

March 9, 2021

Dr. Michael Murphy, Director
Division of Animal and Public Health
American Veterinary Medical Association
1931 North Meacham Road, Suite 100
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RE: Arizona State Senate Bill 1353 entitled “AN ACT AMENDING SECTION 11-1010, ARIZONA REVISED STATUTES; RELATING TO ANIMAL CONTROL.”

Dr. Murphy:

The National Association of State Public Health Veterinarians (NASPHV) is submitting this letter of opposition for Arizona Senate Bill 1353 entitled “AN ACT AMENDING SECTION 11-1010, ARIZONA REVISED STATUTES; RELATING TO ANIMAL CONTROL.” This amendment would allow a licensed veterinarian in Arizona to conduct a rabies antibody titer to determine whether to administer a rabies booster vaccine to a dog. It also states that a rabies titer that shows an adequate immune response may be accepted in lieu of a rabies vaccination for all requirements in Arizona.

At this time there are two main reasons why with dogs and cats, measuring rabies antibody titers should not be used in place of routine rabies vaccination as directed by the individual vaccine manufacturer. The first is an absence of understanding the complexities of the immune response to rabies. The second is the absence of a recognized postexposure prophylaxis protocol for dogs and cats that are not currently vaccinated. What we do know is that animals that have been vaccinated according to the recommended schedule almost always survive rabies exposures, even if they do not receive the recommended vaccine booster after an exposure. The routine vaccination of dogs against rabies was the most effective strategy in the elimination of the canine variant of the rabies virus in North America and an unprecedented accomplishment in both animal and public health.

While much has been learned over the past decade, more research is needed to help elucidate how a measurable antibody response in animals correlates with actual immunity and protection from disease. There is not yet a full understanding of the pathogenesis of the virus or the immune response to the virus including the absence of detectable neutralizing antibodies during the incubation period or the role of cell mediated immunity in preventing disease. There are several examples of animals with elevated titers, but that have succumbed to rabies virus infection in challenge studies. Historically, there has been no good system in place to collect standardized data on domestic animals that have been diagnosed with rabies, and therefore limited opportunity to better understand the vaccination histories for animals that were infected. Studies performed prior to licensing of a veterinary biologic are robust and generate the needed amount of information upon which to base vaccination protocols. Any attempt to circumvent

these protocols via legislation or regulation is risking the proven effectiveness of these programs and the health of both pets and the public.

In humans, there is a recognized effective and recommended post exposure prophylaxis (PEP) protocol to prevent diseases in people who have been exposed to the virus. The protocol is based on our years of research, experience and our understanding of the vaccines that have been approved for use in people. People who receive PEP have had a recognized rabies exposure.

While rabies PEP is always recommended following a known rabies exposure, the hope is that an elevated titer will protect against an unrecognized exposure when PEP is not administered. This is based on the understanding that the presence of circulating antibodies suggests the ability to mount an anamnestic response to the virus.

In animals, administration of regular rabies vaccinations is intended to maintain an elevated titer and provide ongoing protection. Similar to people, if an exposure occurs the animal should receive a booster dose of rabies vaccine. In animals, we can theorize that a serologic titer could be used in the same way. However, the difference is that at this time, we do not have a well-documented post-exposure prophylaxis protocol that is known to prevent rabies in animals. In addition, many rabies exposures in domestic animals go unrecognized thus negating the ability to reliably apply a post-exposure prophylaxis protocol. What we do know is that animals that have been vaccinated according to the recommended schedule tend to survive rabies exposures, even if they do not receive the recommended vaccine booster after an exposure.

There is a lot of ongoing research studying the immune response in animals to the rabies virus and rabies vaccines which will be used to inform guidance on the appropriate management of pets to prevent rabies. We are optimistic that as additional data are gathered and published in peer-reviewed publications that there may well be a place for serologic monitoring in the recommendations for rabies prevention in animals. Significant modifications were made to the last version Compendium of Animal Rabies Prevention and Control from 2016 based on new findings reported in the literature. We continue to identify ways to improve the Compendium and ensure humane management recommendations while preventing exposures to a rabid animal. The use of titers to guide decisions about rabies booster vaccination has been discussed often. Additional modification may be made to the Compendium as we learn more about the immune response and gather supportive data.

Sincerely,



Catherine M. Brown, DVM MSc MPH



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NASPHV Compendium of Animal Rabies Prevention and Control Co-chairs



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public health veterinarians