

## 1996 Severe Attack Surveillance Summary

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During 1996, a total of 786 severe animal attacks or bites were voluntarily reported to the Zoonosis Control Division of the Texas Department of Health by local health departments, law enforcement agencies, animal control agencies, and emergency health care providers. “Severe attack” is defined as one in which the animal repeatedly bites or vigorously shakes its human victim, and the victim, or a person intervening, has extreme difficulty terminating the attack. “Severe bite” is defined as a puncture or laceration made by an animal’s teeth which breaks the person’s skin, resulting in a degree of trauma which would cause most prudent and reasonable people to seek medical care for treatment of the wound, without consideration of rabies prevention alone. Reports were submitted from 86 of Texas’ 254 counties (Figure 1).

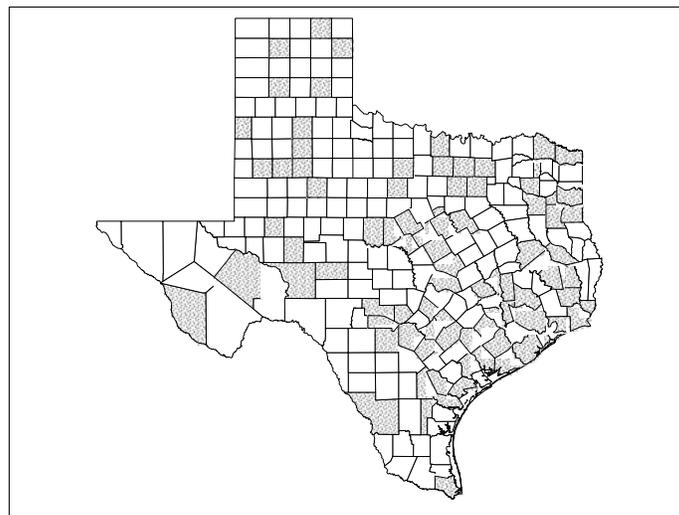


Figure 1. Severe Animal Attack reports by County - 1996

### Species

Species reported to be involved in severe attacks were domestic dog (681 reports, 86.6%); domestic cat (81 reports, 10.3%); rat, wolf-dog hybrid (4 reports each, 0.5%); mouse, raccoon, skunk, and unknown (2 reports each, 0.3%); and bear, ferret, iguana, monkey, pot-bellied pig, squirrel, wolf, and zebra, (one report each, 0.1%) (Figure 2).

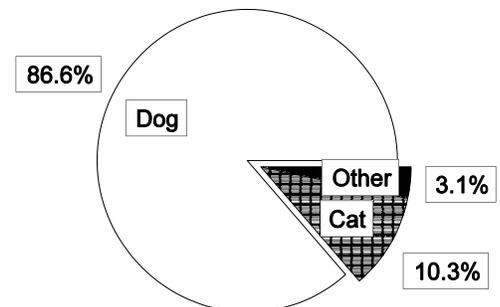


Figure 2. Species involved in severe animal attacks - 1996.

### Canine Breeds

When only reports involving canines (domestic dogs, wolves, and wolf-dog hybrids) are examined, 641 reports listed the specific breed. Of the 90 breeds and breed crosses reported, 8 breeds and breed crosses constituted 53.7% of the reports (Table 1). (Note: the number of animals in various dog breeds in the overall canine population is unknown; therefore, no conclusions can be drawn concerning whether dogs of these 8 breeds are prone to biting more often than other breeds or if these are merely the most popular breeds.) No other breeds or breed crosses represented more than 3% of the reports. Small breeds of dogs were infrequently reported because they are less likely than large breeds to inflict severe wounds.

<u>Breed</u>	<u>No.</u>	<u>%</u>
Chow chow	81	12.6
Rottweiler	64	10.0
Chow cross	46	7.2
German shepherd	41	6.4
Pit bull	33	5.2
Labrador retriever	29	4.5
Mixed	26	4.1
Labrador retriever cross	24	3.7
All others	297	46.3

Table 1. Breeds of canines reported in severe animal attacks - 1996.

### Animal's Sex

Of the attacks involving canines (domestic dogs, wolves, or wolf-dog hybrids), the animal's sex was specified in 335 reports. Of the 77 female canines, 12 (15.6%) were spayed and 65 (84.4%) were intact. Of the 258 male canines, 29 (11.2%) were castrated and 229 (88.8%) were intact (Figure 3). (Note: the proportion of sterilized versus intact animals in the overall canine population is unknown.)

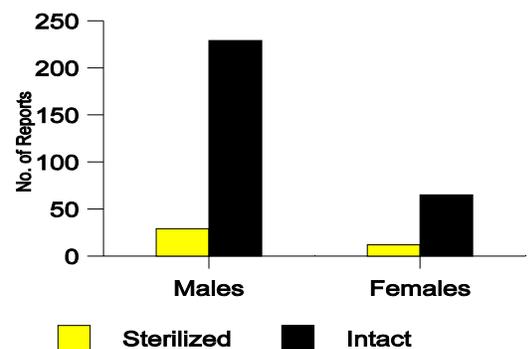


Figure 3. Sex of canines involved in severe animal attacks - 1996.

### Animal's Behavior

Of the 661 reports that listed the animal's behavior prior to the attack, the animal was described as docile or friendly in 399 cases (60.4%). In 211 reports, the animal displayed warning signals (such as barking, growling, hissing, or baring teeth) prior to the attack. Of the 681 reports stating whether multiple animals were involved, 72 (10.6%) incidents involved an attacking animal that was part of a larger group of animals while in 609 (89.4%) incidents, the animal acted alone.

### Rabies Vaccination Status

Of the 767 reports involving canines (domestic dogs, wolves, or wolf-dog hybrids) or domestic cats that indicated the animal's rabies vaccination status, the number of vaccinated animals equalled the number of unvaccinated animals (255). Slightly over one-third of the reports did not specify whether the animal was vaccinated (Figure 4).

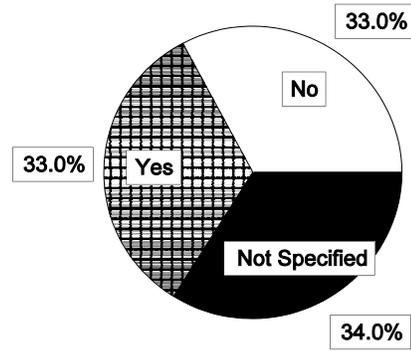


Figure 4. Rabies vaccination status of canines & domestic cats involved in severe animal attacks

### Animal Involved in Previous Attacks

Of the 519 reports in which it was definitely known whether or not the animal was involved in previous attacks on people or animals, 392 (75.5%) had not been involved in previous attacks and 127 (24.5%) had been involved in previous attacks. Of the 104 reports that included information on whether the previous attacks were against people or animals, 88 animals had been involved in attacks against people and 16 were involved in attacks against other animals.

### Provocation/Special Circumstances

Of the 734 reports that listed whether the attack was provoked, 451 (61.4%) were considered by the reporting entity as not provoked, and 283 (38.6%) were considered provoked. No association was found between the victim's age and whether the attack was provoked. Special circumstances involved in the attacks included (in order of frequency) guarding, being startled, teasing, dog fight, injury, hunger/eating, puppies/kittens, and estrus.

### Extent of Injury

When the extent of the injury was specified, 46 attack victims required surgery, 62 required hospitalization, and 231 required sutures.

When only records in which the victim was hospitalized were reviewed, 23 dog breeds or breed crosses were included in 57 reports. Of these, 6 breeds were involved in 63.2% of the attacks (Table 2). No other breeds or breed crosses represented more than 5% of the reports.

Breed	No.	%
Rottweiler	17	29.8
Chow chow	6	10.5
Chow cross	4	7.0
Pit bull	3	5.3
German shepherd cross	3	5.3
Labrador retriever	3	5.3
All others	21	36.8

Table 2. Dog breeds involved in severe attacks in which the victim was hospitalized

### Victim's Sex and Age

The victim's sex was specified in 782 records. For victims 20 years of age and younger, males were more likely than females to be victims of an attack (59.5% versus 40.5%). For victims over the age of 20, the ratio of males to females sustaining a severe attack reflected their respective proportions in the overall population.

The victim's age was listed on 772 records. Age distribution in years is listed in Table 3. Almost half (47.4%) the victims were less than 11 years of age (Table 3). The mean was 21.7 years, the median was 11.0 years, and the mode was 3.0 years (Figure 5). When considering the overall population of Texas, children less than 11 years of age were 4 times more likely than the remainder of the population to be a victim of a severe animal attack.

<u>Age</u>	<u>No.</u>	<u>%</u>
<6	195	25.3
6-10	171	22.1
11-19	120	15.5
20-59	222	28.8
>59	64	8.3

Table 3. Age of victims of severe animal attacks - 1996

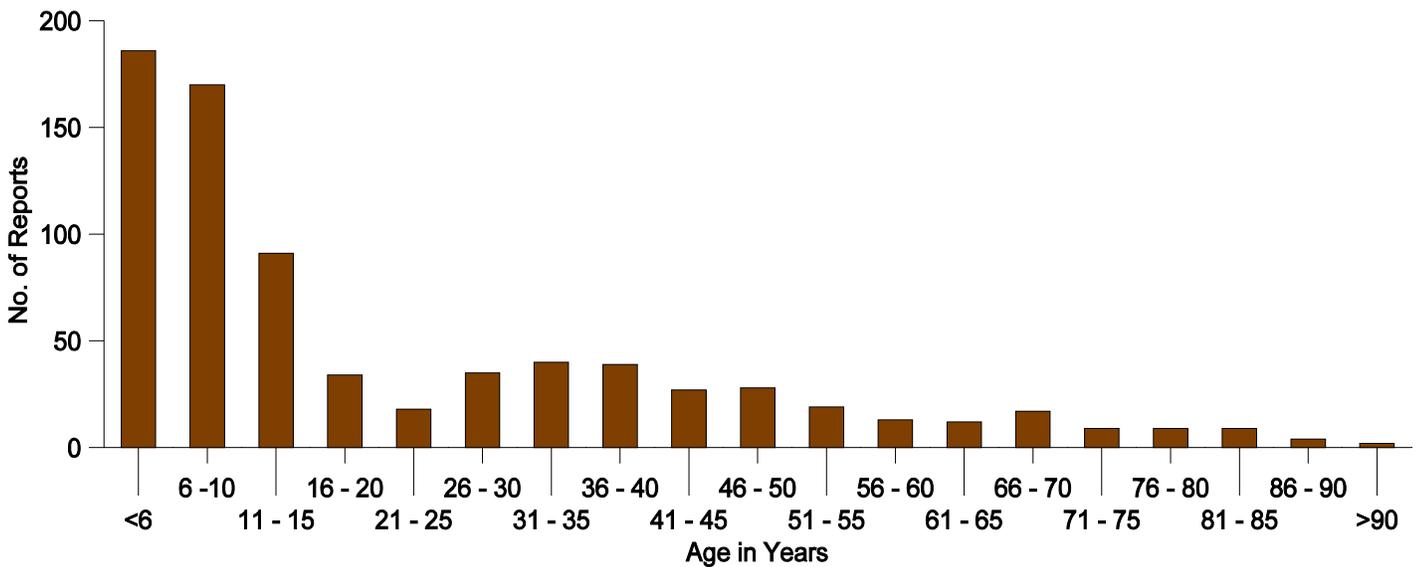


Figure 5. Age of victims of severe animal attacks - 1996

### Anatomic Location of Injury

Many of the attack victims received wounds at multiple anatomic locations. Of the 775 reports that specified the site of injury, the following sites were listed:

- 266 (34.3%) involved the legs
- 215 (27.7%) involved the head
- 165 (21.3%) involved the hands
- 180 (23.2%) involved the arms
- 89 (11.5%) involved the torso
- 27 (3.5%) involved the feet
- 21 (2.7%) involved the neck

When the site of injury is compared to age, the percent experiencing trauma to the head drops significantly as the victim's age (and presumably height) increases (Figure 6). Children less than 11 years of age were victims in 47.4% of the severe attacks, yet sustained 75.6% of the head injuries (Table 4).

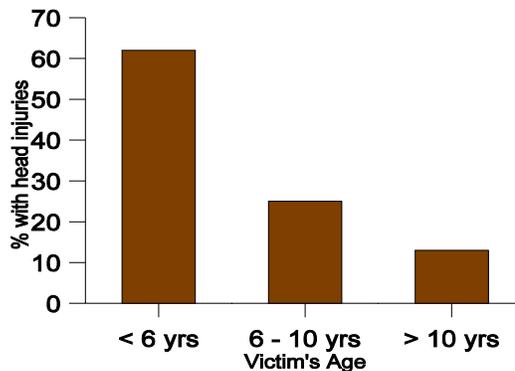


Figure 6. Comparison of victim's age to percent receiving head trauma from a severe animal attack - 1996.

<u>Age</u>	<u>No. with head trauma</u>	<u>% of age group with head trauma</u>	<u>% of all head trauma</u>
<6	119	61.7	55.9
6-10	42	24.7	19.7
>10	52	12.9	24.4

Table 4. Age of severe attack victim receiving head trauma - 1996

### **High Risk Occupation**

Thirty-four reports included victims who were engaged in what would typically be considered a high risk occupation or hobby for animal bites, including:

- postal worker (10)
- animal control officer (6)
- exotic animal owner (3)
- law enforcement officer (3)
- delivery person (2)
- animal shelter employee (1)
- dog groomer (1)
- game ranch owner (1)
- home health nurse (1)
- hunter (1)
- meter reader (1)
- salesman (1)
- veterinarian (1)
- veterinary technician (1)
- veterinary technician student (1)

### **Charges Filed**

Of the 767 reports involving canines (domestic dogs, wolves, and wolf-dog hybrids) and domestic cats, charges were filed against the animal's owner in 55 (7.2%) reports. Twenty reports contained multiple violations. The violations were as follows:

- 25 animal-at-large
- 19 failure to vaccinate against rabies
- 9 dangerous/vicious dog
- 8 failure to license
- 1 failure to quarantine

## **Recommendations**

A review of the surveillance data can help formulate prevention strategies. As with many other public health efforts, education and legislation are two key components in reducing the frequency of animal bites.

### *Education*

- < Educational efforts can originate from humane organizations, animal control agencies, schools, family care practitioners, veterinarians, and parents.
- < Children should be taught to understand basic canine behavior and to avoid circumstances that may evoke an angry response from a dog.
- < Informed dog owners, through their interaction with the pets, can reduce the likelihood of owning an animal that will bite. Lack of socialization, improper training, abuse, and failure to observe early signs of aggression can all contribute to a dog attack.
- < Breeds that have a reputation for being unpredictable or aggressive should be avoided, particularly by families with children.
- < Obstetricians and pediatricians should advise parents that infants and young children should never be left unsupervised around any dog, even the family pet, regardless of how friendly the dog may appear. Extra attention should be lavished on the family dog when a new baby is brought into the home so the pet does not feel “jealous” or that its position is being threatened.
- < Although Texas’ data is insufficient to draw such a conclusion, other studies have shown that dogs that have been spayed or castrated are up to 3 times less likely to be involved in a bite incident. Veterinarians should promote surgical sterilization for the animal’s safety as well as health benefits.

### *Legislation*

- < Although reports indicated that 50% of the biting dogs and cats were currently vaccinated against rabies, citations were issued in only 9% of the cases (despite a Texas law that states that failure to vaccinate dogs and cats annually is a Class C misdemeanor). Increased enforcement of this law and existing local leash laws may provide incentives for dog owners to act responsibly.
- < Where community laws are lacking, local leash and nuisance laws should be enacted and enforced.
- < Local law enforcement agencies should enforce the Texas Dangerous Dog Act (Chapter 822 of the Texas Health and Safety Code), which is designed to minimize human exposure to dogs deemed to be dangerous.
- < Texas residents should be encouraged to report all bites to the Local Rabies Control Authority (as mandated by Chapter 826 of the Texas Health and Safety Code). Reported rates influence public health policies in such matters as leash laws, the impounding of strays, the amount of money allocated for animal control, and rabies vaccination programs for both pets and people.
- < Chapter 828 of the Texas Health and Safety Code requires surgical sterilization of all animals adopted from animal shelters in cities with a population greater than 10,000 and counties with a population greater than 20,000.