



## 2002 Severe Animal Attack and Bite Surveillance Summary

### Introduction

During 2002, a total of 546 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 88 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.

Note: Due to rounding, percentages in some tables may not equal 100%.

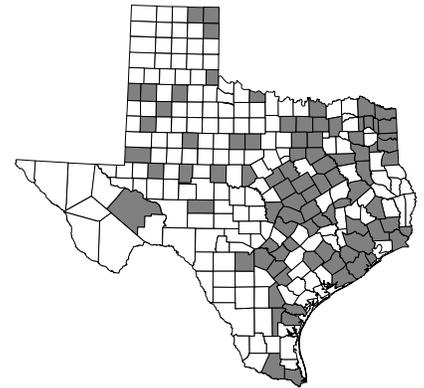


Figure 1. Texas Counties Submitting Reports, 2002

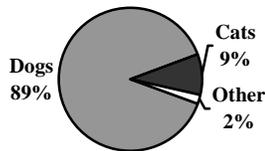


Figure 2. Species distribution, 2002

### Species

Domestic dogs and cats accounted for 98.2% of all reported severe attacks (Figure 2). The overwhelming majority (485 cases, 88.8%) involved domestic dogs, while domestic cats were involved in 51 cases (9.3%). The other species identified were: raccoon (3 reports, 0.5%); fox (2 reports, 0.4%); and javalina, opossum, rabbit, rat, squirrel (1 report each, 0.2%).

### Canine Breed

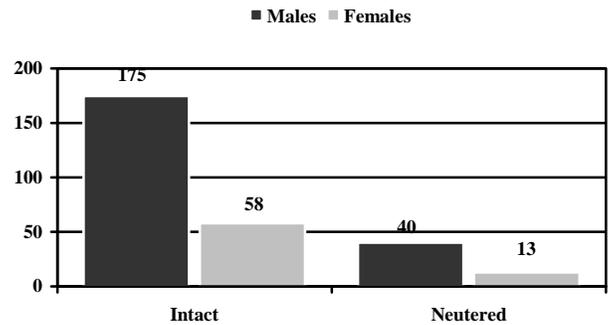
The specific breed of canine (domestic dog and wolf-dog hybrids) was listed in 364 reports. Of the 23 breeds and breed crosses reported, 9 breeds and breed crosses constituted 72% of the reports (Table 1). (Note: the number of animals in various dog breeds in the overall canine population is unknown; 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.

Breed	Number	%
Pit Bull/Pit Bull Cross	72	19.8
Chow/Chow Cross	39	10.7
Rottweiler/Rottweiler Cross	38	10.4
German Shepherd/Shepherd Cross	26	7.1
Labrador Retriever/Lab Cross	25	6.8
Blue Heeler	21	5.8
Dachshund	14	3.9
Chihuahua/Chihuahua Cross	14	3.9
Collie	12	3.3

Table 1. Canine breeds reported in severe animal attacks or bites, 2002

## Animal's Sex

In severe animal attacks or bites involving canines (domestic dogs and wolf-dog hybrids), the animal's sex was specified in 422 reports. The reproductive status of these animals was specified in 286 (67.8%) of these reports. Of the 71 female canines whose reproductive status was specified, 13 (18.3%) were spayed and 58 (81.7%) were intact. Of the 215 male canines whose reproductive status was known, 40 (18.6%) were castrated and 175 (81.4%) were intact (Figure 3). While the exact proportion of sterilized versus intact dogs in the overall canine population in Texas is unknown, a study of the reproductive status of almost 25,000 dogs conducted by the Zoonosis Control Division of the Texas Department of Health in 1997 revealed that 2,788 (23%) of male dogs and 3,756 (31%) of female dogs in the sample had been surgically sterilized. The sample data were drawn both from animal shelter records of dogs which were licensed and from dogs which had been impounded in animal shelters. When comparing the sex and reproductive status of the study population with 1,520 dogs involved in severe bites for the five-year period 1998 - 2002, the following conclusions may be made: spayed and intact females appear to bite at about the same proportion as their prevalence in the overall population; and intact males appear to bite at twice the rate of neutered males.



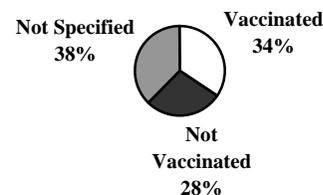
**Figure 3. Sex and reproductive status of canines involved in severe animal attacks or bites, 2002**

## Animal's Behavior

The animal's behavior prior to the attack was listed in 441 reports. The animal was described as docile or friendly in 260 cases (59%). The animal displayed warning signals (such as barking, growling, hissing, curling lip, or baring teeth) in only 167 (37.9%) of all reports. Of the 471 reports stating whether multiple animals were involved, 75 (15.9%) incidents involved an attacking animal that was part of a larger group of animals while 396 (84.1%) incidents involved the animal acting alone.

## Rabies Vaccination Status

The animal's rabies vaccination status was specified in 334 (62.3%) of 536 reports involving canines (domestic dogs and wolf-dog hybrids) or domestic cats. Of all pets involved in attacks/bites in which the vaccination status was known, 150 (44.9%) had not received a rabies vaccination within the past 12 months, and 184 (55.1%) were currently vaccinated (Figure 4).



**Figure 4. Rabies vaccination status of canines and felines involved in severe animal attacks or bites, 2002**

## Animal Involved in Previous Attack

Of the 318 reports in which it was definitely known whether or not the animal was involved in previous severe attacks or bites on people or animals, 247 (77.7%) had not been involved in previous attacks and 71 (22.3%) had been involved in previous attacks. Of the 54 reports that included information on whether the previous attacks were against people or animals, 43 animals had been involved in attacks against people, 9 had been involved in attacks against other animals, and 2 had been involved in attacks against both people and animals.

## Provocation/Special Circumstances

Circumstances described in 159 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, teasing, hunger/eating, dog fight, being startled, estrus, the presence of puppies/kittens, and injury.

## Extent of Injury

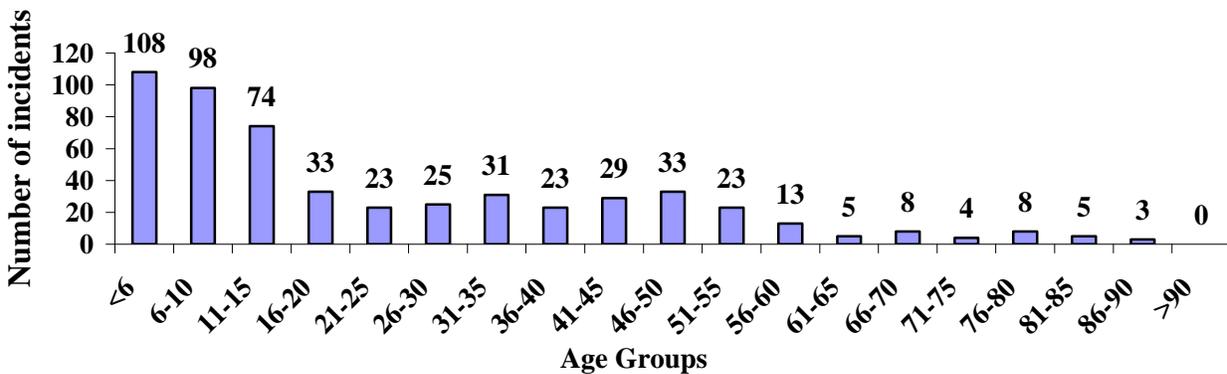
Of the 213 reports in which the extent of injury was specified, 49 (23%) attack victims required surgery, 52 (24.4%) required hospitalization, and 156 (73.2%) required sutures.

## Victim's Sex and Age

In the 544 records that specified the victim's sex, 297 victims (54.6%) were male and 247 victims were female (45.4%). These percentages remained relatively constant over the entire age range of the victims. The victim's age was listed on 546 records; children less than 11 years of age represented 37.7% of these victims (Table 2). The mean age was 23.7 years, the median was 14 years, and the mode was 7 years (Figure 5). When considering the overall population of Texas, children less than 11 years of age were 3.2 times more likely than the remainder of the population to be a victim of a severe animal attack.

Number	Age Group	%
108	<6	19.8
98	6-10	17.9
107	11-20	19.6
200	21-60	36.6
33	>60	6.0

**Table 2. Age of victims of severe animal attacks or bites, 2002**



**Figure 5. Age distribution in severe animal attacks or bites, 2002**

## Anatomic Location of Injury

Many of the attack victims (88 of 546, or 16.1%) received wounds at multiple anatomic locations. Table 3 lists the specific site of the injuries incurred.

Legs	171 (31.8%)	Torso	44 (8.2%)
Hands	139 (25.9%)	Feet	21 (3.9%)
Head	143 (26.6%)	Neck	20 (3.7%)
Arms	111 (20.7%)		

When the site of injury is compared to age, the percentage of victims experiencing trauma to the head decreases significantly as the victim's age (and presumably height) increases. While children less than 11 years of age were victims in 38% of the severe attacks where the site of the bite was specified, they sustained 70% of all head injuries.

**Table 3. Site of injuries incurred for all severe animal attacks or bites, 2002**

## High Risk Occupation

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

Law enforcement/Animal control	13	Utility worker	6
Postal employee	6	Veterinary worker	1
Other delivery person	4		

## Charges Filed

Of the 485 reports involving canines (domestic dogs and wolf-dog hybrids) and domestic cats, charges were filed against the animal's owner in only 35 (6.5%) reports. Seven reports contained multiple violations. The violations were as follows:

<u>Number of reports</u>	<u>Violation</u>
21	animal-at-large
21	failure to vaccinate against rabies
6	dangerous/vicious dog
6	failure to license/register

**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 and coordinate 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 their interaction with 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 all contribute to a dog attack.

Educate prospective owners to avoid breeds that have a reputation for being unpredictable or aggressive, particularly those with children.

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. Extra attention should be lavished on the family dog when a new baby is brought into the home so that the pet does not feel “jealous” or that its position in the family is being threatened.

Promote surgical sterilization for safety reasons, for health benefits to the animal, and for curtailment of pet overpopulation.

*Legislation and Enforcement*

Chapter 826 of the Texas Health and Safety Code states that failure to vaccinate dogs and cats annually is a Class C misdemeanor. Although the 2002 severe bite report forms indicated that only 34% of the biting dogs and cats were currently vaccinated against rabies, citations were issued in less than 3% of the cases. Increased enforcement of this law and existing local leash laws would provide incentives for dog and cat owners to act responsibly.

Enact local leash and nuisance laws and strictly enforce them in areas where community laws are lacking.

Develop local ordinances to offer incentives (such as decreased licensing fees) for owners whose dogs complete a dog obedience class.

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.