

THE CLOCK IS TICKING: UPDATE ON THE DANGEROUS WORLD OF VECTOR-BORNE DISEASES

Illinois State VMA Convention 2023

Jay Tischendorf DVM

wildlifevetusa@gmail.com

406-799-4405

Given that they transmit a greater number of infectious diseases than any other vector, ticks may well be one of Nature's most effective systems for population control. Indeed, seemingly every few years a new tick-transmitted infectious disease is discovered. Such discoveries are typically accompanied by an index case involving a human who became ill or even died. With this in mind, in today's world when it comes to our pets, our other family members, and ourselves, any life stage of any species of tick anywhere, anytime must be considered not just dangerous but potentially deadly. In fact, due simply to the wide range of disease risks they represent, it increasingly makes sense to avoid exposure to ALL possible vectors, including fleas, flies, mosquitoes, and others.

In North America, a partial list of tick-borne diseases includes tularemia, Lyme disease and a close Borrelia relative or two, Heartland virus, Bourbon virus, Powassan virus, Anaplasmosis, Babesiosis, Colorado tick fever, tick-borne relapsing fever, and a who's who of Rickettsial diseases including Rocky Mountain spotted fever and several similar maladies (Rickettsia parkeri, tidewater, and 364D Rickettsioses), plus a range of Ehrlichiosis, or Ehrlichial diseases.

This human-centric report from the CDC provides excellent coverage of many of these conditions:
<https://www.cdc.gov/mmwr/volumes/65/rr/pdfs/rr6502.pdf>

These diseases all stem from so-called "hard ticks." It's very important to note that soft ticks can also transmit significant diseases to our pets and our other family members. This is yet another reminder, as noted above, to make every possible effort to avoid all possible vectors and aggressively prevent their bites. It is hardly hyperbole to say that if a tick or other ectoparasite isn't transmitting a disease we know of today, it's transmitting one we will discover next month or next year. Why take a chance?

Fortunately, for both people and pets, there are safe and effective parasite prevention products. Collectively, as a profession, we need to be more committed and aggressive in getting our clients to use these critical products. When considering the implications of sick animals and treating diseases which may be terribly debilitating or even fatal, these products are incredibly economical. Increasingly, in fact, I recommend a multi-modal approach, which for pets involves utilizing a combination of approved products such as a topical repellent compound in conjunction with a systemically acting medication. Vectors that manage to somehow break through and survive the initial topical barrier and its potent repellent (plus or minus 'cidal') effects will then face the largely lethal capabilities of the secondary, systemic product. Such a protocol provides very thorough, multi-layered protection.

Taking a purposeful “AIDD” approach to vectors is also advised. AIDD stands for Avoid, Inspect, Detect, and Destroy. This approach entails 1) Avoiding areas and environments that may harbor vectors or other parasites, 2) Inspecting our pets for ectoparasites after going into such areas when we absolutely can’t avoid them, 3) Detecting any parasites or vectors on our pet, and 4) safely removing and Destroying any parasites we find.

On a related note, at risk of being called a hoarder, as my ex-wife frequently claimed I was (I prefer the term “archivist”), I do recommend saving any ticks or other insects collected from a pet (or family member) on the off chance that the victim comes down with any unexplained ailments in the future. Several labs are now available for testing ticks for a broad range of pathogens, so this is an additional option for monitoring the presence and risk of vector borne microbes whether it be for ticks collected from our pets or us, or simply from the environment.

There is much to cover on this subject of vectors and disease. This introductory write-up highlights some of the many topics and perspectives that will be discussed in-person during this presentation.