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Preserving the Human-Canine Bond

New Study Explains Why Breed Specific Legislation Does Not Reduce Dog Bites[i]

Important article now available from JAVMA website.

October 1, 2010 -- For years, evidence has mounted that breed specific legislation (BSL) fails to reduce dog bite incidents. The data supporting this conclusion has come from cities and counties all over North America, and from four European countries.

An insightful new analysis, recently published in the Journal of the American Veterinary Medical Association, explains why BSL has consistently failed to reduce dog bites. The authors, Gary J. Patronek, VMD, PhD, and Amy Marder, VMD, CAAB, of the Center for Shelter Dogs, Animal Rescue League of Boston; and Margaret Slater, DVM, PhD, of the ASPCA, have applied one of the most valuable and well-recognized tools of evidence-based medicine to this question.

Number needed to treat (called NNT) measures the effectiveness of new medicines or treatments. It asks the question: How many patients have to take the medicine or get the treatment in order for one patient to avoid a bad outcome? The fewer patients that have to be treated in order to avoid a bad outcome, the more effective scientists consider a medicine or treatment to be.

But what if we had to treat thousands of patients to avoid even one bad outcome? Would we bother with a new medicine if the number of people we needed to treat to prevent one bad outcome, was 10,000? If we could only identify 9,900 people suffering from the disease, we could not treat enough people with the new medicine to be sure that even one of them would avoid the dreaded symptom.

This is precisely the result that Patronek and his colleagues obtained when they applied this evidence-based method to estimating how many dogs a community would have to ban to prevent a single, serious dog bite. They called their mystery number the number needed to ban (NNB). Using dog bite injury data from the Centers for Disease Control, the State of Colorado, and other, smaller jurisdictions, along with guestimates of the population of various breeds or kinds of dogs, the authors calculated the absurdly large numbers of dogs of targeted breeds who would have to be completely removed from a community, in order to prevent even one serious dog bite. For example, in order to prevent a single hospitalization resulting from a dog bite, the authors calculate that a city or town would have to ban more than 100,000 dogs of a targeted breed.

To prevent a second hospitalization, double that number.

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Dog-bite related fatalities are so extremely rare that not even a state could ban enough dogs to insure that they had prevented even one. (Consider: in Denver, Colorado, after they banned pit bull dogs in 1989, they had another dog bite related fatality in the Denver area, involving another type of dog.)

Spain, Italy, Great Britain and the Netherlands have all reported that their breed specific regulations have not produced a reduction in dog bite incidents. The Toronto Humane Society surveyed health departments throughout the province of Ontario, and reported that the breed ban enacted in 2005 had not produced a reduction in dog bites. In Winnipeg, Manitoba, after the city banned one type of dog, dog bites actually rose, just involving other types of dogs. Reports from Denver, Colorado, Miami-Dade, Florida, Prince George's County, Maryland, and Omaha, Nebraska all tell the same story.

While there is no scientific evidence that one kind of dog is more likely to injure a person than another kind of dog and BSL's documented record is one of ineffectiveness, BSL remains a policy that some find attractive. Patronek, Marder and Slater explain why.

"It is our belief," they write in their conclusion, "that BSL is based largely on fear, and it has been emphasized that appeals to fear have their greatest influence when coupled with messages about the high efficacy of the proposed fear-based solution."

The documented failures of BSL, now combined with the NNB analysis, can be marshaled to undermine such fear-based appeals. BSL proponents will be unable to show "high efficacy of the fear-based solution" or that BSL is rationally related to the public safety issues communities are typically attempting to address when implementing BSL.

The complete article can be purchased from the Journal of American Veterinary Medical Association at

http://avmajournals.avma.org/doi/full/10.2460/javma.237.7.788

[i] Patronek, G., Slater, M., Marder, A., "Use of a number-need-to-ban calculation to illustrate limitations of breed-specific legislation in decreasing the risk of dog bite-related injury," JAVMA, vol 237, Number 7, October 1, 2010