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Deaths and Hospitalizations from Dog Bite Injuries — Alaska, 1991–2002

Background

Human injuries from dog bites are not reportable to state health officials in Alaska. However, available data for dog bite-related deaths or hospitalizations¹ can be used to approximate the overall community burden of dog bite injuries.

Methods

Data for fatalities were obtained from the Alaska Section of Epidemiology's dog bite fatality database, which consists primarily of information obtained from media reports gathered since 1940. Additionally, the Alaska Trauma Registry² was evaluated to identify persons hospitalized for at least one day with E-code 906.0.

Results

Deaths.

From 1991–2002, nine deaths were recorded (incidence, 123 per 100 million persons per year). One death was captured by the Alaska Trauma Registry. This victim was pronounced dead in the emergency room and therefore not included in the hospitalizations data below. Eight (89%) victims were Alaska Native persons and six (67%) were male. The mean age was 45 months (median: 54 months; range: 9–64 months). Five deaths occurred in the Southwest, two in the Northern, and one each in the Anchorage/Mat-Su and Interior regions. Three victims were exposed to chained dogs and three to free-roaming dogs, all in outdoor settings. One victim wandered into a dog lot but whether the attacking dog was confined was unknown. One victim was attacked indoors by a family pet. No details were available for the ninth victim.

Hospitalizations.

From 1991–2002, 288 persons were hospitalized for at least one day after a dog bite injury. The mean age was 19.9 years (median: 9 years; range: <1 to 96 years) and incidence varied by age (Table 1).

Table 1. Annual Rates of Dog Bite Injury Hospitalizations by Age-group — Alaska, 1991–2002.

Age-group (years)	# of hospital visits (% of all injuries)	Annual rate per 100,000*
0–4	95 (33.0)	15.2
5–9	60 (20.8)	8.7
10–14	23 (8.0)	3.5
15–19	8 (2.8)	1.5
20–29	17 (5.9)	1.9
30–39	29 (10.0)	2.2
40–49	17 (5.9)	1.3
50–59	18 (6.3)	2.6
60+	21 (7.3)	3.7
Total	288	3.9

*Based on July 1, 1997 population.

Fifty-seven percent of victims were male (163 of 288) and 60% (168 of 282) were non-Native persons. Alaska Native and non-Native persons had incidence rates of 9.3 and 2.8 per 100,000 per year, respectively.

Forty-three percent (123 of 288) of injuries occurred to the head and neck and 40% (115 of 288) to the upper extremity. The mean number of days hospitalized was 3.4 (median: 2; range: 1 to 28). Alaska Native persons were hospitalized for a mean of 4.6 days compared to 2.5 days for other persons ($p < 0.0001$). The mean number of days hospitalized did not vary significantly when Anchorage victims were compared to those in the rest of the state.

Injury rates varied by region (Table 2). A home setting – not necessarily the victim's – was listed as the place of injury for 59% (130 of 221) of victims.

Discussion

The incidence of dog bite injury deaths in Alaska was much higher than that of the nation at 123 versus 7.1 per 100 million population per year, respectively.³ The oldest Alaska decedent was aged 64 months. By comparison, nationally, 50% of deaths occurred in persons aged >10 years.³

Table 2. Region of Occurrence for Dog Bite Injury Hospitalizations — Alaska, 1991–2002.

Region of injury occurrence*	# of injuries (% of total)	AK population July 1, 1997 (% of total)	Annual rate per 100,000
Anch/Mat-Su	115 (40.6)	306,877 (50.3)	3.1
Gulf Coast	25 (8.8)	71,700 (11.8)	2.9
Interior	53 (18.7)	95,567 (15.7)	4.6
Northern	26 (9.2)	23,082 (3.8)	9.4
Southeast	17 (6.0)	73,830 (12.1)	1.9
Southwest	47 (16.6)	37,599 (6.2)	10.4
Total	283**	609,655	3.9

*Based on Alaska labor market regions.

**Records excluded if region was out-of-state or unknown.

Alaska hospitalization rates also were higher than in other studies, especially the rate among 0–4 year old children, which was three times higher than the national rate.⁴ Similar to previous studies, Alaska dog bite victims were more likely to be male, young children, injured in the head/neck region, and injured in a home setting.^{4–7} Alaska Native persons had significantly longer average hospital stays compared to other persons. This may have resulted from having more episodes among younger age-groups or other factors, such as differences in the anatomic location of injury.

Deaths and injuries from dogs are a well-known Alaska public health concern,⁸ and the health consequences of a serious injury (e.g., limb amputation) can be lifelong and costly. Health educators and health care providers working with young children, Alaska Native persons, and persons living in Southwest and Northern Alaska should recognize the higher risk among these groups.

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