ESTABLISHED EPIDEMIOLOGICAL MEASURE SHOWS WHY BREED BANS FAIL TO REDUCE DOG BITE INJURY

ABSURDLY LARGE NUMBER OF DOGS WOULD NEED TO BE REMOVED TO PREVENT ONE SERIOUS BITE

For years, evidence has mounted that breed-specific legislation (BSL) fails to reduce dog bite incidents. The data supporting this conclusion has come from North America and European countries.[1]

An insightful analysis, published in the *Journal of the American Veterinary Medical Association* in 2010, explains why BSL has consistently failed to reduce dog bites.[2] The authors, Gary Patronek, Amy Marder and Margaret Slater, 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 estimates 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.

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 can still be a policy that some find attractive. Patronek, Marder, and Slater explained 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 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 which communities are typically attempting to address when implementing BSL.

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SOURCES and NOTES

1. For more information see the National Canine Research Council Website: "Breed-Specific Legislation FAQ"
2. Patronek, G.J., Slater, M., & Marder, A. (2010). Use of a number-needed-to-ban calculation to illustrate limitations of breed-specific legislation in decreasing the risk of dog bite-related injury. *Journal of the American Veterinary Medical Association. 237*(7), 788-792.