THE PROBLEMS WITH DOG BITE STUDIES

NCRC National Canine Research Council
Preserving the Human-Canine Bond

> "In this study, we have tried to elicit the various human, dog, and environmental factors associated with dog bites, and to determine if these factors indicate ways to prevent and control dog bites."
>
> Henry M. Parrish, 1959

The purpose of studying dog bites, which commenced in the late 1950's, has not changed from Henry Parrish's time to our own: how can we reduce the number of dog bite injuries?

Good intentions notwithstanding, a problem was evident from the first that has not been solved in the years since. The researchers defined dog bites as a public health problem on the order of a disease, and then employed a traditional public health analysis in pursuit of the cause of the "disease." This approach assumes that it is possible to isolate the factor, or factors, that compel a dog to respond with a bite.

Dog bites are not a disease. They are the result of complex interactions between sentient creatures of different species. They occur in the most uncontrolled and unscientific settings imaginable. However one breaks down the "factors" – whether related to the dog, the owner, the environment, or the victim – they cannot be measured against each other.

When the list of factors became too daunting, researchers attempted to limit them to a few, or even to one: correlating bite incident with the attributed breed of the dog, and presenting this correlation as a cause/effect relationship. Single-cause explanations are easily comprehended, and make a condition seem more manageable.

The problem is that focus on breeds puts the focus on the dog, at the expense of consideration of his relationship with the human beings who controlled him. This breed focus has hindered scientific inquiry and prevented the development of better informed public policy. And it has damaged the human-canine bond.

Neglect of the human and environmental components

Some dog bite studies have attempted to factor for the behavior of the owner and/or the victim. Others have not bothered. A few classify dog bites as either "provoked" or "unprovoked." In fact, dog bites are classified as provoked when someone noticed the human (or animal) behavior to which the dog responded and judged such a response to be justified. Unprovoked bites fall into one of two sub-categories. Either no one noticed or understood what had transpired; or they did notice, and deemed the severity of the dog's response unacceptable from the human perspective.

Furthermore, researchers have frequently failed to acknowledge the relevance of stressful or inhumane situations that humans often force dogs to endure. At NCRC, we urge people to consider what the world looks like from their dog's point of view. NCRC, as a result of its investigations of the circumstances surrounding incidents of severe and fatal incidents, draws a distinction between a "family" dog and "resident" dog. The distinction is similar to one drawn by European scholars ("dependent" vs. "independent" dogs), in that both are an attempt to assess the nature and quality of the dog's relationship with human being.

There are at least two parties involved in a dog bite; a dog and one or more humans. Dog behavior cannot be understood or analyzed apart from humans, or the situations in which humans have placed dogs.

Isolating one or two dog-specific factors and ignoring others:

Most dog bite studies attempt to analyze the incidents on the basis of "dog-specific factors." These factors may include the sex of the dogs, the reproductive status (altered vs. unaltered) and/or the breed of the dogs. This data may then be presented as a valid representation of which dogs bite more frequently, despite the fact that the analysis does not predict an individual dog's future behavior.

Not surprisingly, different studies have reported conflicting results. One study found that intact male dogs were responsible for the majority of bites, while another study indicated that spayed females bit more frequently. Conflicting results are to be expected when attempting to pluck out a single factor from the complex, multi-variable, interaction between a dog and a human that resulted in a bite.

Attempting to isolate "dog-specific factors" may even result in salient circumstances being ignored, in favor of the factor previously deemed the factor of interest. Consider the case of an intact, male dog chained to a barn, without food or water for 2 days, and suffering from cancerous tumors. The dog bit a 4-year-old boy. A study attempting to isolate "dog specific factors," attributed this incident to an "unaltered, male" dog, ignoring the dog's illness and mistreatment. The study later concluded that unaltered male dogs bite more frequently.

There is no individual factor, or combination of factors, that reliably explain which dogs bite. A dog bite is the culmination of dozens of circumstances and variables, both past and present.

Inaccurate breed identifications result in bad data:

Most dog bite studies are developed from one or more of the following sources:

- Animal care and control, or health department incident reports
- Hospital outpatient or inpatient data
- News accounts
- Telephone surveys

Breed descriptors obtained from these sources may come from the dog's owner. They may also come from persons who have no direct knowledge (i.e., animal control officer, victim, neighbor, police officer, witness, unnamed source) of the dog's lineage.

There is robust evidence that these breed descriptors are often inaccurate. Roughly half the dogs in the U.S. are mixed breed dogs. Surveys conducted by researchers from Western University in California have shown that, when asked to name the breed or breed mix in mixed-breed dogs whose origin they did not know, adoption agency personnel responses correlated extremely poorly with DNA analysis of the same dogs. It's not that professionals can't identify commonly available, physically distinct pure-bred dogs, but that mixed-breed dogs do not always look like their parents. If professionals cannot accurately identify the dogs, what about the breed labels assigned by non-professionals, who might nevertheless be the source of a breed attribution in a news story or bite report?

If we have not been breed labeling the dogs accurately, dog bite studies proposing to correlate incidents by breed have never contained, and will never contain, reliable data.

We have always known the cause of dog bite injuries:

From the first dog bite study published more than 50 years ago until today, the conclusions and recommendations of the researchers have shared a lot in common.

> "This study of the epidemiology of dog bites would seem to indicate that human factors are more important than environmental factors in the genesis of dog bites."
>
> -- Henry M. Parrish, 1959

> "Education programs aimed at influencing the behavior of pet owners, particularly with respect to the responsibilities of ownership, would do much to reduce the magnitude of the problems."
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> -- H. Michael Maetz, 1975

> "Poor owner control blamed for increase in dog bites."
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> -- Washington Post, 1975

> "The growing problem of dog control can only be solved if dog owners realize their responsibilities as pet owners."
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> -- Lancaster Farming, 1978

> "Efforts to prevent severe dog bites should be focused primarily at the level of the owner."
>
> -- John C. Wright, 1985

> "Generic non-breed-specific dangerous dog laws can be enacted that place primary responsibility for a dog's behavior on the owner . . . In particular, targeting chronically irresponsible down owners may be effective."
>
> -- Jeffrey J. Sacks, et al, 2000

> "The dog bite problem is not a disease problem with a single vector; it is a complex societal issue that must address a wide range of human behaviors in ways that deal with irresponsible behavior that puts people and animals at risk."
>
> -- Randall Lockwood, 2007

The vector of injury is us!

If we want better outcomes in our communities, we need to promote responsible pet ownership: the humane care, custody and control of all dogs.