

Bitten or Struck by Animals

Each year, more than 450 Ontarians are hospitalized from being bitten or struck by an animal. Dogs account for two-fifths of these injury hospitalizations.

Results

In Ontario, there were a total of 459 injury hospitalizations due to being bitten or struck by (e.g., clawed, scratched, trampled, or gored) a mammal during the 2002/03 fiscal year. Persons being bitten or struck by a dog accounted for two-fifths of these injury hospitalizations (Table 1).

Females accounted for more than half of the injury hospitalizations caused by being bitten or struck by an animal. These injuries occurred across the life span. A peak in the number of hospitalizations was observed among young children under 10 years of age (Figure 1). The average age of persons hospitalized from being bitten or struck by a dog was 34 years compared to 47 years for other mammals.

The head and upper limb were the most common sites of injury (Figure 2). More specifically, open wounds of the head, face, hand or wrist, and fractures of the lower leg were most frequent. About three-fifths of the cases coded as 'other' and 'unspecified' sites of injury were due to cellulitis, an infection of the skin and surrounding tissue. Different injury patterns were observed by age (Table 2). For example, among children under 5 years, the most frequent site of injury was the head. In contrast, the lower and upper limb were the most common sites of injury for Ontarians 70 years and older.

The 459 cases accounted for more than 1,800 days in acute care hospitals, with an average length of stay of 4.0 days. The average length of hospital stay was highest among Ontarians 75 years and older (average of 8.3 acute care hospital days). About 93% of cases were discharged home and 5% were transferred to another inpatient facility (e.g., rehabilitation centre). Fewer than 1% of persons hospitalized with an animal-related injury died during their hospital stay.

In Ontario, the age-standardized hospitalization rate for injuries caused by being bitten or struck by an animal was 3.9 per 100,000 population (Table 3). By region, the highest number of injuries was observed in the South West region and the highest rate was seen in the North region. The fewest number of injuries was seen in the East region and the lowest rate was observed in the Toronto region.

TABLE 1. Type of injury hospitalization caused by being bitten or struck by an animal (Ontario, 2002/2003)

Type of animal	Number	%
Bitten or struck by dog	183	40
Bitten or struck by other mammal	276	60
Total	459	100

FIGURE 1. Injury hospitalizations caused by being bitten or struck by an animal, by age and sex (Ontario, 2002/2003)

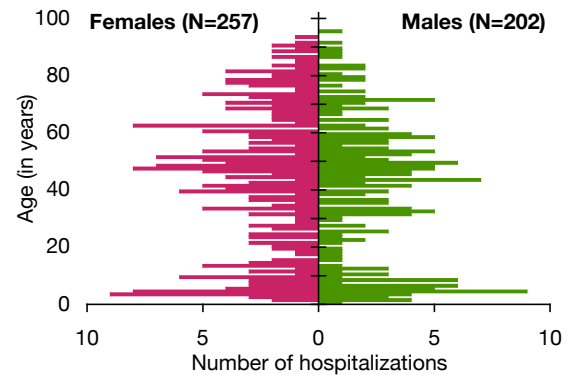


FIGURE 2. Site of injury for hospitalizations caused by being bitten or struck by an animal (Most responsible diagnosis, Ontario, 2002/03)

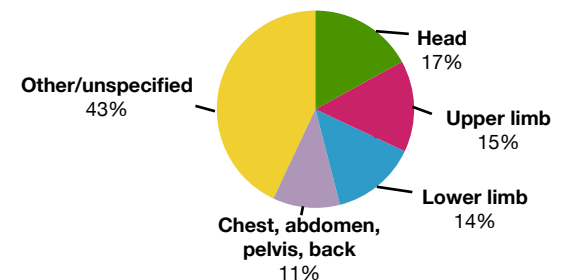


TABLE 2. Site of injury for hospitalizations caused by being bitten or struck by an animal for select age groups (Most responsible diagnosis, Ontario, 2002/03)

Site of injury	Age group (Number(%))	
	<5 years	70+ years
Head	21 (45%)	4 (6%)
Upper limb	7 (15%)	10 (14%)
Lower limb	<5 (2%)	15 (21%)
Chest, abdomen, pelvis, back	<5 (6%)	5 (7%)
Other/unspecified	15 (32%)	38 (52%)
Total	47 (100%)	72 (100%)

TABLE 3. Regional comparison of injury hospitalizations caused by being bitten or struck by an animal (Ontario, 2002/03)

	South West	Central South	Central West	Central East	Toronto	East	North	Ontario
Number	87	59	54	76	57	53	67	459
Rate per 100,000 ^a	5.4	4.9	2.7	4.0	2.2	3.3	7.4	3.9
Average age (in years)	44	39	40	42	41	43	41	41
% female	49	61	61	50	51	60	66	56

a. Age-standardized rate per 100,000 population. Note: Region of residence unknown/outside of Ontario for 6 hospitalizations.

Ontario Injury Compass

is produced by

SMARTRISK

in collaboration with

The Ontario Public

Health Association

and with funding from

The Government of Ontario

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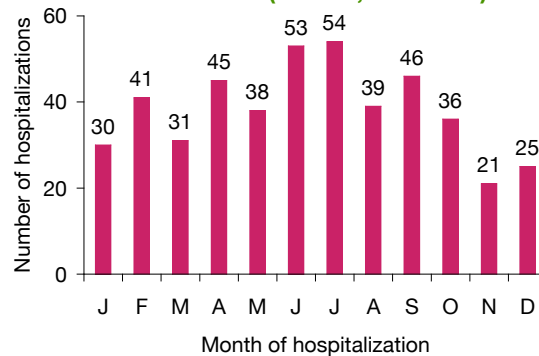
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TABLE 4. Regional comparison of injury hospitalizations caused by being bitten or struck by an animal, by age (Ontario, 2002/03)

	South West	Central South	Central West	Central East	Toronto	East	North	Ontario
Rate per 100,000 population^a (Number)								
<5 years	3.3 (<5)	11.9 (8)	4.3 (6)	6.0 (7)	5.1 (8)	6.7 (6)	16.0 (8)	6.6 (47)
5-9 years	7.6 (8)	3.8 (<5)	3.3 (5)	6.4 (9)	2.0 (<5)	1.9 (<5)	6.6 (<5)	4.4 (35)
10-39 years	3.4 (22)	2.7 (13)	1.5 (14)	2.2 (18)	1.4 (16)	1.8 (12)	4.8 (18)	2.3 (115)
40-69 years	8.1 (42)	7.0 (28)	3.3 (22)	4.3 (28)	2.4 (20)	4.5 (25)	7.1 (23)	4.8 (190)
70+ years	8.1 (12)	5.8 (7)	5.4 (7)	9.8 (14)	4.3 (10)	5.6 (8)	17.0 (14)	7.2 (72)

a. Age-specific rate per 100,000 population. Note: Region of residence unknown/outside of Ontario for 6 hospitalizations.

FIGURE 3. Injury hospitalizations caused by being bitten or struck by an animal by month of admission (Ontario, 2002/2003)



In Ontario, the highest hospitalization rates were seen among Ontarians under 5 years of age and 70 years and older (Table 4). Variations in the age-specific hospitalization rates were observed by region.

The highest number of injury hospitalizations caused by being bitten or struck by a dog or other mammal was observed in July, followed closely by June. The lowest numbers were seen in November and December (Figure 3).

Discussion

This Compass highlights patterns of injury hospitalizations caused by being bitten or struck by a dog or other mammal in Ontario. Dogs account for more than two-fifths of the injury hospitalizations. Similar patterns of injury have been reported in other provincial and national analyses.¹⁻⁶ However, it is important to note that much of the past research is focused on dog bites.

Hospitalizations represent only one aspect of the issue. Many people are treated for their injuries at an emergency department or a clinic. Also, in some cases the incident and associated injuries can be fatal.

References

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Managing the risk

The Humane Society of Canada estimates that there are over 2 million dogs in Ontario and 3 out of every 5 households have a pet of some kind. In Ontario, there are also many other types of animals, such as farm animals and wildlife. Here are some tips that can be used to help reduce the risk for injury:

- ❖ Animals can be unpredictable. Do not approach an unfamiliar animal. Allow the animal to see and sniff you first before petting it.
- ❖ Do not approach a stray or wild animal. If you encounter one, you should not turn and run away. Remain motionless, like a tree. When the animal loses interest, attempt to walk away slowly, always keeping the animal in view.
- ❖ Always supervise children around pets and other animals. Teach them to be gentle and respectful to animals.
- ❖ Do not disturb an animal who is sleeping or eating. Never tease an animal.
- ❖ When getting a new pet, take the time to learn about the breed and choose one according to what will fit in with your family. Owners should be responsible for their animals. Spay or neuter your pet to reduce aggressiveness and consider obedience training.
- ❖ Legislation about public safety related to dogs was amended in Ontario in 2005. The legislation bans pit bulls, puts restrictions on existing pit bulls, and increases penalties for the owner of a dog that is a danger to the public.

For Further Information

Ontario Society for the Prevention of Cruelty to Animals
www.ospca.on.ca
Humane Society of Canada
www.humanesociety.com
Legislative Assembly of Ontario
www.ontla.on.ca
Cochrane Injuries Group
www.cochrane-injuries.lshtm.ac.uk

Methods

Hospitalization data included acute care hospitalizations for persons bitten or struck by a dog or other mammal in Ontario from the 2002/2003 fiscal year. Data were obtained from the Discharge Abstract Database at the Canadian Institute for Health Information (CIHI). These injuries were classified according to the International Classification of Diseases, 10th revision (ICD-10) using codes W53-W55. Fewer than 1% of cases resulted in an in-hospital death. Regions were defined according to place of residence using the Ontario Ministry of Health Region Codes.

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