injuries can be recorded, the data in this table represents the first, most serious, recorded injury.

Table 5. Treatment received in the emergency department

Treatment	# of cases (%)
Left without being seen	3 (3.2)
Advice only	8 (8.4)
Treated, follow-up if necessary	24 (25.3)
Treated, medical follow-up required	52 (54.7)
Held in emergency for prolonged	1 (1.1)
Admitted to hospital	7 (7.4)
Total	95 (100.0)