



## 1999 Severe Animal Attack and Bite Surveillance Summary

### Introduction

During 1999, a total of 684 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. Reports were submitted from 83 of Texas' 254 counties (Figure 1). A "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. A "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. One severe animal attack resulted in the death of a 10-year-old girl.

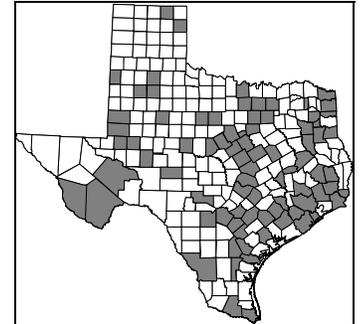


Figure 1. Texas counties from which reports of severe animal attacks or bites were received - 1999

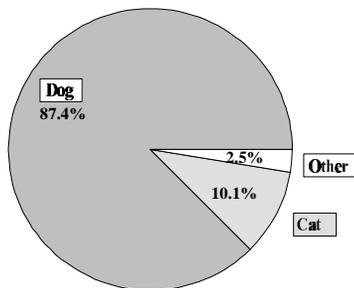


Figure 2. Species involved in severe animal attacks or bites - 1999

### Species

Domestic dogs and cats accounted for 97.5% of all reported serious attacks (Figure 2). The overwhelming majority (598 cases, 87.4%) involved domestic dogs, while domestic cats were involved in 69 cases (10.1%). The other species identified were: raccoon (4 reports, 0.6%); rat (3 reports, 0.4%); squirrel (2 reports, 0.3%); bat, feral hog, ferret, fox, prairie dog, rabbit, wolf, and wolf-dog hybrid (1 report each, 1.2%).

### Canine Breed

The specific breed of canine (domestic dog and wolf-dog hybrids) was listed in 529 reports. Of the 76 breeds and breed crosses reported, 9 breeds and breed crosses constituted 61.6% 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 9 breeds are prone to bite more often than other breeds or if these are merely the more 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.

Breed	Number	%
Chow	68	12.9
Rottweiler	57	10.8
German Shepherd	41	7.8
Pit Bull	39	7.4
Chow Cross	39	7.4
Labrador Retriever	27	5.1
Blue Heeler	19	3.6
Mixed Breed	18	3.4
Labrador Retriever Cross	17	3.2

Table 1. Canine breeds reported in severe animal attacks or bites - 1999

### Animal's Sex

In severe animal attacks or bites involving canines (domestic dogs and wolf-dog hybrids), the animal's sex was specified in 511 reports. Of the 71 female canines whose reproductive status was specified, 15 (21.1%) were spayed and 56 (78.9%) were intact. Of the 261 male canines whose reproductive status was known, 232 (88.9%) were intact and 29 (11.1%) were castrated (Figure 3). Of all dogs reported in severe attacks whose sex and reproductive status were known, intact males were 2.1 times more likely to be involved than females or castrated males.

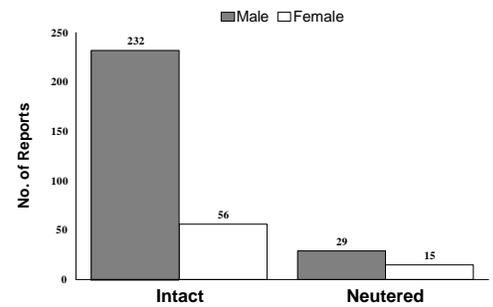


Figure 3. Sex and reproductive status of canines involved in severe animal attacks or bites - 1999

While the exact proportion of sterilized versus intact animals in the overall canine population in Texas is unknown, a study of the reproductive status of almost 25,000 dogs was conducted by the Zoonosis Control Division of the Texas Department of Health in 1997. The sample data were drawn both from veterinary records of dogs which were licensed and from dogs which had been impounded in animal shelters. The study revealed that 2,788 (23%) of male dogs and 3,756 (31%) of female dogs in the sample had been surgically sterilized. When comparing the sex and reproductive status of dogs involved in severe bites with the study population, the following conclusions may be made. Spayed and intact females appear to bite in the same proportion as their prevalence in the overall population. Neutering males appears to reduce the risk of serious attacks or bites by more than 2 times.

### Animal's Behavior

The animal's behavior prior to the attack was listed in 528 reports. The animal was described as docile or friendly in 313 cases (59.3%). In 197 reports (37.3%), the animal displayed warning signals (such as barking, growling, hissing, curling lip, or baring teeth) prior to the attack. Of the 563 reports stating whether multiple animals were involved, 65 (11.5%) incidents involved an attacking animal that was part of a larger group of animals while in 498 (88.5%) incidents, the animal acted alone.

### Rabies Vaccination Status

The animal's rabies vaccination status was specified in approximately three-quarters (444) of reports involving canines (domestic dogs and wolf-dog hybrids) or domestic cats. Of these, 230 (51.8%) had not received a rabies vaccination within the past 12 months, and 214 (48.2%) were currently vaccinated (Figure 4). While over one-half of the dogs with known vaccination status were currently vaccinated, nearly 70% of cats whose vaccination status was known were not currently vaccinated.

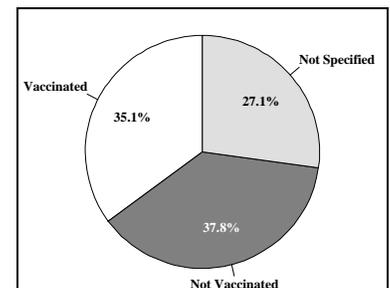


Figure 4. Rabies vaccination status of canines and domestic cats involved in severe animal attacks or bites - 1999

### Animal Involved in Previous Attack

Of the 361 reports in which it was definitely known whether or not the animal was involved in previous severe attacks or bites on people or animals, 276 (76.5%) had not been involved in previous attacks and 85 (23.5%) had been involved in previous attacks. Of the 46 reports that included information on whether the previous attacks were against people or animals, 35 animals had been involved in attacks against people, 10 had been involved in attacks against other animals, and 1 had been involved in attacks against both people and animals.

**Provocation/Special Circumstances**

Circumstances described in 210 reports included situations in which the attack could be 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, hunger/eating, injury, puppies/kittens, and estrus.

**Extent of Injury**

Of the 309 reports in which the extent of injury was specified, 40 (12.9%) attack victims required surgery, 99 (32.0%) required hospitalization, and 170 (55.0%) required sutures.

When reports were reviewed in which the victim was hospitalized and the breed of canine (domestic dog and wolf-dog hybrid) was known, 27 dog breeds or breed crosses were included in 87 reports. Of these, 5 breeds and breed crosses were involved in 39 (44.8%) attacks (Table 2).

Breed	Number	%
Pit Bull	12	13.8
Rottweiler	9	10.3
Chow	8	9.2
German Shepherd	5	5.7
Chow Cross	5	5.7
All Others	48	55.2

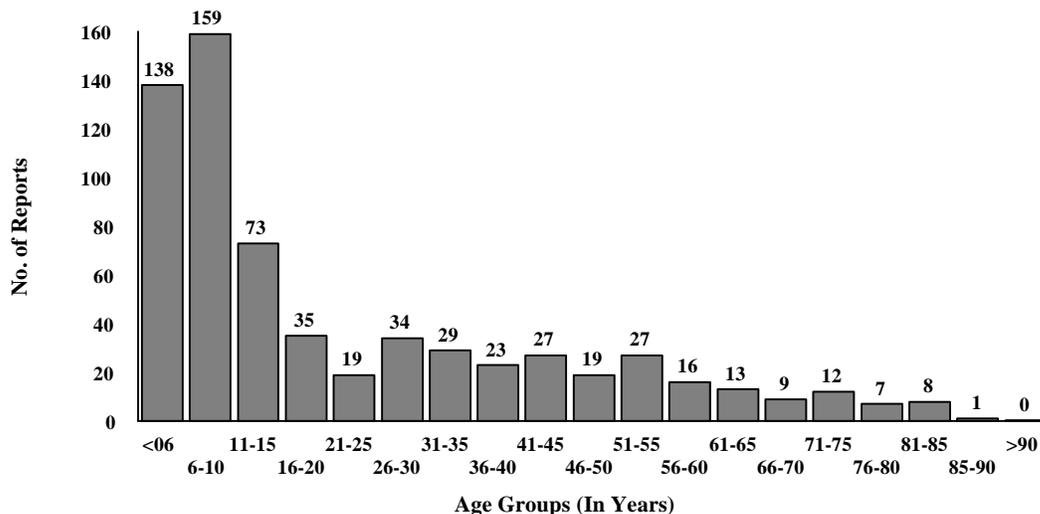
**Table 2. Dog breeds involved in severe attacks or bites in which the victim was hospitalized - 1999**

**Victim’s Sex and Age**

In the 665 records that specified the victim’s sex, 369 victims (55.5%) were males and 296 victims were females (44.5%). These percentages remained relatively constant over the entire age range of the victims. The victim’s age was listed on 649 records; children less than 11 years of age represented 45.8% of these victims (Table 3). The mean age was 22.4 years, the median was 11 years, and the mode was 3 years (Figure 5). When considering the overall population of Texas, children less than 11 years of age were 4.2 times more likely than the remainder of the population to be a victim of a severe animal attack.

Age Group	Number	%
<6	138	21.3
6-10	159	24.5
11-20	108	16.0
21-60	194	29.9
>60	50	8.3

**Table 3. Age of victims of severe animal attacks or bites - 1999**



**Figure 5. Age groups of victims of severe animal attacks or bites - 1999**

## Anatomic Location of Injury

Many of the attack victims received wounds at multiple anatomic locations. Of the 647 reports that specified the site of injury, the following sites were listed:

188 (29.1%) involved the head	50 (7.7%) involved the torso
183 (28.3%) involved the legs	23 (3.6%) involved the feet
163 (25.2%) involved the hands	12 (1.9%) involved the neck
139 (21.5%) involved the arms	

When the site of injury is compared to age, the percent experiencing trauma to the head decreases significantly as the victim's age (and presumably height) increases (Table 4). While children less than 11 years of age were victims in 45.8% of the severe attacks, they sustained nearly three-quarters of all head injuries (Figure 6).

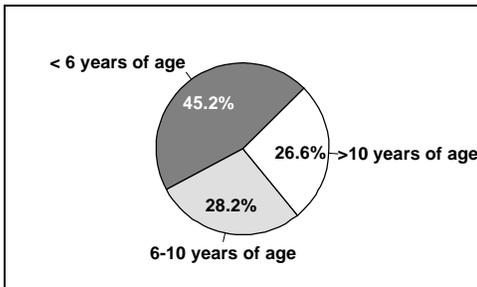


Figure 6. Age of victim receiving head trauma due to a severe animal attack or bite - 1999

Age	Number with head trauma	% of age group with head trauma	% of head trauma, all groups
< 6	85	56.8	45.2
6-10	35	34.0	28.2
> 10	50	14.7	26.6

Table 4. Age of severe attack or bite victim receiving head trauma - 1999

## High Risk Occupation

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

Delivery person	7	Utility worker	3
Animal control personnel	6	Census worker	1
Law enforcement	5	Construction/labor	1
Veterinary/animal care	4	Realtor	1
Home health worker	3		

## Charges Filed

Of the 625 reports involving canines (domestic dogs and wolf-dog hybrids) and domestic cats, charges were filed against the animal's owner in 23 (3.7%) reports. Six reports contained multiple violations. The violations were as follows:

<u>Number of reports</u>	<u>Violation</u>
9	animal-at-large
8	failure to vaccinate against rabies
7	dangerous/vicious dog
4	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*

- ▶ Develop educational efforts through humane organizations, animal control agencies, schools, family care practitioners, veterinarians, and parents.
- ▶ Teach children to understand basic canine behavior and to avoid circumstances that may evoke an angry response from a dog.
- ▶ Inform dog owners that through their interaction with their pets, they 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 all contribute to a dog attack.
- ▶ Avoid breeds that have a reputation for being unpredictable or aggressive particularly if families with children acquire a pet.
- ▶ Educate obstetricians and pediatricians to advise parents to never leave infants and toddlers unsupervised around any dog, even the family pet, regardless of how friendly the dog may appear. Lavish extra attention on the family dog when a new baby is brought into the home so the pet does not feel “jealous” or that its position in the family is being threatened.
- ▶ Promote surgical sterilization for safety reasons as well as the health benefits to the animal and prevention of pet overpopulation.

### *Enforcement*

- ▶ Chapter 826 of the Texas Health and Safety Code mandates that failure to vaccinate dogs and cats annually is a Class C misdemeanor. Although reports indicated that at least 38% of the biting dogs and cats were not currently vaccinated against rabies, citations were issued in only 1% of the cases. Increased enforcement of this law and existing local leash laws to provide incentives for dog owners to act responsibly.
- ▶ Where community laws are lacking, enact local leash and nuisance laws and strictly enforce them.
- ▶ Develop local ordinances to offer incentives (such as decreased licensing fees) for owners whose dogs complete a dog obedience class.
- ▶ Have local law enforcement agencies 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.

- ▶ Encourage reporting of 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, impoundment of strays, 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 either surgical sterilization or a voucher for sterilization of all animals adopted from animal shelters in cities with populations greater than 10,000 and counties with populations greater than 20,000. Make efforts locally to actually sterilize the animal rather than issue the owner a voucher to be used for sterilization because redemption of sterilization vouchers tends to be low.