



# DOG BITES IN COLORADO

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REPORT OF DOG BITE INCIDENTS REPORTED TO ANIMAL CONTROL  
JULY 2007 – JUNE 2008

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SPONSORED BY COALITION FOR LIVING SAFELY WITH DOGS

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## INTRODUCTION

Corona Research is pleased to present this report to the Coalition for Living Safely with Dogs. Corona Research was retained by the Animal Assistance Foundation, on behalf of the Coalition for Living Safely with Dogs, to analyze data on dog bite incidents reported to animal control agencies in Colorado.

### OVERVIEW OF BITE DATA COLLECTION METHODOLOGY

In 2007, The Coalition for Living Safely with Dogs launched an effort to collect data on dog bites across the state of Colorado. The Coalition asked animal control organizations across the state to complete a brief questionnaire for each dog bite that they responded to between July 1, 2007 and June 30, 2008. Organizations were required to commit to entering all data for this entire period if they were going to enter any data at all. The questionnaire was available online, hosted by SurveyMonkey.com, and required a password, so that only animal control organizations could enter data into the system. The questionnaire consisted of 20 questions and is provided as an appendix to this report.

### SCOPE OF DATA

The final survey data was downloaded from SurveyMonkey.com on January 13, 2009. A total of 2,140 entries were downloaded. The database was cleaned to remove 71 entries that were exact duplicates of other entries, and 9 entries that were associated with an agency that did not enter data for the entire data collection period. The resultant database contains 2,060 entries from 17 animal control agencies.

### MARGINS OF ERROR & INTERPRETATION OF RESULTS

The margin of error for a survey estimates the degree of uncertainty in any particular result assuming the survey population is a simple random sample of a particular proportion of the total population. The present survey data is not gathered as a simple random sample of bite incidents, and so there is no straightforward way to estimate the amount of error in the estimates included in this report. However, because the data is a total population sample for the 17 agencies that provided data, there is no margin of error due to sampling for those organizations. There is only error attributable to missing data (information that was unknown or unreported), clerical error in data entry, or any other errors made while taking the report.

If the 17 agencies providing data were a random sample of all of the state's animal control agencies, an approximate margin of error for interpreting the survey findings as percentages of all bites *reported to animal control agencies in Colorado* could be estimated. However, it is clear that the reporting agencies are not a random sample, but include many of the state's large municipal agencies, and relatively few of the state's many smaller agencies and agencies responsible for large areas with low population density. Therefore, with respect to the state as a whole, the present data are biased toward dogs living in urban households. There may be any number of differences between dogs in urban areas and dogs in rural areas (e.g., differences in socialization and training, differences in the frequency and nature of human-animal interactions, etc.), so how bites reported to the 17 agencies currently

providing data will be different from bites reported to the many agencies that are not currently reporting data cannot be precisely estimated. If the 17 agencies reporting were a random sample of all agencies, the margin of error for interpreting findings for all reported bites would be  $\pm 1.5$  percent, however, the actual margin of error is likely to be much larger.

The survey findings cannot be interpreted as percentages of all bites that occur in Colorado. There are a variety of reasons to expect that the bites reported to animal control are not a random sample of all bites, but rather are biased toward more severe bites, bites from larger dogs, and bites where the person bitten is not the dog's owner.

## BACKGROUND RESEARCH USED IN ESTIMATES

1. Sacks, J. J., Kresnow, M.-J., & Houston, B. (1996). Dog bites: how big a problem? *Injury Prevention*, 2, 52-54.

Sacks, Kresnow, and Houston report data collected from a 1994 national, public, random digit dial (RDD) telephone survey, which found the national incidence of dog bites to be 18/1000 (that is, 18 of every 1,000 people are bitten in any given year). Only 3/1000 bites necessitated medical attention. Children were more likely to be bitten than adults, and adult males were more likely to be bitten than adult females. No differences in bite rates were seen between different census regions, urbanicity, race/ethnic groups, or household income groups, for children or adults. This estimate of the national incidence of dog bites is used in Section 1 of this report to calculate one estimate of the statewide incidence of dog bites in Colorado.

2. Chang, Y-F., McMahon, J. E., Hennon, D. L., LaPorte, R. E., & Coben, J. H. (1997). Dog bite incidence in the city of Pittsburgh: A capture-recapture approach. *American Journal of Public Health*, 87, 1703-1705.

Chang, *et al.* report data collected from a 1993 study in Pittsburgh, PA, which estimated the annual incidence of dog bites in Pittsburgh to be 5.89/1000. Further, they estimate that 36.3% of bites were reported (6.2% of all bites were reported to animal control, 16.4% were reported to the hospital, and 16.0% were reported to the police or directly to the health department). The study used a log-linear modeling method with capture-recapture data to estimate the annual incidence of bites using the number of incidents reported to each of three sources and the overlap (or lack thereof) between lists to estimate the probability of bites missing from all lists. Their estimate of the percentage of bites reported to animal control in Pittsburgh is used in Section 1 of this report to calculate one estimate of the statewide incidence of dog bites in Colorado.

3. American Veterinary Medical Association (2007). *U.S. Pet Ownership and Demographics Sourcebook*. Membership & Field Services, AVMA: Schaumburg, Illinois.

AVMA conducted a mail survey of a representative sample of U.S. households regarding a variety of issues related to household pets. They provide the percentage of households with dogs for communities of varying sizes, and the average number of dogs per household with dogs, for Colorado. As a whole, 43 percent of Colorado households have dogs, with an average of 1.7 dogs per household. (They estimate the Colorado dog population at 1,413,000 dogs.) These estimates of the dog population in Colorado are used in Section 1 of this report to estimate the percentage of dogs reported to animal control for a bite incident.

4. Colorado Department of Local Affairs, State Demography Office. (2007). Population Estimates. Table 5. Population for Colorado Counties and Municipalities.

DOLA provides a yearly estimate of the population in each county, apportioned by the portion of each municipality located within the county as well as the unincorporated area in each county. These population estimates were used to calculate the human population in each animal control jurisdiction, and were combined with the AVMA dog population percentages to estimate the dog population in each animal control jurisdiction.

5. U.S. Dept. of Commerce, Bureau of the Census. (2007). American Community Survey (ACS): Public Use Microdata Sample (PUMS): 1-Percent Sample. Retrieved from Data Ferrett.

The ACS/PUMS data is a 1-year, 1% sample of the U.S. Population. PUMS data is the raw data collected by the U. S. Census, and can be downloaded so that the user can group data as desired for analysis. The PUMS data was downloaded for age in Colorado in order to apportion the Colorado population into the same age group bins that were provided in the survey instrument, so that bite victims could be accurately compared to the Colorado population.

6. The American Kennel Club (AKC). (2007). Total AKC registrations for each breed in Colorado.

AKC provided counts of the number of dogs of each breed in Colorado that were registered with AKC in 2007. These tallies included only dogs that registered during 2007. Dogs still living that registered in years prior to 2007 are not included. A total of 13,886 dogs were registered during 2007; AKC estimates that with an average life span of 10 years, at any given time there are roughly 138,000 registered AKC dogs living in Colorado. Unfortunately there are no existing estimates of the percentage of purebred dogs that are registered, nor are there estimates of any bias in registration, such that dogs of some breeds are more likely to be registered than dogs of other breeds. This report recognizes more dog breeds than just the AKC registered breeds.

## REPORTING NOTES

1. For many of the survey questions, entries left blank are grouped with entries of “unknown” and included in the graph. This is done for two reasons. First, it ensures that all graphs which include the unknowns have a common baseline and are based on the same number of responses. Second, in many cases it is possible, if not probable, that the actual values of the unknowns are not the same as the values of the knowns. For example, there are a number of incidents where it is “unknown” whether the dog had a current rabies vaccination. If the majority of the unknown dogs are in fact not current on their rabies vaccination, it would be misleading to only present the numbers for the dogs where it is known because it would overestimate the proportion of dogs who are vaccinated.
2. The number of incidents depicted in each graph is 2,060 unless otherwise noted.
3. Percentage values in text and graph labels are rounded to the nearest whole number, but graphs show the exact value for the survey sample. For this reason, occasionally two bars with the same label will have slightly different lengths, and percentages may not sum to exactly 100.
4. Survey questions for year 2 have since been reworded in an effort to capture the appropriate data and to alleviate confusion in answering the questions.

## KEY FINDINGS

While many conclusions and implications can be drawn from the survey, several stand out as being of particular interest. The corresponding exhibit number from the report follows each finding.

### *The Big Picture*

1. **Most dogs do not bite.** More than 1.4 million dogs live in Colorado, and over 700,000 live in the reporting area for this study, but fewer than one third of one percent of dogs (fewer than one in 350) in the reporting area were reported to animal control for biting a human. *Exhibits 1-1 and 1-2*
2. **Many different types of dogs were involved in reported dog bite incidents.** Bites from 129 different breeds of dog were reported to the 17 participating animal control organizations during the one year period of the study. *Exhibit 3-1*
3. **Any dog can bite given the right circumstances.** *Exhibits 2-1 through 2-5*

### *When and Why Bites Occur*

4. **Running at large was the single most common bite circumstance and is preventable.** Animal control officers recorded a circumstance for each bite as one of 17 circumstances provided in the survey (including running at large, provoked, etc.), “Other” or “Unknown”. Eighteen percent of bites occurred when a dog was running at large. For some breeds, including Pit Bulls, German Shepherds, and Boxers, one-quarter or more of bites occurred when a dog was running at large. *Exhibit 2-2*
5. **Many bites were not a result of aggression toward humans, but occurred when a human intervened in fighting or play between dogs.** The second most common bite circumstance was dog-to-dog aggression. Overall, 12 percent of bites occurred as a result of dog-to-dog aggression, and among some breeds this percentage was even higher. An additional six percent were “play bites”. *Exhibit 2-2*
6. **At home, bites were most likely to occur when a dog was protecting property, food, or toys.** Approximately half of all bites occurred at home, in a variety of circumstances. Aggression while protecting property, food, or toys accounted for a total of 27 percent of bites that occurred at home. An additional 10 percent of bites at home occurred as a result of dog-to-dog aggression. *Exhibits 2-1 and 2-3*
7. **Bites to a family member at home most often occurred when a dog was protecting its food or toys.** Fifteen percent of all bites that occurred at home to a relative of the dog’s owner (presumably, members of the dog’s household, as opposed to non-relatives of the dog’s

owner, who are presumably visitors to the home) occurred when the dog showed possessive aggression over food or toys (and constituted 6 percent of all bites that occurred in the home overall). *Exhibits 2-4 and 2-5*

### *Findings by Breed*

8. **Whether any breed is more or less likely to bite than any other breed depends on knowing how popular each breed is numerically, and at this time, that information is unavailable for Colorado.** There are more bites from some breeds than others in the dataset, however, there are more dogs of some breeds than others in Colorado, and to draw conclusions about breeds we need to know whether bites are proportional or disproportional to their population. At this time, there is no dog census for Colorado. The American Kennel Club reports the most popular *registered* breeds in Colorado, however that popularity measure does not include the many purebred dogs that are not registered, the breeds that are not recognized by AKC (including pit bulls), nor the many dogs of mixed breed. *Exhibit 3-3*
9. **Common bite circumstances differed slightly between breeds.** For all breeds, running at large, aggression while protecting property, and dog-to-dog aggression were the most common bite circumstances. German Shepherds and Boxers were slightly more likely than the average breed to bite while protecting property, while Chow Chows were slightly less likely to bite while protecting property. Siberian Huskies, Pit Bulls, and Golden Retrievers were slightly more likely than the average breed to bite during dog-to-dog aggression, while Chihuahuas were somewhat less likely to bite during dog-to-dog aggression. *Exhibit 3-7*

### *Other Dog Characteristics*

10. **Male dogs bit twice as often as female dogs and caused more serious injuries.** Male dogs were responsible for 60 percent of bites, while females were only responsible for 30 percent of bites (for 10 percent of bites, the dog's sex was unknown). There were equal proportions of bites reported from spayed/neutered or from intact dogs, however no population data is available to determine whether proclivity to bite is equal for spayed/neutered and unspayed/unneutered dogs. Bites from male dogs were also more likely than bites from females to result in a level 3 or 4 injury, while bites from females were more likely to result in a level 1 or 2 injury. *Exhibits 4-1 and 4-5*
11. **Male dogs were more likely to bite while protecting property, food, or toys; Female dogs were more likely to bite during dog-to-dog aggression.** Both male and female dogs were most likely to bite while running at large, however, males were more likely than females to bite while protecting property (12 percent of male bites vs. 8 percent of female bites), and females were more likely than males to bite during dog-to-dog aggression (16 percent of female bites vs. 10 percent of male bites). *Exhibit 4-6*
12. **Adolescent dogs between 1 and 4 years of age were responsible for the most bites.** Among incidents where the age of the dog was known, 53 percent of bites came from dogs between 1 and 4 years of age. The most common bite circumstances for adolescent dogs were running at large, protecting property, and fear-based aggression; for adult dogs (5 years and older) the most common bite circumstances

were protecting property, running at large, and dog-to-dog aggression. For puppies, the most common bite circumstances were play bites, running at large, and dog-to-dog aggression. *Exhibits 4-2 and 4-8*

### *Victim Characteristics (Including When Children Are Bitten)*

13. **Children (14 and under) were bitten disproportionately to their population; 9 and 10 year old boys were the most common victims among those under age 14.** Forty percent of bite victims were children aged 14 or younger, while only 20 percent of Coloradans are aged 14 or younger. So, children are bitten about twice as often as would be expected given their proportion of the population. *Exhibit 5-2*
14. **Males under age 15 were more likely to be bitten than females under age 15; no differences were found between adult males and females.** No difference was found between the percentage of adult males and females bitten, but among those under age 15, 57 percent of bite victims were male and 43 percent were female, which is a statistically significant difference from 50/50. *Exhibit 5-3*
15. **The most frequent bites were of minor severity.** The most commonly reported injuries were one or more punctures. As the level of injury increased, the frequency decreased, so severe injuries were much less common than minor injuries. *Exhibit 5-3*
16. **On average, reported bites to children were less severe than bites to adults.** Half of bites to children were a level one (bruising) or two (one puncture) injury, compared with 45 percent of bites to adults. *Exhibit 5-5*
17. **Aside from being bitten by a dog running at large, children were most often bitten when playing with a dog, left unsupervised with a dog, provoking a dog, or when a dog was startled.** Eighty-seven breeds of dog were reported to bite children during the one year period of the study. *Exhibits 3-6 and 5-6*
18. **A greater proportion of children's bites came from puppies, and many came from small breed dogs.** Thirteen percent of bites to children were from a dog under one year of age. In comparison, only seven percent of bites to adults were from a dog under one year of age. Puppies were equally likely to bite a child or an adult, whereas older dogs were more likely to bite adults than children. *Exhibits 5-6 and 5-7*

### *Implications for Future Data Collection*

19. **More complete reporting of incidents is needed.** Not all animal control agencies include the same information in their case reports, and some of the information in the survey is more resource-intensive to track down, including prior history of contact for dogs and owners involved in incidents. Ultimately, complete and accurate reporting is the key to understanding dog bites and developing strategies to reduce them. *Exhibits 6-1 through 6-3*

**20. Participation from more agencies is needed.** Having the participation of many of the state's largest agencies was critical to initiating a statewide data collection effort for dog bite incidents. The 17 reporting agencies covered incidents for half the population of Colorado. For future years, increasing the number of participating agencies, particularly among smaller agencies will be critical to understanding how incidents differ in different regions of the state. Each animal control agency faces different circumstances. Ultimately, involving all of the state's animal control agencies in the reporting effort will be the best way to evaluate the state of dog bites in Colorado. *Exhibit 7-1*

## SECTION 1: ESTIMATED YEARLY NUMBER OF BITES IN COLORADO

In this section, we calculate an estimate of the number of dog bites occurring yearly in Colorado. First, we determined the number of people and the number of dogs living in each animal control jurisdiction in the state of Colorado. In all, Colorado has 134 animal control agencies (not including a number of sheriff's departments that provide animal control services in rural counties). Seventeen of those jurisdictions provided us with information about all dog bites reported to them in the year from July 1, 2007 to June 30, 2008. The 17 reporting organizations represent 52 percent of the state's population of people and approximately 51 percent of the state's population of dogs. Slightly less of the state's dog population is represented than the human population because more large than small municipalities provided data, and we calculated the dog population for each municipality separately using the 2007 AVMA *U.S. Pet Ownership and Demographics Sourcebook*, which reports that people in large municipalities are less likely to own dogs than are people in small municipalities. (Estimates for each community size are provided in the table notes below Exhibit 1-1.)

**Exhibit 1-1**

	State of Colorado	Reporting Bite Data	% Reporting
Number of Animal Control Organizations	134	17	13%
Human Population 2007 (DOLA)	4,919,884	2,580,016	52%
Dog Population 2007	1,413,000	726,152	51%

**Table Notes:**

\* Human Population data is from the Colorado Department of Local Affairs, State Demography Office, 2007 Population Estimates.

\* Dog Population data is calculated from the 2007 AVMA *U.S. Pet Ownership and Demographics Sourcebook* using the percentage of households with dogs for communities of varying sizes, and the average number of dogs per household with dogs, for Colorado. Specifically, they report that in communities with 2 million or more people, 33.3 percent of households have dogs; in communities of 500,000 to 1,999,999 people, 39.7 percent of households have dogs; in communities with 100,000 to 499,999 people, 44.0 percent of households have dogs; and in communities with fewer than 100,000 people, 49.8 percent of households have dogs. In Colorado, households with dogs have an average of 1.7 dogs per household. They estimate the total CO dog population at 1,413,000 dogs.

Next we calculated the percentage of dogs involved in an incident, by dividing the number of bites reported in each jurisdiction by the number of dogs in that jurisdiction. Overall, less than one in every 350 dogs was reported to animal control for biting a human (0.28 percent). This calculation is provided in the table below.

**Exhibit 1-2**

	<b>Estimated Dog Population in Reporting Jurisdictions</b>	<b>Number of Bites Reported</b>	<b>% of Dogs Reported for Biting (Bites/Dogs)</b>
<b>OVERALL</b>	<b>726,152</b>	<b>2,060</b>	<b>0.28%</b>

Next we estimated the total number of bites reported to animal control organizations in Colorado. First, we subtract the estimated number of dogs living in the animal control jurisdictions that provided us with data from the total population of dogs in Colorado provided by AVMA (see Exhibit 1-1, above). This produced an estimate of 686,848 dogs living in animal control jurisdictions that did not provide us with data. It is unknown whether dog bites occur or are reported at the same rate in the non-reporting as in the reporting jurisdictions. At the present time, we have very few of the state’s smallest animal control jurisdictions providing data, and it could be that in smaller jurisdictions bites are reported at a different rate (or occur at a different rate). Among the current reporting agencies there is no obvious pattern in the proportion of dogs biting in communities of different sizes (aside from an increase in variance among smaller communities), so we could apply the overall rate of 0.28 percent (of dogs biting a person in a given year) for all non-reporting jurisdictions. However, because there may be differences across jurisdictions that are not currently apparent because of our small sample of small jurisdictions, we can estimate a range of possible values for the unreported bites by applying the rates found for agencies at the 20<sup>th</sup> and 80<sup>th</sup> percentile among the 17 agencies currently reporting. (The 20<sup>th</sup> and 80<sup>th</sup> percentile are used to avoid extreme values that are unlikely to reflect the rate found across all unreported jurisdictions.) Using the 20<sup>th</sup> percentile rate of 0.13 percent, we estimate a minimum of 893 additional bites are reported to animal control jurisdictions yearly ( $686,848 \times 0.0013 = 893$ ). Using the 80<sup>th</sup> percentile rate of 0.34 percent, we estimate a maximum of 2,335 additional bites are reported to animal control jurisdictions yearly. Combined with the 2,060 known reported bites, we can estimate that the actual number of bites reported to animal control organizations in Colorado during the one year period of the study was very likely between 3,000 and 4,400 bites.

**Exhibit 1-3**

<b>Estimated Total Number of Bites Reported to Animal Control in Colorado During the One Year Period of the Study</b>	<b>Approx. 3,000 to 4,400</b>
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Not all bites are reported to animal control organizations. We found several studies that provide information to help estimate the total number of bites – reported and unreported – that are likely to have occurred in Colorado in the past year. A paper published in 1996 reported that in the U.S., 18

of every 1,000 people are bitten by a dog in any given year (Sacks, Kresnow, & Houston, 1996). This estimate was gathered from a nationwide telephone survey asking people whether they, or anyone in their household, had been bitten by a dog in the previous year. If, in Colorado, the same relationship holds, and 18 of every 1,000 people are bitten in a given year, then in 2007, with a human population of 4,919,884 we would estimate that approximately 88,558 people were bitten by dogs. Then, using the estimated total number of bites reported to animal control in Colorado: 3,000 to 4,400 we would estimate that 3.4 to 5.0 percent of all bites in Colorado were reported to animal control ( $3,000/88,558 = 3.4\%$ ).

To compute a second estimate, we started with a paper published in 1997 that found that 6.2 percent of all dog bites in Pittsburgh, PA were reported to animal control (Chang, et al., 1997). If the state of Colorado were to show the same relationship as Pittsburgh, PA, and the number of reported bites was between 3,000 and 4,400, and constituted 6.2% of all bites that occurred, then we would estimate that in total, between 48,000 to 71,000 people were bitten by dogs in Colorado in 2007.

**Exhibit 1-4**

	<b>Percentage Reported to Animal Control</b>	<b>Estimated Total Number of Bites</b>
<b>Estimate 1:</b> If 18/1,000 Coloradoans were bitten last year Based on Sacks, Kresnow, & Houston (1996)	3.4% to 5.0%	Approx. 89,000
<b>Estimate 2:</b> If 6.2% of bites were reported to Animal Control in Colorado Based on Chang, et al. (1997)	6.2%	Approx. 48,000 to 71,000
<b>Average of Estimates 1 &amp; 2</b>	<b>5.2%</b>	<b>Approx. 74,000</b>

By averaging these two calculations, we would estimate that approximately 74,000 bites occurred in Colorado in 2007, and approximately 5.2% of those bites were reported to animal control. This is not a precise estimate, however. We have no way of knowing at this time whether Colorado looks more like Pittsburgh, or more like the US as a whole, or whether Colorado looks different than both of those populations. Only a statewide survey of Colorado residents could determine with a specified margin of error what percentage of people are bitten in a given year.

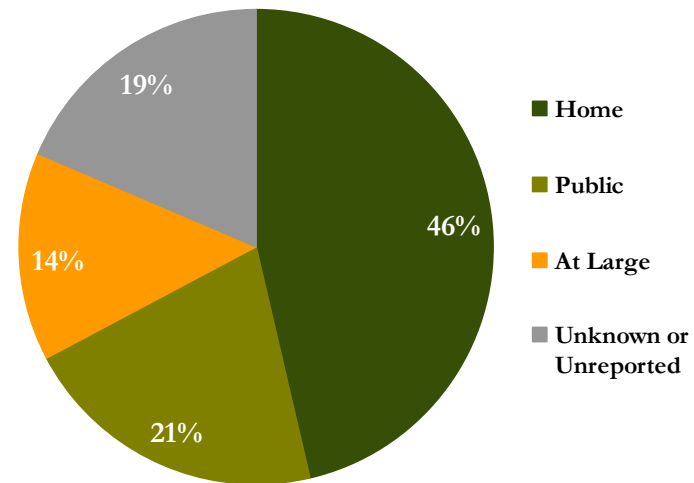
## SECTION 2: WHERE AND WHY BITES OCCUR

This section of the report provides information about where bites took place (home/public/at large), the circumstances under which bites occurred, and how bite location and circumstances differed depending on whether the victim was a stranger to the dog.

**BITES WERE MOST LIKELY TO OCCUR AT THE DOG'S HOME**

In about half of cases, the bite was reported to occur at the dog's home. Twenty-one percent of bites occurred in a public area; fourteen percent of bites occurred when the dog was running at large. In an additional fifth of cases (19 percent) the bite location was unknown or unreported.

**Exhibit 2-1  
Location of Bite Incident**

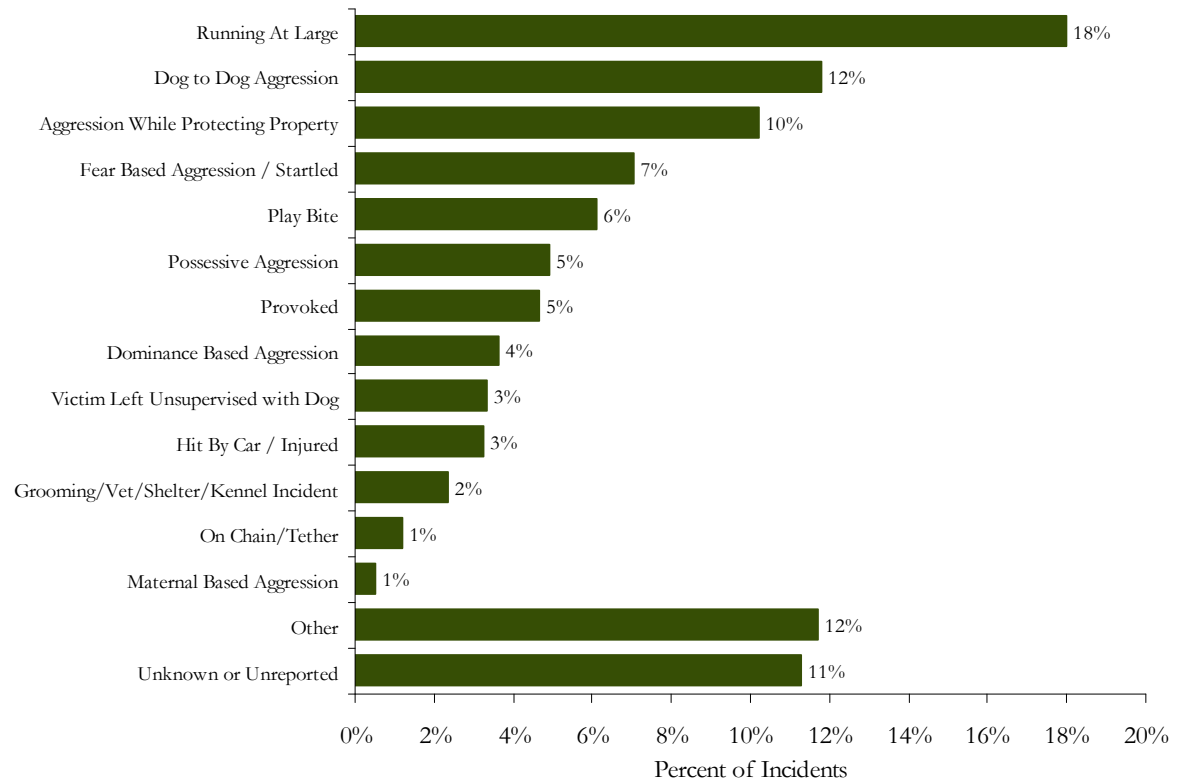


**RUNNING AT LARGE AND  
DOG-TO-DOG AGGRESSION  
WERE MOST COMMON BITE  
CIRCUMSTANCES**

Twenty percent of bites occurred while the dog was running at large. In an additional 12 percent of cases a person was bitten while intervening in dog-to-dog aggression.

Nearly half of all bite cases were attributed to one of four causes: running at large, dog-to-dog aggression, aggression while protecting property, and fear based aggression.

**Exhibit 2-2  
Bite Circumstance**



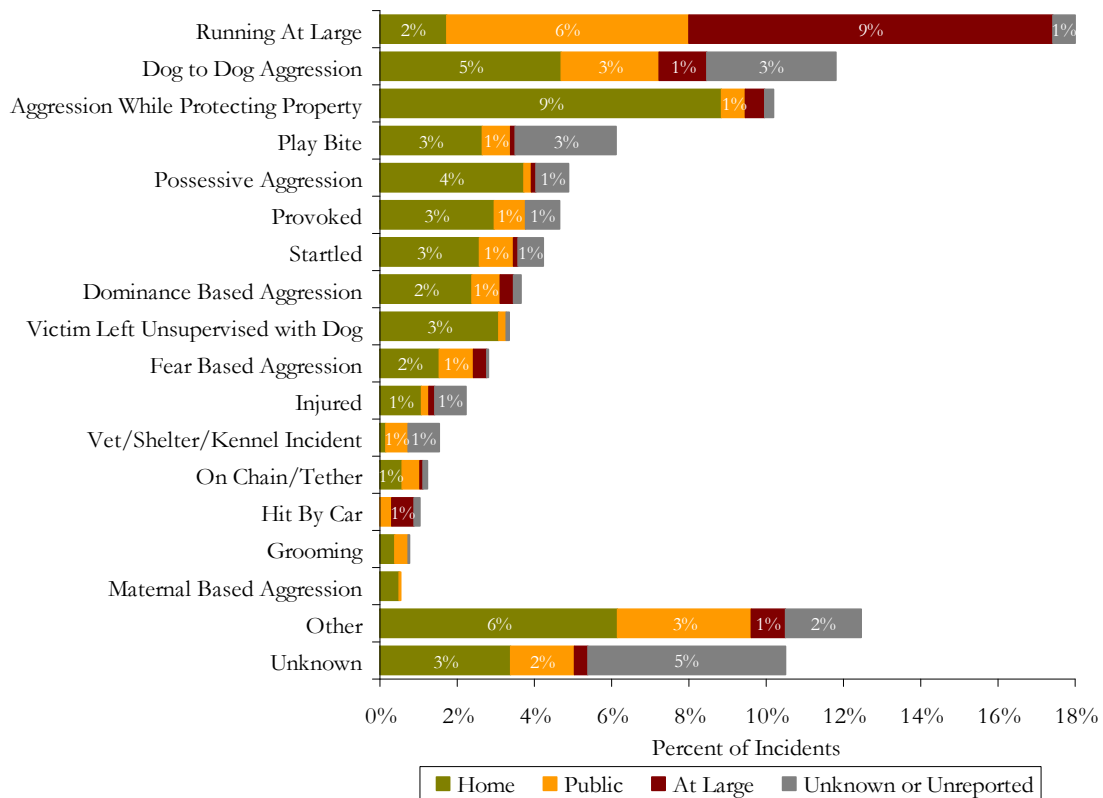
\*Possessive aggression includes both protecting food and toys. Aggression while protecting property refers to protecting territory, such as the house or yard.

**AT HOME, BITES WERE MOST LIKELY TO OCCUR WHEN DOGS WERE PROTECTING PROPERTY, FOOD, OR TOYS**

Other than running at large, most bite circumstances were more likely to occur at home than in public or at large. In particular, aggression while protecting property and possessive aggression occurred almost exclusively at the dog’s home.

Dog-to-dog aggression was another frequent cause of bites that occurred at home, and also the most frequent cause of bites that occurred in public and at large.

**Exhibit 2-3  
Bite Circumstance by Location**



\*Values of less than one percent are not labeled on graph for clarity in reading.

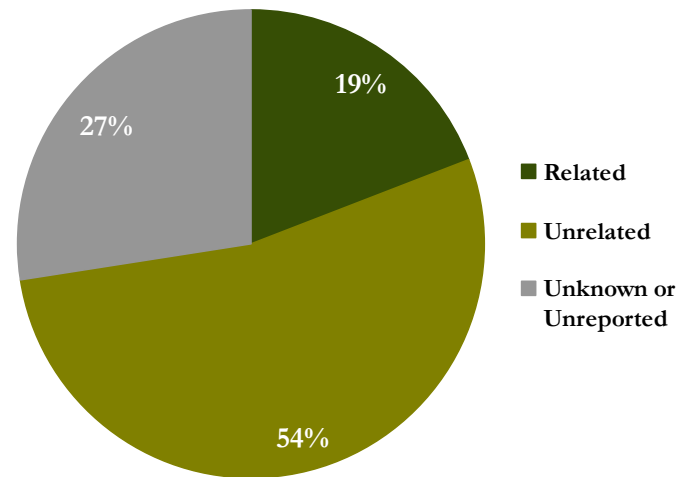
**A MAJORITY OF BITE VICTIMS WERE NOT RELATED TO THE DOG'S OWNER**

In over half of reported incidents, the dog owner was not related to the victim. In 19 percent of incidents the victim was related to the dog owner. For 27 percent of incidents reported, the relationship of the dog owner to the victim was unknown or not reported.

This question may underestimate the frequency with which dogs bite members of their household. The phrasing does not make clear how to respond if the victim IS the dog owner, or if the victim lives in the household with the dog but is not related to the owner. As a result this question has been changed for year two reporting.

**Exhibit 2-4  
Relationship of Dog Owner to Victim**

*(Are the dog owner and victim related?)*

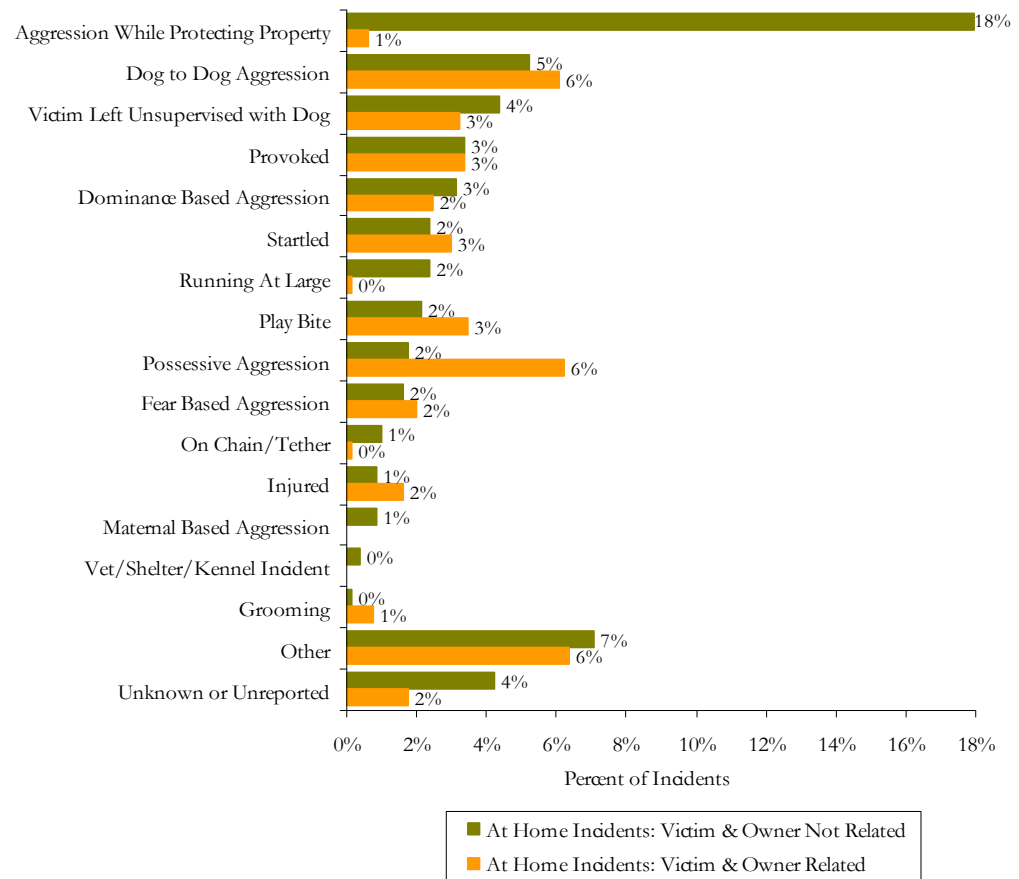


**AT HOME, FAMILY MEMBERS WERE MOST OFTEN BITTEN WHEN A DOG WAS PROTECTING FOOD OR TOYS**

When a relative of the owner was bitten at home, the most common circumstances were possessive aggression (over food or toys), and dog-to-dog aggression.

The most common circumstance when a dog at home bit a person unrelated to the owner, was when the dog was protecting property. This accounted for 31 percent of all bites to a non-relative that occurred at home (and 18 percent of home bites overall).

**Exhibit 2-5  
At Home Bite Circumstances for Victims Related and Unrelated to Dog's Owner**



\*n=803 (incidents occurring at home where the victim and owner are known to be either related or unrelated; unknown/unreported relationships are not included).

### SECTION 3: BITES BY BREED OF DOG

This section of the report provides information about the breeds of dogs involved in reported bite incidents. However, drawing conclusions about particular dog breeds based on the percentages of reported bites caused by dogs of those breeds is difficult, if not impossible, at this time for several reasons:

1. **Breed Size (Large Breed/Small Breed).** It is very likely that bites from large breed dogs are more likely to be reported to animal control than bites from small breed dogs. Because of this, the percentages of bites from large breeds will be overestimated, and the percentages of bites from small breeds will be underestimated.
2. **Popularity of Breed.** Whether any breed is more or less likely to bite than any other breed depends on knowing how popular each breed is numerically, and at this time, that information is unavailable for Colorado. There are more bites from some breeds than others in the dataset, however, there are more dogs of some breeds than others in Colorado, and to draw conclusions about breeds we need to know whether bites are proportional or disproportional to their population. At this time, there is no dog census for Colorado.

### ANY BREED CAN BITE

Bites were reported from 129 of the 188 different breeds of dog offered in the survey during the one-year period of the study. The table provides a list of breeds given as the “primary breed” for dogs reported for a bite.

Some of the dogs identified with each primary breed are of mixed breed, and some are purebred. The percentage of mixed breed and purebred dogs is given in Exhibit 3-2 on the following page.

In addition, 2 percent of reported bites were identified as a dog of mixed breed where the primary breed was unknown.

**Exhibit 3-1  
Breeds Involved in Bite Incidents**

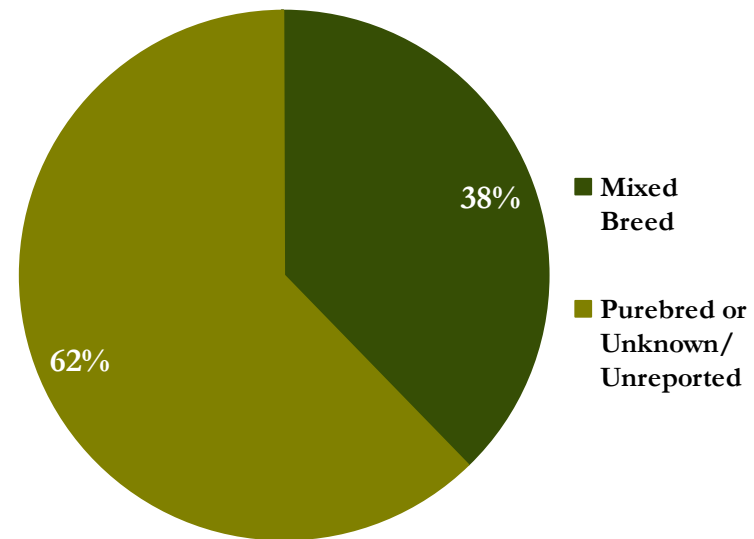
<b>Dog Breeds Involved in Bite Incidents</b>				
Airedale Terrier	Brittany	English Setter	Manchester Terrier	Rottweiler
Akbash	Brussels Griffon	English Springer Spaniel	Mastiff	Rough Collie
Akita	Bullmastiff	Flat Coat Retriever	Miniature Bull Terrier	Samoyed
Alaskan Malamute	Cairn Terrier	French Bulldog	Miniature Pinscher	Schipperke
American Bulldog	Cardigan Welsh Corgi	German Shepherd	Miniature Schnauzer	Scottish Terrier
American Eskimo	Catahoula Leopard Hound	German Shorthaired Pointer	Neapolitan Mastiff	Sharpei
American Water Spaniel	Cavalier King Charles Spaniel	German Wirehaired Pointer	Newfoundland	Shetland Sheepdog
Anatolian Shepherd	Chesapeake Bay Retriever	Giant Schnauzer	Norfolk Terrier	Shiba Inu
Australian Cattle Dog	Chihuahua - Long Haired	Golden Retriever	Norwegian Elkhound	Shih Tzu
Australian Shepherd	Chihuahua - Smooth Coated	Gordon Setter	Norwich Terrier	Siberian Husky
Basenji	Chinese Crested Dog	Great Dane	Old English Sheepdog	Silky Terrier
Basset Hound	Chinese Sharpei	Great Pyrenees	Papillon	Smooth Collie
Beagle	Chow Chow	Great Swiss Mountain Dog	Pekingese	Soft-Coated Wheaten Terrier
Bearded Collie	Cocker Spaniel	Greyhound	Pembroke Welsh Corgi	St Bernard
Belgian Malinois	Coton de Tulear	Ibizan Hound	Pit Bull	Staffordshire Bull Terrier
Bernese Mountain Dog	Dachshund - Long-haired	Irish Setter	Plott Hound	Standard Schnauzer
Bichon Frise	Dachshund - Miniature	Irish Terrier	Pointer	Tibetan Spaniel
Black and Tan Hound	Dachshund - Standard	Irish Water Spaniel	Pomeranian	Tibetan Terrier
Bloodhound	Dachshund - Wire-haired	Italian Greyhound	Poodle - Miniature	Vizsla
Bluetick Hound	Dalmatian	Jack Russell Terrier	Poodle - Standard	Weimaraner
Border Collie	Dandie Dinmont	Japanese Chin	Poodle - Toy	Welsh Springer Spaniel
Border Terrier	Doberman Pinscher	Keeshond	Portuguese Water Dog	West Highland White Terrier
Boston Terrier	Dutch Sheepdog	Kuvasz	Pug	Whippet
Bouvier des Flandres	English Bulldog	Labrador Retriever	Queensland Heeler	Wire Fox Terrier
Boxer	English Cocker Spaniel	Lhasa Apso	Rat Terrier	Yorkshire Terrier
Briard	English Foxhound	Maltese	Rhodesian Ridgeback	

**AT LEAST 38 PERCENT OF REPORTED BITES WERE FROM A MIXED BREED DOG**

In 38 percent of incidents, the biter was reported to be a dog of mixed breed. It is unknown what percentage of dogs in Colorado are of mixed breed.

**Exhibit 3-2  
Purebred and Mixed Breed Dogs**

*(Is the dog a mixed breed?)*



\*Note: "Yes" was the only available response option for this question, all remaining entries are categorized as "Purebred or Unknown/Unreported".

**POPULAR BREEDS WERE INVOLVED IN MORE BITES**

Whether any breed is more or less likely to bite than any other breed depends on knowing how popular each breed is numerically, and at this time, that information is unavailable for Colorado.

**Exhibit 3-3  
Breeds Involved in Bite Incidents**

<b>Bites By Breed</b>		
<b>Rank</b>	<b>Primary Breed</b>	<b>Reported Incidents</b>
1	Labrador Retriever	13.3%
2	Pit Bull	8.4%
3	German Shepherd	7.8%
4	Rottweiler	3.9%
5	Chow Chow	3.5%
6	Chihuahua - Smooth Coated	3.3%
7	Australian Shepherd	3.3%
8	Border Collie	2.5%
9	Siberian Husky	2.4%
10	Golden Retriever	2.4%
11	Boxer	2.2%
12	Australian Cattle Dog	2.2%
13	Cocker Spaniel	1.6%
14	Beagle	1.5%
15	Mastiff	1.3%
16	Shih Tzu	1.3%
17	Jack Russell Terrier	1.3%
18	Poodle - Miniature	1.2%
19	American Bulldog	1.1%
20	Queensland Heeler	1.0%
21	Dachshund - Miniature	1.0%
22	Miniature Pinscher	1.0%
23	Dalmatian	1.0%
24	Akita	0.9%
25	German Shorthaired Pointer	0.8%
	<i>All Others</i>	29.9%
	<i>Total</i>	100.0%

**AVERAGE BITE SEVERITY IS BETWEEN LEVEL 2 AND 3 FOR ALL BREEDS**

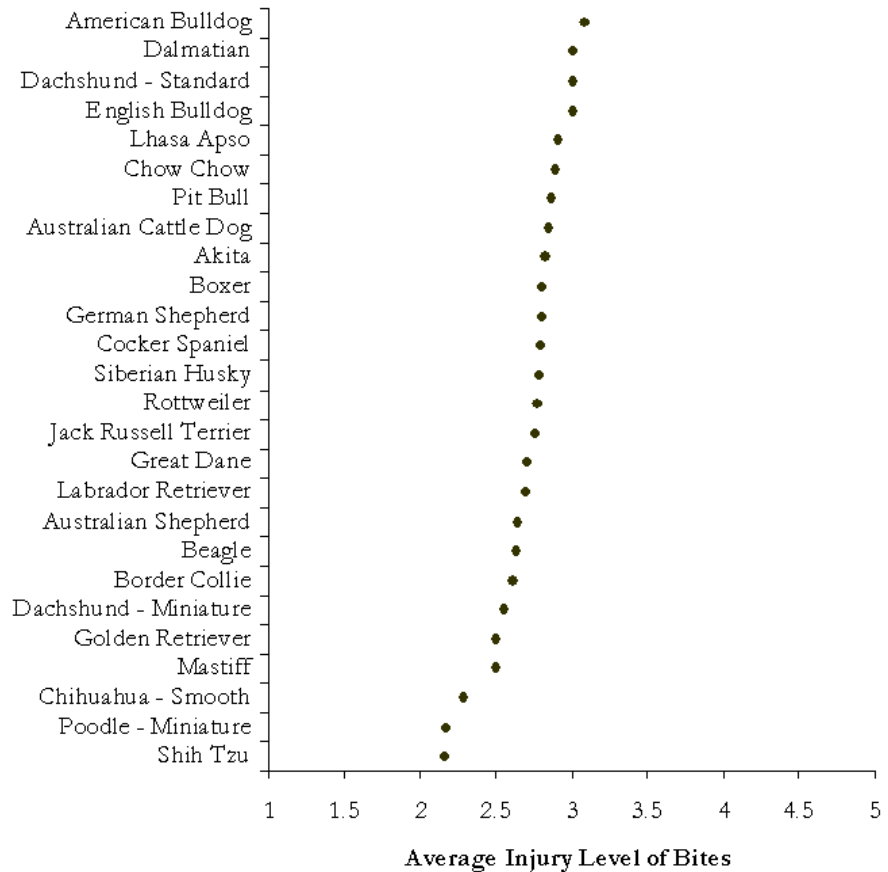
Bite severity was reported on a scale of 1-5 with the following breakdown:

- 1 – Bruising
- 2 – One puncture
- 3 – Multiple punctures
- 4 – Multiple punctures/Lacerations
- 5 – Maul (Serious bodily injury)

There were 27 breeds of dog with at least 10 bites where injury level was reported. The average injury level across those bites was calculated for each breed and plotted in rank order on this graph.

For all of these breeds, the average injury level was between 2.15 and 3.07. There are no “outlier” breeds that inflict only severe injuries. The majority of bites from each breed are level 2 and 3 injuries (one or more punctures); more severe bites are infrequent.

**Exhibit 3-4  
Average Bite Injury Level by Breed**



\*These 27 breeds each had 10 bites where the injury level had been reported.

**BITES TO CHILDREN WERE  
REPORTED FOR 87 BREEDS OF  
DOG IN 2007**

Dogs of 87 different breeds were reported for biting children. The breeds involved in the most bites to children are very similar to those involved in all bites (Exhibit 3-3).

**Exhibit 3-5  
Bites to Children by Breed**

<b>Bites By Breed</b>		
<b>Rank</b>	<b>Primary Breed</b>	<b>Bites to Children Age 14 or younger</b>
1	Labrador Retriever	15.6%
2	Pit Bull	7.5%
3	German Shepherd	6.8%
4	Chihuahua - Smooth Coated	4.2%
5	Rottweiler	4.1%
6	Chow Chow	3.8%
7	Golden Retriever	3.2%
8	Australian Shepherd	2.7%
9	Boxer	2.6%
10	Border Collie	2.1%
11	Siberian Husky	2.0%
12	Australian Cattle Dog	1.8%
13	Cocker Spaniel	1.7%
14	Shih Tzu	1.5%
15	Mastiff	1.5%
16	Beagle	1.5%
17	Queensland Heeler	1.4%
18	Great Dane	1.4%
19	English Bulldog	1.4%
20	Dalmatian	1.2%
21	Dachshund - Miniature	1.2%
22	Poodle - Standard	1.1%
23	Poodle - Miniature	1.1%
24	Pekingese	1.1%
25	Lhasa Apso	1.1%
	<i>All Others</i>	27.0%
	<i>Total</i>	100.0%

**BITE CIRCUMSTANCES VARY  
SOMEWHAT WITH BREED**

Across breeds, bites are most common when a dog is running at large, when a conflict between dogs breaks out, and when a dog is protecting property.

**Exhibit 3-6  
Bites by Circumstance by Breed**

	All Breeds	Labrador	Pit Bull	German	Rottweiler	Chow	Chihuahua	Aust.	Border	Golden	Siberian
		Retriever		Shepherd		Chow	Smooth Coated	Shep	Collie	Retriever	Husky
Number of Incidents	2060	273	173	160	81	73	68	68	52	49	49
Running At Large	18%	19%	24% (+)	29% (+)	21%	12% (-)	16%	12% (-)	13%	12% (-)	8% (-)
Dog to Dog Aggression	12%	12%	20% (+)	10%	12%	10%	0% (-)	6% (-)	12%	20% (+)	22% (+)
Aggression While Protecting Property	10%	8%	8%	15% (+)	10%	5% (-)	10%	12%	13%	12%	6%
Fear Based Aggression / Startled	6%	7%	4%	5%	4%	7%	10%	9%	15% (+)	4%	4%
Play Bite	6%	7%	5%	6%	7%	3%	6%	7%	8%	8%	6%
Possessive Aggression	5%	6%	2%	3%	2%	5%	3%	1%	0% (-)	8%	12% (+)
Provoked	5%	5%	2%	4%	9% (+)	1%	3%	6%	2%	4%	4%
Victim Left Unsupervised with Dog	4%	4%	3%	3%	7%	5%	1%	1%	6%	6%	2%
Dominance Based Aggression	4%	3%	4%	3%	4%	8% (+)	4%	3%	4%	2%	0%
Hit By Car / Injured	3%	4%	1%	2%	2%	7%	10% (+)	6%	2%	0%	2%
Grooming/Vet/Shelter/Kennel Incident	2%	3%	1%	0%	1%	3%	10% (+)	4%	2%	2%	4%
On Chain/Tether	1%	1%	0%	1%	4%	5%	3%	0%	0%	0%	0%
Maternal Based Aggression	1%	0%	1%	1%	1%	0%	0%	1%	0%	0%	0%
Other	12%	11%	10%	9%	6% (-)	18% (+)	12%	18% (+)	12%	12%	16%
Unknown	11%	10%	16% (+)	11%	9%	10%	10%	13%	12%	8%	12%
<b>Total</b>	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

\*These are the 10 breeds involved in the most bites.

\*The percentage of each incident across all breeds is presented in the first column in blue text.

\*Plus signs (+) show where each breed has more incidents for that circumstance than the average of All Breeds by 5% or more (4% for some of the less common circumstances).

\*Minus signs (-) show where each breed has fewer incidents for that circumstance than the average of All Breeds by 5% or more.

#### SECTION 4: OTHER DOG CHARACTERISTICS

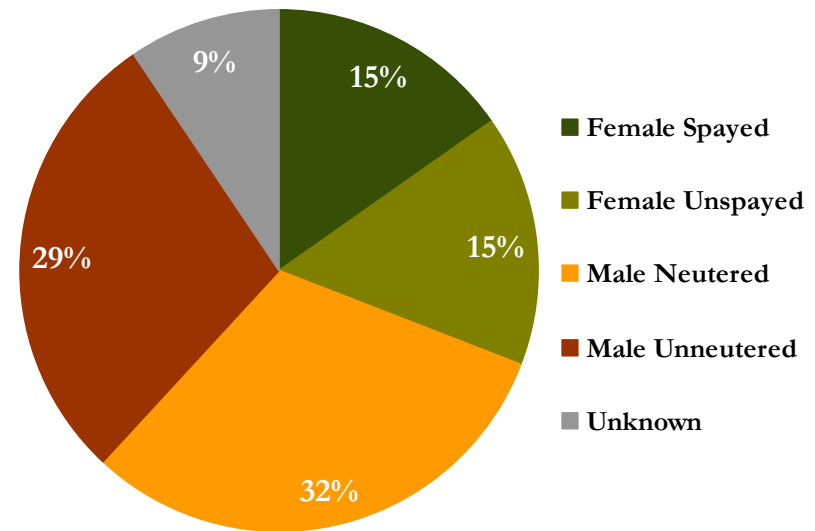
This section of the report provides information about the age of dogs involved in bite incidents, as well as their sex, spay/neuter status, and rabies vaccination status.

**MALE DOGS BIT TWICE AS OFTEN AS FEMALE DOGS**

Sixty-one percent of bites were committed by male dogs, compared with 31 percent from female dogs. There were equal proportions of bites reported from spayed/neutered or from intact dogs, however no population data is available to determine whether proclivity to bite is equal for spayed / neutered and unspayed / unneutered dogs.

It is unknown what percentage of dogs in Colorado are spayed or neutered.

**Exhibit 4-1  
Bites by Sex of Dog**

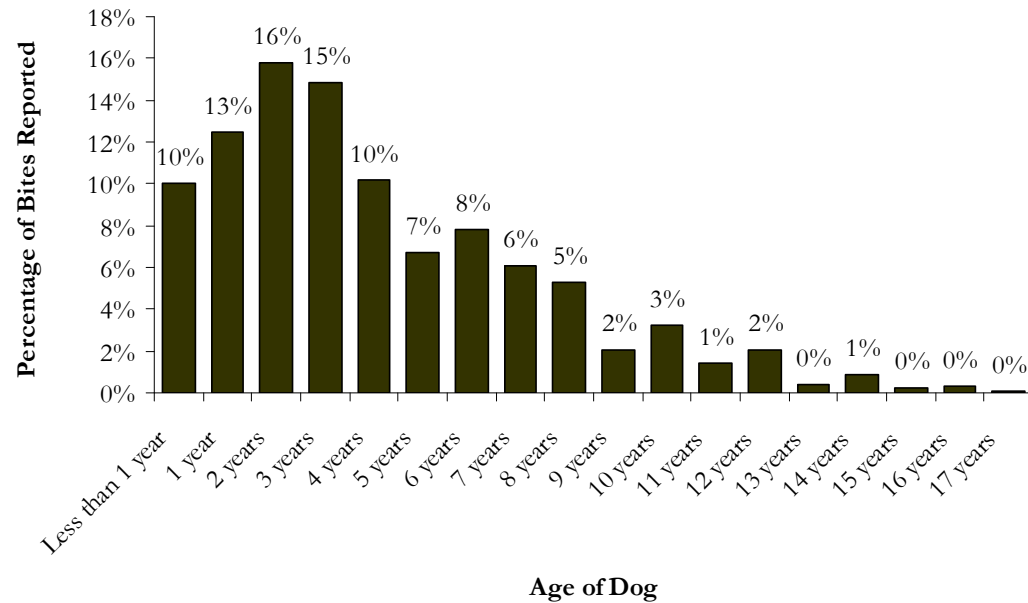


**ADOLESCENT DOGS (AGED 1-4 YEARS) COMMITTED MORE THAN HALF OF ALL BITES**

Among dogs who bit and whose age was known, 53 percent were between one and four years old. Thirty-seven percent were 5 years or older. Ten percent of bites were from a dog under one year of age.

For more than half of incidents reported, the age of the dog was unknown (not shown on graph).

**Exhibit 4-2  
Bites by Age of Dog**



\*n = 1,008

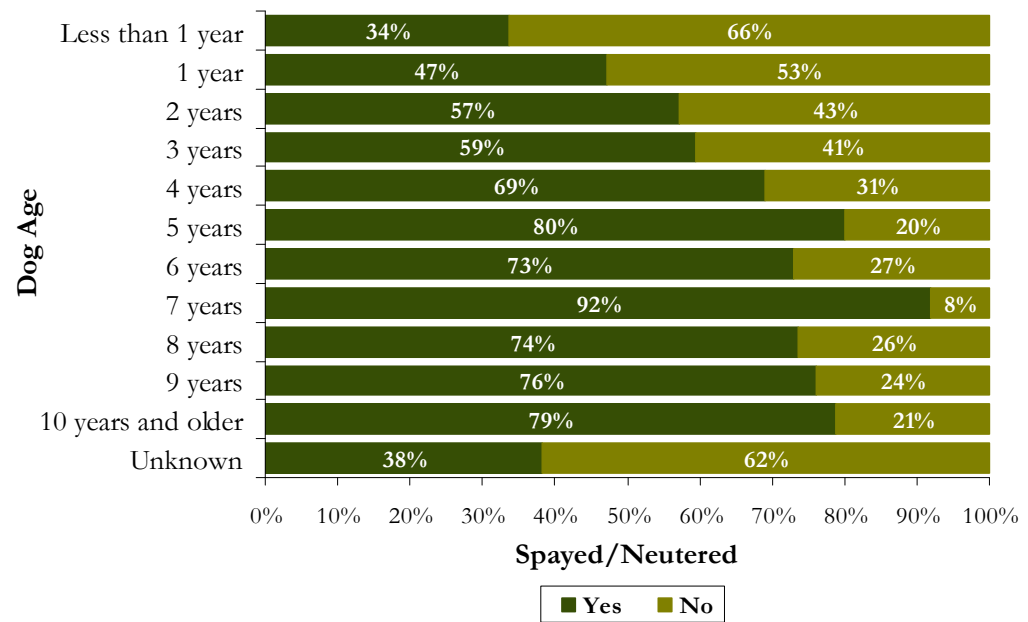
\*For 1,052 reported incidents, the age of the dog was unknown or unreported.

**YOUNGER DOGS WERE LESS LIKELY TO BE SPAYED OR NEUTERED THAN OLDER DOGS**

The age at which dogs are spayed or neutered is important for interpreting results showing differences between spayed or neutered dogs and unspayed or unneutered dogs. The spayed or neutered dogs that bit were on average, older than the unspayed or unneutered dogs (4.9 years vs. 3.1 years).

Among all dogs age 5 and older, 79 percent are spayed or neutered.

**Exhibit 4-3  
Spay/Neuter Status for Dogs of each Age**



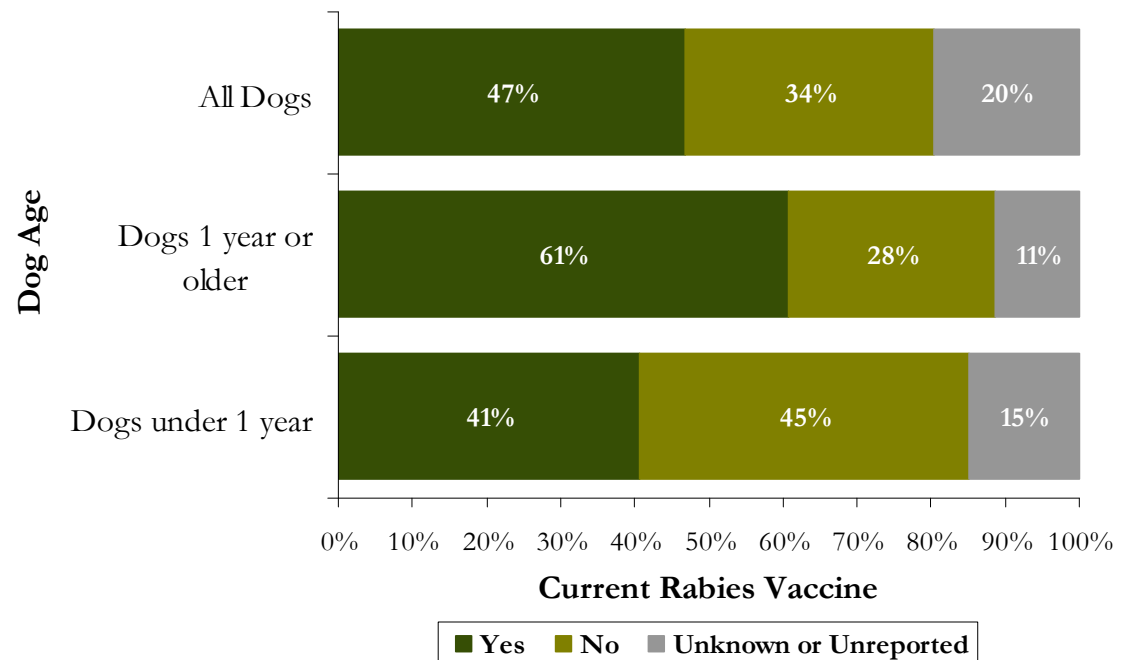
\*n = 1,865 (incidents where the dog's sex was unknown or unreported are not included)

**SIXTY-ONE PERCENT OF DOGS OVER ONE YEAR OLD WHO BIT SOMEONE HAD A RABIES VACCINATION**

Just under half of dogs who bit someone had a current rabies vaccination (47 percent). When dogs under one year of age are excluded, this percentage increases to 61 percent.

More than one-third of dogs had not been vaccinated (34 percent), however among dogs one year old or older, 28 percent of dogs had not been vaccinated. In 20 percent of reported cases, it was unknown whether the dog had been vaccinated for rabies.

**Exhibit 4-4  
Rabies Vaccination Status by Age of Dog**



\*n = 2,060 for All Dogs

\*n = 907 for Dogs 1 year or older

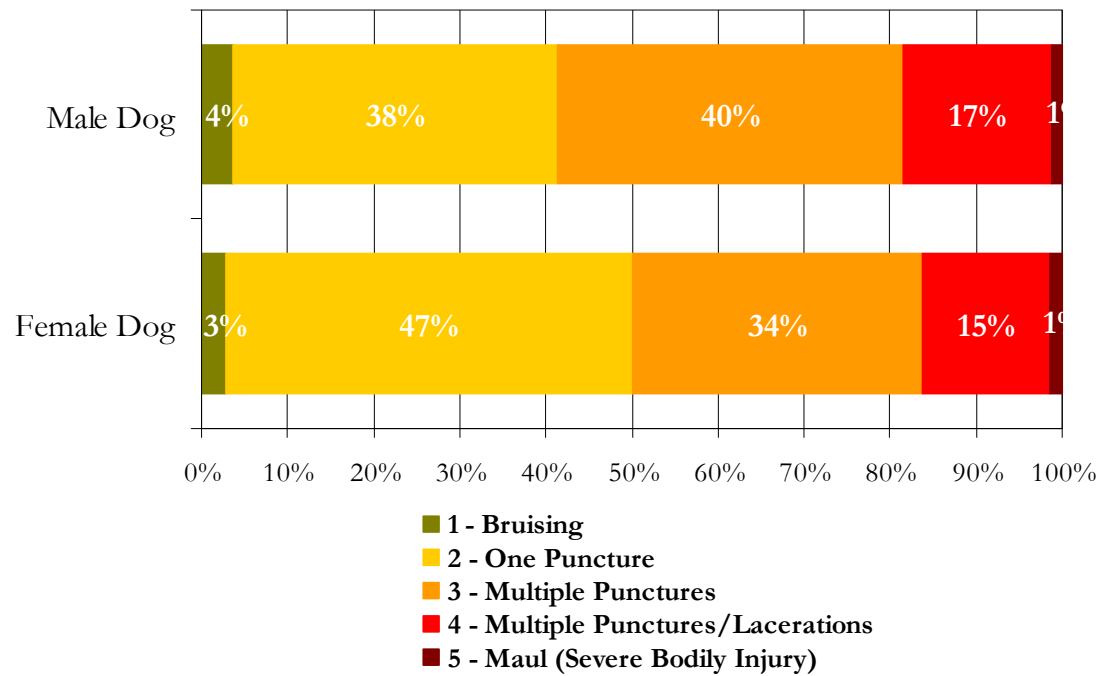
\*n = 101 for Dogs under 1 year

**BITES FROM MALE DOGS WERE MORE SEVERE ON AVERAGE THAN BITES FROM FEMALE DOGS**

Bites from male dogs more often resulted in level 3 or 4 injuries while bites from female dogs more often resulted in level 1 or 2 injuries.

Male dogs also bit twice as often as female dogs.

**Exhibit 4-5  
Bite Severity by Dog Sex**



\*n = 946 (incidents where the level of injury was unknown or unreported are not included)

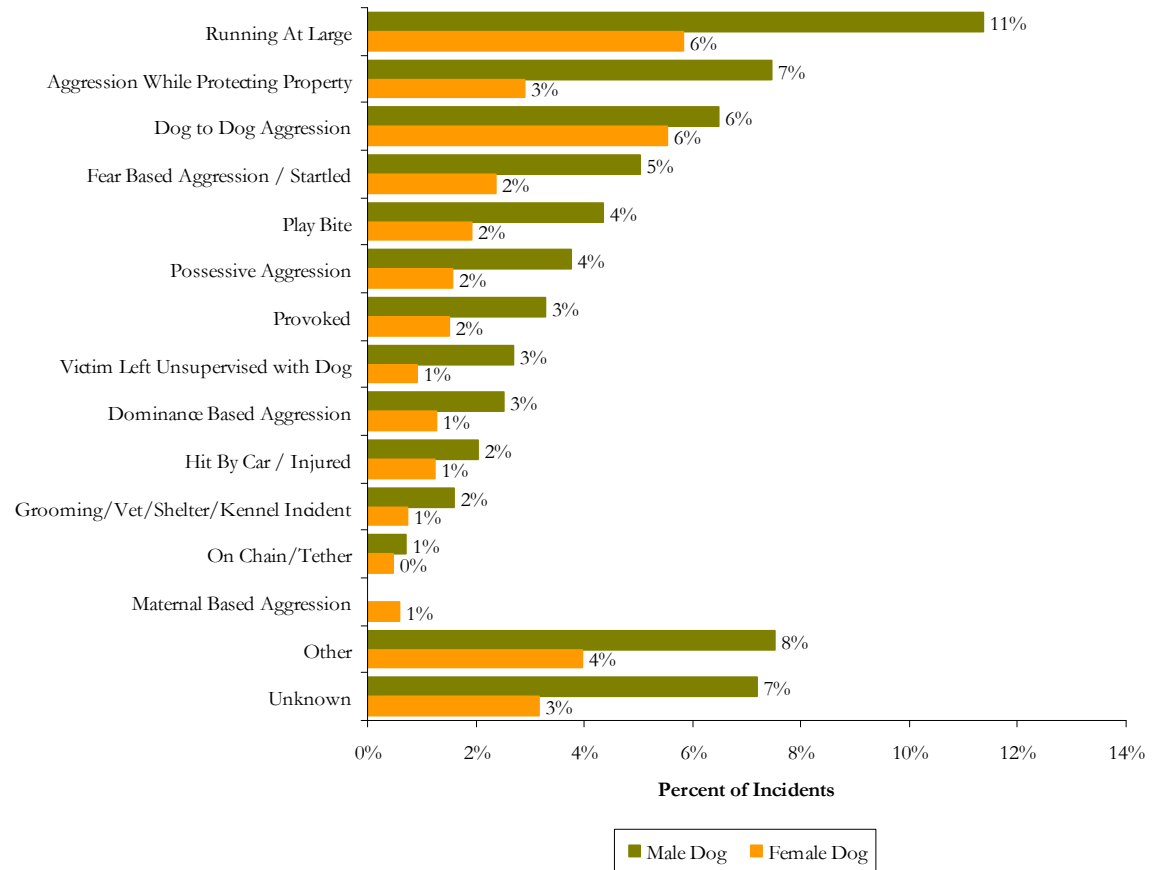
**FEMALES WERE MOST LIKELY TO BITE DURING DOG-TO-DOG AGGRESSION; MALES WHEN PROTECTING PROPERTY**

Male dogs bit twice as often as female dogs overall, and this ratio held for nearly all bite circumstances. However, a bite occurring during dog-to-dog aggression was almost equally likely to be from a female dog as a male dog.

Sixteen percent of bites from female dogs occurred as a result of dog-to-dog aggression, while just 10 percent of bites from males occurred as a result of dog-to-dog aggression.

In contrast, males were more than twice as likely as females to bite while protecting property.

**Exhibit 4-6  
Bite Circumstances for Male and Female Dogs**



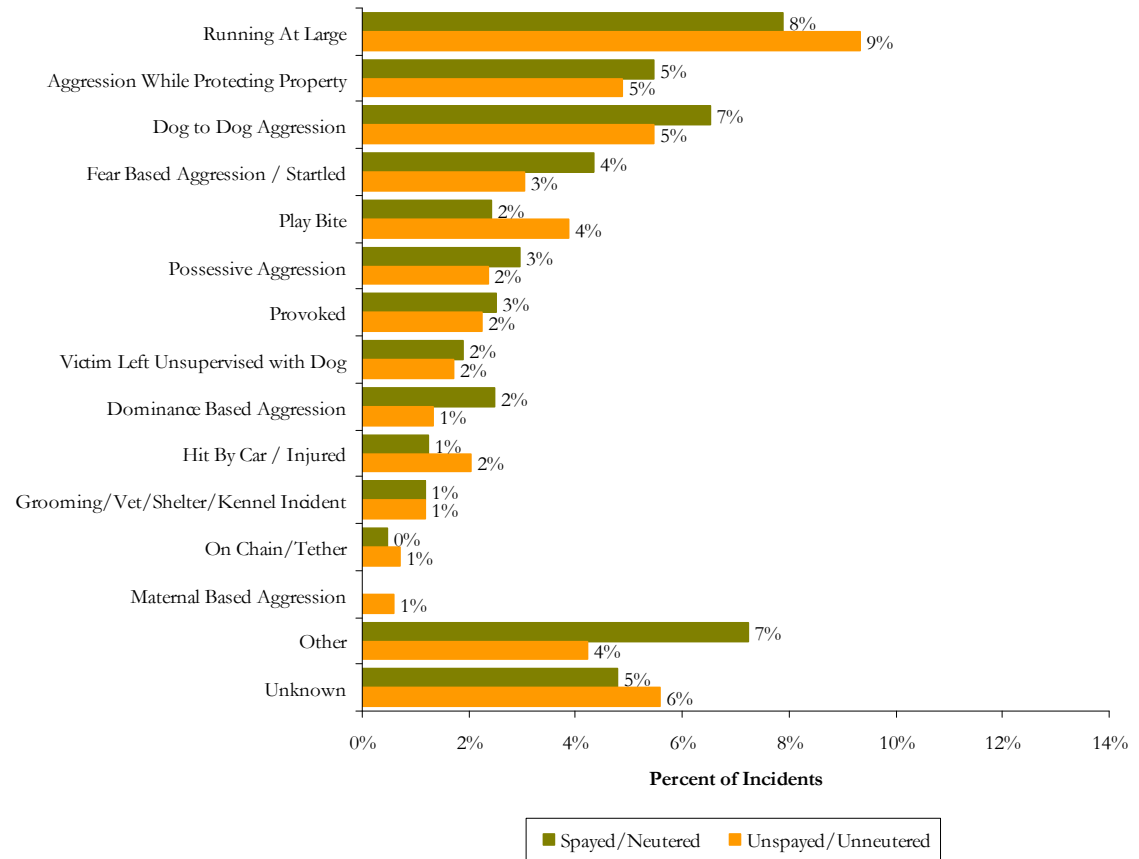
\*n = 1,865 (incidents where the sex of the dog is unknown or unreported are not included.)

**THERE ARE FEW DIFFERENCES IN BITE CIRCUMSTANCES FOR S/N VS INTACT DOGS**

Dogs that were not spayed or neutered were slightly more likely than dogs that were to play bite (which is because very young dogs are both more likely to be unspayed/unneutered and to play bite).

Most differences between spayed / neutered and unspayed / unneutered dogs are small and likely related to the average age difference between groups (4.9 years for spayed/neutered vs. 3.1 years for unspayed/unneutered).

**Exhibit 4-7  
Bite Circumstance by Spay/Neuter Status**



\*n = 1,865 (incidents where the sex of the dog is unknown or unreported are not included.)

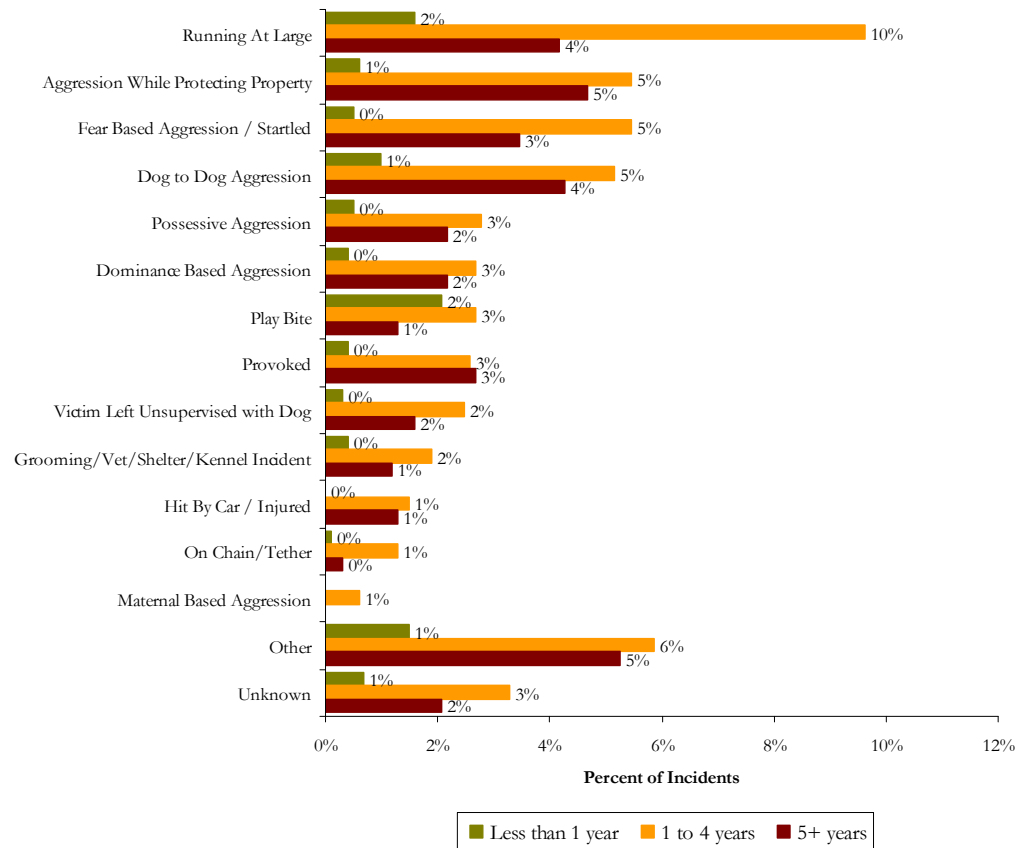
**ADOLESCENT DOGS WERE MOST LIKELY TO BITE WHILE RUNNING AT LARGE, PUPPIES WHILE PLAYING, AND OLDER DOGS WHILE PROTECTING PROPERTY**

Bites caused by adolescent dogs when they were running at large was the single most common bite circumstance, accounting for 10 percent of all bites.

Mature dogs (age 5 and older) most frequently bit when they were protecting property, followed by running at large and dog-to-dog aggression.

The most common circumstances for bites from puppies were play bites, running at large, and dog-to-dog aggression.

**Exhibit 4-8  
Bite Circumstance by Age of Dog**



\*n = 1,008 (incidents where the age of the dog is unknown or unreported are not included.)

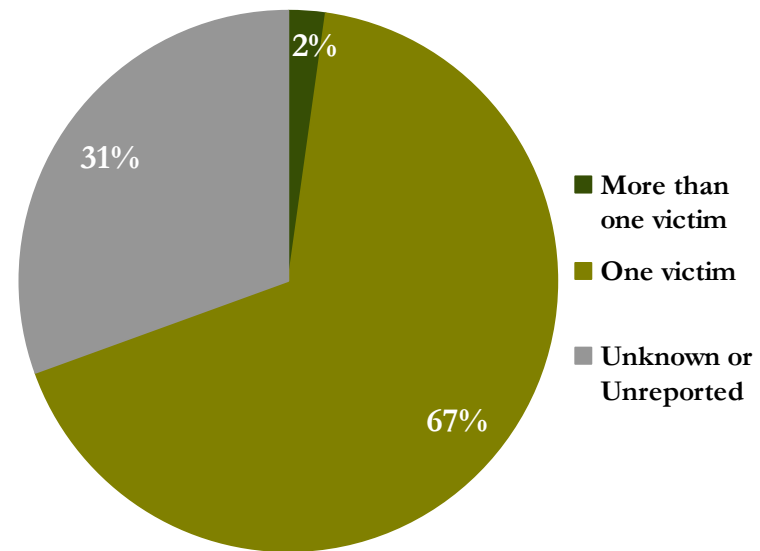
## SECTION 5: VICTIM CHARACTERISTICS

This section of the report provides information about the bite victims, including their age, gender, the level of injury sustained, and the circumstances when they were bitten.

**VERY FEW INCIDENTS HAD  
MULTIPLE VICTIMS**

In a majority of reported dog bite incidents, only one person was bitten. In two percent of reported cases, two or more people were bitten.

**Exhibit 5-1  
Incidents with Multiple Victims**



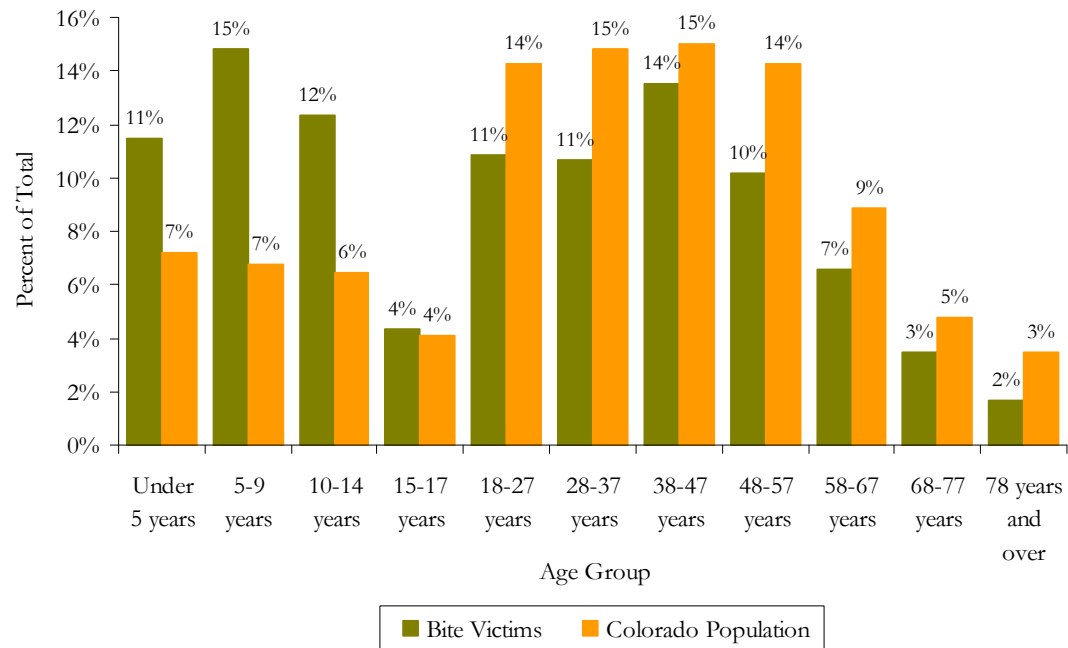
**CHILDREN SUSTAINED A DISPROPORTIONATELY LARGE NUMBER OF BITES COMPARED TO THEIR POPULATION**

Among victims whose age was known, 39 percent were 14 years old or younger. Only 20 percent of the Colorado population is age 14 or younger, but almost 40 percent of those bitten are in this age group.

In comparison, 15 to 17 year olds make up 4 percent of the total population and 4 percent of those bitten. All age groups over age 18 were somewhat underrepresented among those bitten with respect to the population.

For 338 reported incidents (16 percent), the age of the victim was unknown (not pictured).

**Exhibit 5-2  
Bites by Age of Victim**



\*n = 1,722 (bite victims of unknown/unreported age are not included in graph or base total for percentages)

\*Percentages in the graph sum to 100 independently for each group (bite victims and Colorado residents).

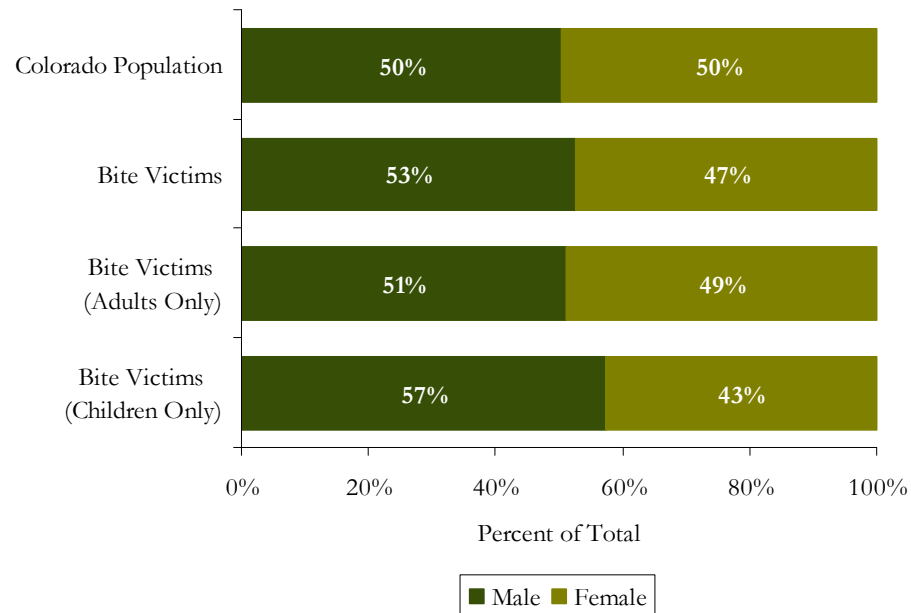
\*CO population is from 2007 ACS/PUMS (U.S. Census).

**DOGS WERE MORE LIKELY TO BITE MALES THAN FEMALES**

The top bar shows the Colorado population in 2007. Half of Coloradans are male and half are female. Among victims whose gender was known, 53 percent were male and 47 percent were female. This represents a significant skew toward males among bite victims overall ( $X^2=5.36, p<.05$ ).

However, when the age of the victim is taken into account, there is no significant difference in the number of male and female victims among adults (age 15 or older). But there is a significant difference between male and female victims among children ( $X^2=7.08, p<.01$ ).

**Exhibit 5-3  
Bites by Gender of Victim**



\*Top bar is CO population from 2007 ACS (U.S. Census).

\*n = 1,398 for bite victims bar (incidents where gender of victim was unknown or unreported are not included.)

\*n = 778 for adult bite victims bar (incidents where age or gender of victim was unknown or unreported are not included.)

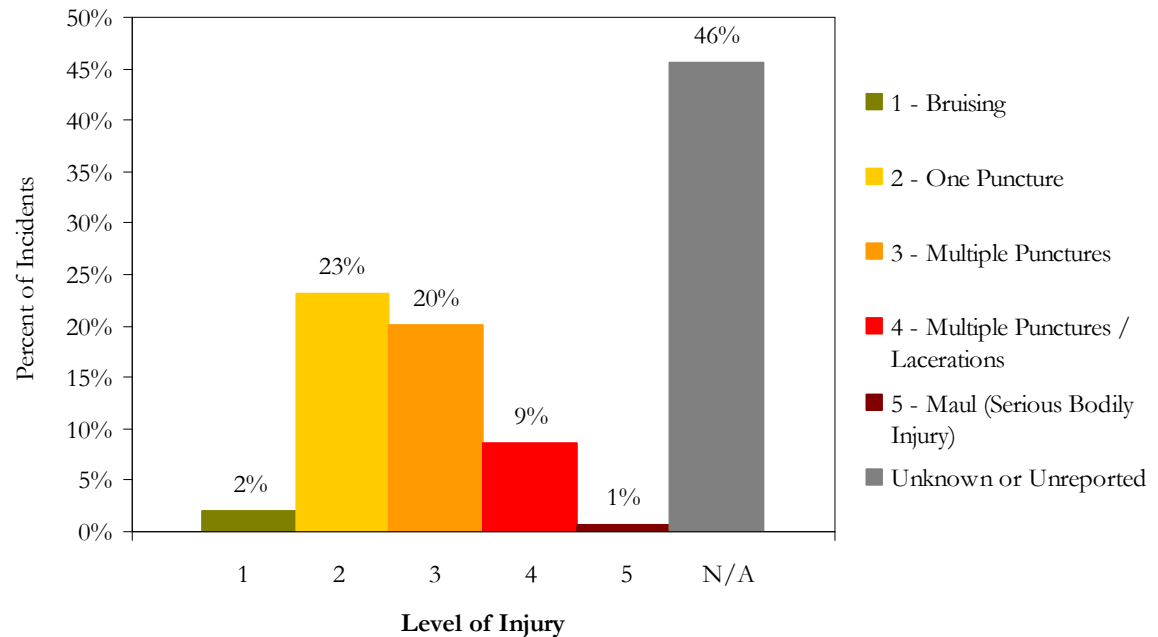
\*n = 445 for children bite victims bar (incidents where age or gender of victim was unknown or unreported are not included.)

**REPORTED BITES WERE  
COMMONLY ONE OR MORE  
PUNCTURES**

In nearly half of reported cases, the extent of the bite injury was unreported. Bruising (level 1 injury) is not considered a bite by many reporting agencies, which is why there are so few in the data set.

This distribution of injuries suggests that as severity increases, frequency decreases. Minor injuries are the most frequent, and major injuries are very infrequent.

**Exhibit 5-4  
Level of Injury**

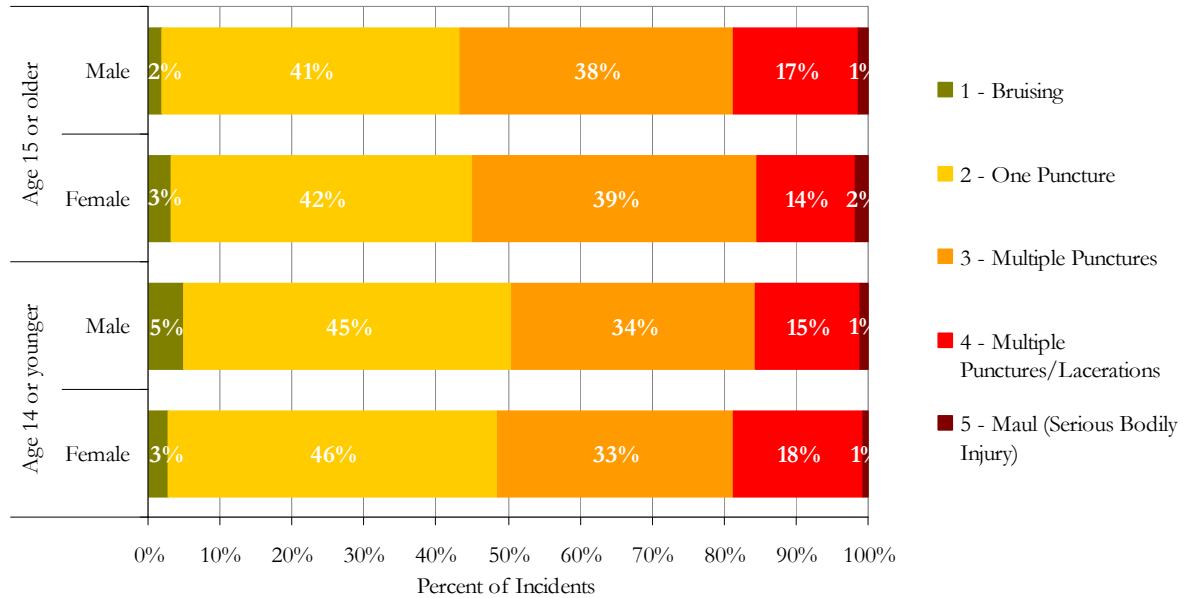


**ON AVERAGE, CHILDREN'S INJURIES WERE LESS SEVERE THAN ADULT'S INJURIES**

Level 2 and 3 injuries were the most common injuries reported by males and females, adults and children. However, reported bites for children (age 14 or younger) were, on average, less severe than reported bites for adults. Half of reported bites for boys, and 49 percent of reported bites for girls were bruises and one-puncture injuries. Among adults, 43 percent of bites for men and 45 percent of bites for women were level 1 and 2 injuries.

Girls age 14 or younger sustain level 4 and 5 injuries more frequently when bitten than do young boys or adult women.

**Exhibit 5-5  
Level of Injury by Age and Gender of Victim**



\*n = 946 (incidents with unknown/unreported injury level, age, or gender are not included)

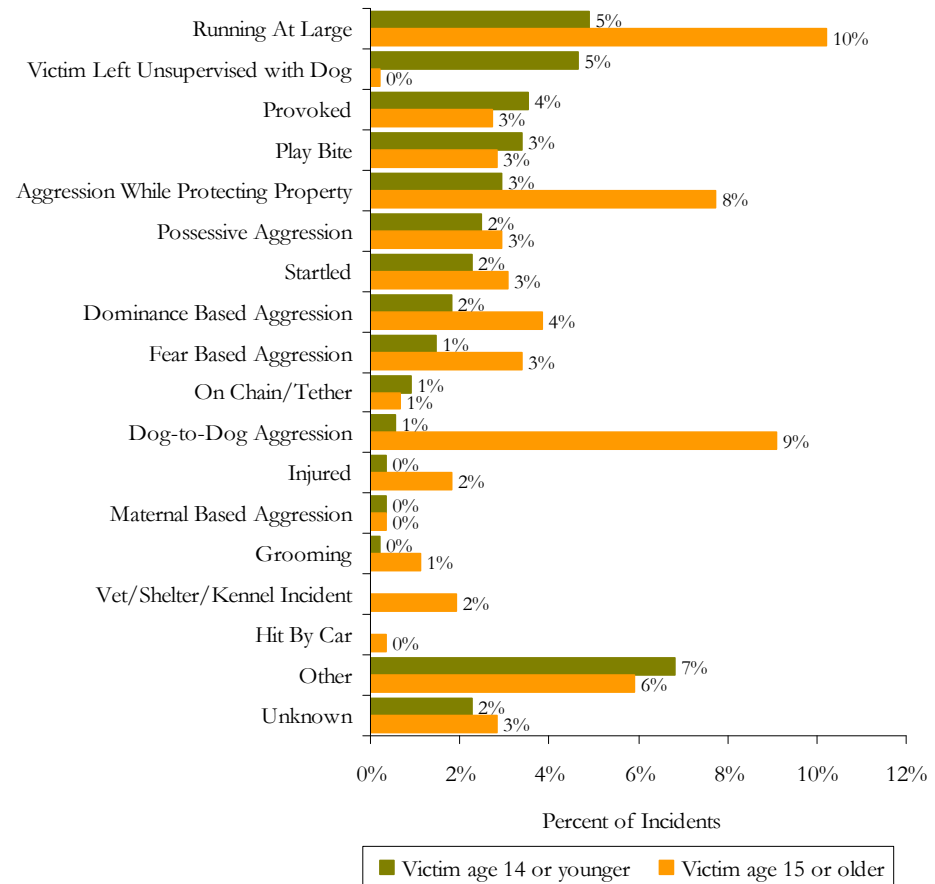
**DIFFERENCES IN BITE CIRCUMSTANCES FOR CHILDREN AND ADULTS**

Running at large was the most common circumstance when both children and adults are bitten.

Aside from running at large, the three most common bite circumstances for children were being left unsupervised with the dog, provoking the dog, and play bites.

For adults, the three most common circumstances after running at large were dog-to-dog aggression, aggression while protecting property, and dominance-based aggression.

**Exhibit 5-6  
Victim Age by Bite Circumstance**



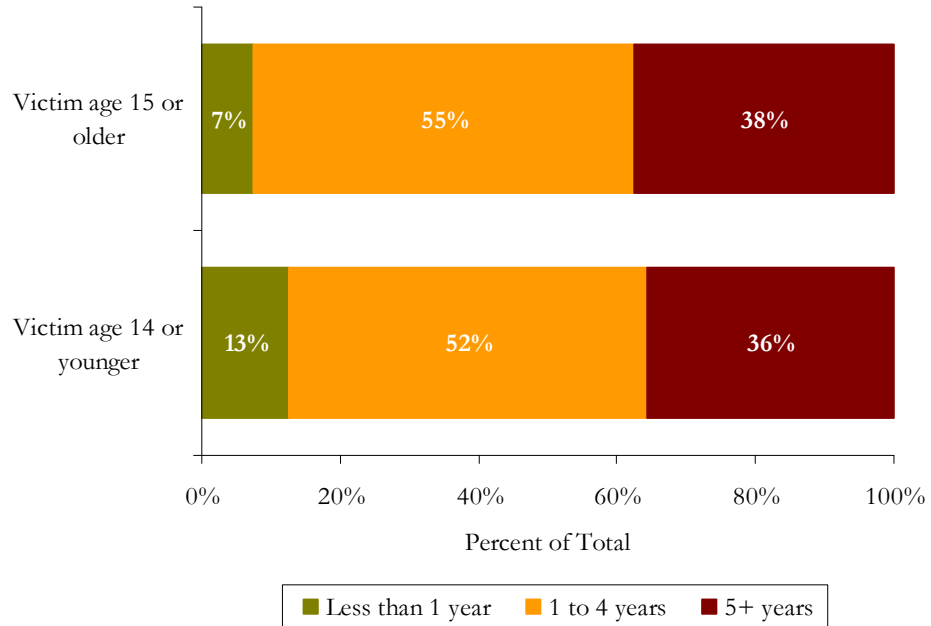
\*n = 881 (incidents where the age of the victim was unknown or unreported are not included)  
\*Circumstances are sorted in descending order of frequency for victims age 14 and younger.

**A GREATER PROPORTION OF CHILDREN'S BITES CAME FROM PUPPIES**

Thirteen percent of bites to children came from puppies, compared to only seven percent of bites to adults.

Although children make up only 20 percent of the Colorado population, and 40 percent of bite victims overall, 50 percent of reported bites from puppies are bites to children. Among adolescent and adult dogs, 36 percent of their bites are to children and 64 percent are to adults.

**Exhibit 5-7  
Victim Age by Bite Circumstance**



\*n = 753 (incidents where the age of the victim or age of the dog was unknown or unreported are not included)

\*Colorado population is from 2007 ACS.

## SECTION 6: ANIMAL CONTROL CONTACT

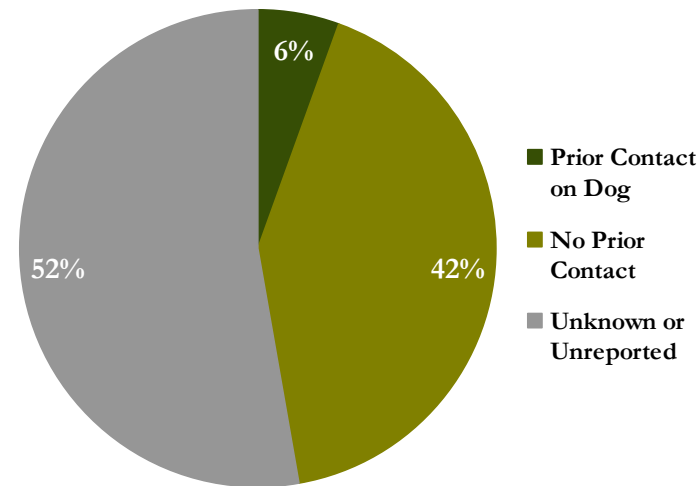
This section of the report provides information about animal control's involvement in the incident. This includes prior contact history for the dog and/or owner, and whether enforcement action was taken for the reported incident.

**MOST BITES WERE FROM FIRST TIME OFFENDERS**

Six percent of reported bites were from a dog that had a prior contact history, but 42 percent of bites were from a dog with no contact history. In half of cases, it was unknown or unreported whether the dog had a prior contact history.

If the unknowns have the same pattern of contact history as the knowns, then the actual total percentage of those with a contact history will about 12 percent. If unknowns are more likely to have no prior contact history, then the actual percentage of dogs with a contact history will be between 6 and 12 percent.

**Exhibit 6-1  
Prior Contact History on Dog**

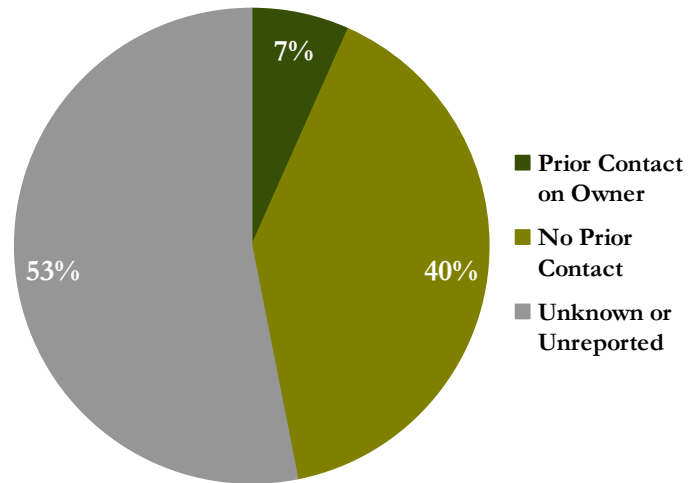


**MOST OWNERS HAD NO PRIOR CONTACT HISTORY**

Seven percent of reported bites were from a dog whose owner had a prior contact history, but 40 percent of bites were from a dog whose owner had no contact history. In over half of cases, it was unknown or unreported whether the owner had a prior contact history.

If the unknowns have the same pattern of contact history as the knowns, then the actual total percentage of those with a contact history will be about 14 percent. If unknowns are more likely to have no prior contact history, then the actual total percentage of owners with a prior contact history will be between 7 and 14 percent.

**Exhibit 6-2**  
**Prior Contact History on Owner**

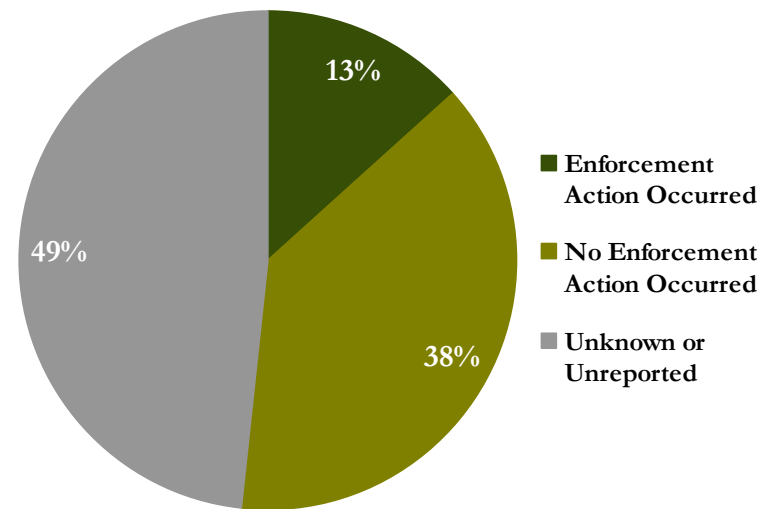


**FOR MOST BITES, NO ENFORCEMENT ACTION OCCURRED**

Enforcement action occurred in 13 percent of cases. In 38 percent of cases no enforcement action occurred. In half of cases, it was unknown or unreported whether enforcement action occurred with the dog.

If the unknowns have the same pattern of enforcement action as the knowns, then the actual percentage of cases with enforcement action will be about 26 percent. If unknowns are more likely to have no enforcement action, then the actual percentage of cases with enforcement action will be between 13 and 26 percent.

**Exhibit 6-3  
Enforcement Action with Dog**



## SECTION 7: SOURCE OF DATA

This section of the report provides an overview of the agencies that provided data for this initial year of data collection.

**MANY OF COLORADO'S  
LARGEST ANIMAL CONTROL  
AGENCIES PROVIDED DATA**

Denver Animal Control and the Humane Society of the Pikes Peak Region (not including the Pueblo and Douglas County divisions) together provide animal control services for nearly 1.2 million Coloradans, which is nearly one-quarter of the state's population.

Ultimately, involving all of the state's animal control agencies in the reporting effort will be the best way to evaluate dog bites in Colorado.

**Exhibit 7-1  
Participating Agencies**

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**Participating Agencies**

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Adams County Animal Control
Aurora Animal Care Division
Denver Animal Control
Douglas County Animal Services *division of HSPPR
Frederick Police Dept
Garfield County Animal Control
Humane Society of Boulder Valley
Humane Society of the Pikes Peak Region
Jefferson County Animal Control
Lakewood Animal Control
Longmont Police Department
Meeker Police Dept
Montrose Animal Control
Town of Parker
Pitkin County Animal Safety
Pueblo Animal Services *division of HSPPR
Summit County Animal Control

**APPENDIX: 2007 DOG BITE STATISTICS COLLECTION SURVEY**

This survey is being sponsored and endorsed by the Coalition for Living Safely with Dogs (CLSD) and the Colorado Association of Animal Control Officers (CAACO) and funded by the Animal Assistance Foundation. The goal of the survey is to collect Dog Bite Data on a state wide basis so our organizations can help policy makers in cities and counties make more informed decisions about important animal welfare issues regarding public safety and animals.

Please answer as many questions as possible.  
Thank You

1. CAACO Member Agencies [Respondent is asked to identify their agency in Q1 or Q2.]

1. Adams County Animal Control
2. Alamosa Police Department
3. Arvada Animal Management
4. Aurora Animal Care Division
5. Blanca Animal Control
6. Boulder County Sheriff's Office
7. Brighton Police Department
8. Broomfield Police Department
9. Town of Buena Vista
10. City of Burlington Animal Control
11. Campbell County Sheriff AC
12. Canon City Police Department
13. Carbondale Police Department
14. Cheyenne Animal Shelter
15. Clear Creek Animal Control
16. Cody Police Department
17. Craig Police Department
18. Delta Animal Control
19. Denver Animal Control
20. Douglas County Animal Services \*division of HSPPR
21. Eagle County Animal Care
22. Englewood Department of Safety Services
23. Estes Park Police Department
24. Evans Police Department
25. Federal Heights Police Department
26. Frederick Police Department
27. Florence Police Department
28. Frisco Police Department
29. Garfield County Animal Control
30. Grand County Animal Control
31. Greeley Police Department
32. Humane Society of Boulder Valley
33. Humane Society of the Pikes Peak Region
34. Jefferson County Animal Control
35. Lafayette Police Department
36. La Plata County Humane Society
37. Lakewood Animal Control
38. Larimer Humane Society

39. Littleton Animal Control
40. Longmont Police Department
41. Louisville Police Department
42. Meeker Police Department
43. Mesa County Animal Services
44. Monte Vista Police Department
45. Montrose Animal Control
46. Northglenn Code Enforcement
47. Rifle Police Department
48. Teller County
49. Town of Coal Creek
50. Town of Parker
51. Town of Otis
52. Town of Rangely
53. Pitkin County Animal Safety
54. Pueblo Animal Services \*division of HSPPR
55. Sheridan Police Department
56. Snowmass Village Animal Control
57. Sweet Water County Animal Control
58. Weld County Sheriff Department
59. Wheatridge Police Department
60. Windsor Police Department
61. Yuma Animal Control

## 2. CAACO Non Member Agencies

1. Arapahoe County Animal Control
2. Archuleta County Sheriff Department
3. Aspen Animal Control
4. Avon Animal Control
5. Basalt Police Department
6. Bayfield Marshal's Office
7. Brush Police Department
8. Castle Rock Animal Control
9. Cedaredge Animal Control
10. Central City Police Department
11. Cherry Hills Animal Control
12. Cheyenne Wells Animal Control
13. Commerce City Animal Control
14. Conejos Animal Control
15. Cortez Animal Control
16. Costilla County Code Enforcement
17. Creede Animal Control
18. Crested Butte Animal Control
19. Cripple Creek Animal Control
20. Crowley County Sheriff's Department
21. Custer County Sheriff's Department
22. Dacono Animal Control
23. Del Norte Animal Control
24. Divide Animal Control
25. Durango Animal Control
26. Town of Eads

27. Edgewater Animal Control
28. Elbert County Animal Control
29. Elizabeth Police Dept / AC
30. Erie Animal Control
31. Firestone Police Department /AC
32. Frederick Police Department/Code Enforcement
33. Fremont County Animal Control
34. Fruita Police Department
35. Fort Lupton Animal Control
36. Fort Morgan Animal Control
37. Glenwood Springs Animal Control
38. Greenwood Village Animal Control
39. Gunnison Animal Control
40. Hayden Animal Control
41. Hinsdale County Animal Control
42. Holyoke Animal Control
43. Hudson Animal Control
44. Hugo Animal Control
45. Johnstown Animal Control
46. La Junta Police Department
47. Lamar Animal Control
48. Leadville Animal Control
49. Limon Animal Control
50. Mancos Marshal's Office
51. Manitou Springs Animal Control
52. Mead Animal Control
53. Norwood Animal Control
54. Nederland Animal Control
55. New Castle Police Department
56. Oak Creek Animal Control
57. Otero County Sheriff Department
58. Ouray Animal Control
59. Pagosa Springs Animal Control
60. Palmer Lakes Animal Control
61. Paonia Animal Control
62. Parachute Animal Control
63. Salida Animal Control
64. Silt Police Department
65. Silverthorne Police Department
66. Steamboat Springs Animal Control
67. Sterling Animal Control
68. Stratton Animal Control
69. Summit County Animal Control
70. Thornton Animal Control
71. Town of Silver Cliff
72. City of Trinidad Animal Control
73. Walden Animal Control
74. Walsenburg Animal Control
75. Westcliffe Animal Control
76. Westminster Animal Control

3. Reference Number (Case #, Animal ID, Etc.)

4. Are there Multiple Victims for this Dog?

Yes  
No  
Unknown

5. Primary Dog Breed (list not provided here)

6. Secondary Dog Breed (list not provided here)

7. Mix?

Yes

8. Sex

Female Spayed  
Female Unspayed  
Male Neutered  
Male Unneutered  
Unknown

9. Age of Dog

Less than 1 year  
1 year  
2 years  
3 years  
4 years  
5 years  
6 years  
7 years  
8 years  
9 years  
10 years  
11 years  
12 years  
13 years  
14 years  
15 years  
16 years  
17 years  
18 years  
19 years  
20 years

10. Age of Victim

Less than 1 year  
1 year  
2 years

- 3 years
- 4 years
- 5 years
- 6 years
- 7 years
- 8 years
- 9 years
- 10 years
- 11 years
- 12 years
- 13 years
- 14 years
- 15 years
- 16 years
- 17 years
- 18-27 years
- 28-37 years
- 38-47 years
- 48-57 years
- 58-67 years
- 68-77 years
- 78-87 years
- 88+ years

11. Sex of Victim

- Male
- Female
- Unknown

12. Are the Dog Owner and Victim Related?

- Yes
- No
- Unknown

13. Bite Circumstance

1. Aggression While Protecting Property
2. Dog to Dog Aggression - Off Leash (Victim Bit)
3. Dog to Dog Aggression - On Leash (Victim Bit)
4. Dominance Based Aggression
5. Fear Based Aggression
6. Grooming
7. Hit By Car
8. Injured
9. Maternal Based Aggression
10. On Chain/Tether
11. Play Bite
12. Possessive Aggression (Food)
13. Possessive Aggression (Toys)
14. Provoked
15. Running At Large

- 16. Startled
- 17. Unknown
- 18. Victim Left Unsupervised with Dog
- 19. Other (please specify)

14. Level of Injury

- 1 - Bruising
- 2 - One Puncture
- 3 - Multiple Punctures
- 4 - Multiple Punctures/Lacerations
- 5 - Maul(SBI)
- 6 - Fatality

15. Prior Contact History on Dog?

- Yes
- No
- Unknown

16. Prior Contact History on Owner?

- Yes
- No
- Unknown

17. Has Enforcement Action Occurred with this Dog?

- Yes
- No
- Unknown

18. Location

- Home
- Public
- At Large

19. Zip Code

20. Rabies Vaccination Current?

- Yes
- No
- Unknown