

Tickborne Disease Work Group 2023

August 14, 2023

Meeting location: virtual

Meeting time: 11AM-3PM

Meeting participants:

Vanessa Wigand, Virginia Department of Education
Matthew Allen, Virginia Hospital and Healthcare Association
Holly Gaff, Old Dominion University
Wayne Hynes, Old Dominion University
Joshua Bernick, Virginia Department of Health
Lori Flammia, Virginia Department of Health
David Gaines, Virginia Department of Health
James Broyhill, Virginia Department of Health
Julia Murphy, Virginia Department of Health
Tracy Woodall, Virginia Department of Health
Kathy Hosig, Virginia Cooperative Extension
Monte Skall, National Capital Lyme Disease Association
Greg Skall, National Capital Lyme Disease Association
Sammy Zambon, Virginia Department of Conservation and Recreation
Maria Circosta, Virginia Council of Nurse Practitioners
Jennifer Platt, Tick-Borne Conditions United
Linda Grace, Virginia Veterinary Medical Association
Ellen Stromdahl, Defense Centers for Public Health
John Tracey, Department of Wildlife Resources
Jory Brinkerhoff, University of Richmond
Katelyn Jordan, Virginia Farm Bureau
Chris Haskins, Virginia Farm Bureau
Robyn Nadolny, Defense Centers for Public Health
Samantha Adhoot, American Academy of Pediatrics, Virginia chapter
Kaila Cooper, Virginia Infection Prevention Training Center
Samuel Shor, Clinical Associate Professor George Washington University
Carrie Bissett, Virginia Department of Agriculture and Consumer Services
Charles Paullin
Emily Spangler
Lauren Schmitt
Diane Fore
Debi Fleishman
Amanda Warren

Welcome and Introductions

Julia Murphy, State Public Health Veterinarian with the Virginia Department of Health (VDH), introduced herself and welcomed the attendees. All attendees introduced themselves by name and affiliation.

Meeting Minutes

Julia Murphy reviewed the minutes from the meeting convened on 7/13/2023 and asked for corrections. The only correction offered was changed the spelling of the last name of Wayne Hynes, Old Dominion University. The group unanimously agreed that these minutes should be approved pending the correction. The July 13, 2023, minutes will be uploaded to the Virginia Regulatory Town Hall. The minutes from this meeting will be posted by 8/26/23.

Report timeline and enrolled bill language review

Julia Murphy reported to the work group that the timeline for the final report submission to the VDH leadership is September 1, 2023. The final report is due to the General Assembly on November 1, 2023. A review of the language:

The language of HB2008, which was enacted by the 2023 General Assembly on March 21, 2023, and major aspects of tickborne disease that the work group has been tasked with addressing in its report were reviewed, namely:

- i. increasing public awareness of tick-borne diseases and strategies for preventing tick-borne diseases
- ii. (ii) educating health care providers and the public about the importance of and need for early diagnosis and treatment of tick-borne diseases
- iii. (iii) improving public health surveillance and data collection related to tick-borne diseases, and
- iv. (iv) developing and implementing strategies to reduce tick populations and reduce the risk of exposure to and transmission of tick-borne diseases in the Commonwealth.

Review of recent report updates

Matthew Allen, from the Virginia Hospital and Healthcare Association, had recommended a change to the map illustrating where ticks reside, and Joshua Bernick, from the Virginia Department of Health (VDH), has improved the map. Joshua Bernick is waiting for more information from the Fairfax County entomology department and worked with Holly Gaff, from Old Dominion University, regarding the accuracy of locations. The group commented that the elevation and color coding is improved, and Julia Murphy asked if there were any other questions regarding the map. Ellen Stromdahl also offered that she and Robyn Nadolny could share Defense Centers for Public Health tick data to help offer a perspective on tick ecology in areas of the map not yet covered and will share those with VDH after this meeting. There was reflection on Katelyn Jordan's (Virginia Farm Bureau) earlier thoughts on Virginia landscapes and that perhaps local governments should include tick management and mitigation strategies in their plans. Wayne Hynes made a correction to "biology" where there is discussion of funding as not everyone is familiar with the area of entomology.

Group discussion

There was much discussion regarding individual tick testing. Ellen Stromdahl, representing the Defense Centers for Public Health, offered that tick testing is an excellent teaching opportunity. Greg Skall's (National Capital Lyme Disease Association) response was that some individuals do have problems getting testing done. He recommended developing criteria to present to private labs to help with result interpretation. Samantha Adhoot, from the Virginia chapter of the American Academy of Pediatrics, advised that patients can collect ticks off themselves and when they receive results, they cannot interpret them which may cause anxiety. She also stated that results from tick testing should not be given to patients if it is only for entomological purposes. Robyn Nadolny, from the Defense Centers for Public Health, added that tick test results should come with language explaining the utility and the limitations of the result, and this is a great educational opportunity. James Broyhill, from the VDH, stated that tick testing can be beneficial after patient symptoms develop. Joshua Bernick added that test results can be influenced by sample handling such as how ticks are stored and how sample can degrade prior to being tested if not stored in ideal conditions. David Gaines, from the VDH, offered that ticks can be removed and put in alcohol, but that limits testing to bacterial agents as viral testing requires the tick specimen to be placed in a -80C freezer quickly after removal. Robyn Nadolny added that the ticks can be frozen and dated for testing purposes. It was also mentioned by clinicians in the group that testing ticks in advance was not useful for primary care providers. The results derived from a tick specimen did not aid them in the treatment of the patient. Samantha Adhoot also stated that testing results caused a lot of anxiety in patients should the results come back positive for a tick-borne illness.

David Gaines stated VDH is not able to submit every tick for testing due to limited resources and tick testing is not available for every pathogen. VDH will sometimes collaborate with universities regarding tick testing for entomological surveillance purposes. From the standpoint of testing ticks associated with individual patients, a concern is that a negative result could give a false sense of security depending on the panel and methods used to test the tick and concerns about test results that may exclude diseases that the tested specimen is known to transmit and/or include disease agents that are not transmissible by that particular species of tick. To be sustained at the state level, this kind of tick testing would also require funding. Monte Skall stated she has worked with Old Dominion University, they ask for a donation, and they will test for most likely pathogens. This was confirmed by Wayne Hynes. Holly Gaff suggested that perhaps a recommendation could be made for research to better understand tick testing methods and how/if this information could be used in a clinically appropriate way.

Presentations

Tickborne Illnesses: Educational Strategies

Kaila Cooper

This presentation focused on adult learners and health literacy within the context of tick-borne disease. Educational opportunities, particularly in association with reportable diseases, literacy strategies, adult learners and measuring education effectiveness were presented. Concepts and thoughts presented include: the need to invest more effort in how we educate around those key periods where we know we have peak periods of disease, how we can have more robust disease surveillance, how best to target people at higher risk of exposure, understanding health literacy

of the target audience. The National Action Plan to Improve Health literacy was cited as a reference. Concepts related to adult learners were also presented including the need for educational opportunities to be flexible and take into consideration that adults can be slower learners. Also stressed the importance of assessing the effectiveness of the education through participant feedback and the value of collaborative learning.

Physician Education: Where might we improve outcomes?

Samuel Shor

This presentation focused on the goal of decreasing Lyme Disease in Virginia. Concepts associated with chronic manifestations of Lyme disease and, by extension, poor quality of life were presented. In light of the potential for these long-term sequelae, prevention was presented as a key goal. Prevention minimizes exposure. Concepts presented emphasized some reassessment of recommendations for prophylaxis, tick attachment and acute line management. For instance, some studies suggest that not all tick feeding is uninterrupted and Lyme disease transmission may occur more rapidly than is currently thought and, in light of that perhaps any tick attachment warrants a longer course of antibiotic prophylaxis than is currently recommended. In addition, some studies suggest that initial treatment times may need to be longer than currently recommended. Finally, it was stressed that healthcare providers need to be aware that Lyme disease can be complex and need to understand that there can be individual patient variations such as a lack of erythema migrans rash, differences in rash appearance based on skin color and response to treatment.

Tick borne diseases in Virginia: Pediatrician perspective

Samantha Adhoot

This presentation focused on the prevention of tickborne diseases and the need for education for healthcare professionals and the public. One key concept shared was the need for better information about the safety of tick repellents and their proper use including the concentration of the repellent and the difference between adults and children in that regard. The confusion patients often have about tick removal and the need for better communication about how to remove a tick properly was shared. In addition to tick borne disease prevention efforts, it was stressed that messages about prevention should not make people fearful of the outdoors and the continued need to message that it is fine to give doxycycline to children. It was also emphasized that healthcare providers need to maintain a high index of suspicion even if the presentation is less typical offering an example of arthritis in the foot/toe as opposed to the knee. Regarding treatment, pediatricians need continued reassurance of the safety of doxycycline for children, the specific duration of illness for the different phases of Lyme, and also the treatment for other suspected tick-borne diseases.

Tick-borne Disease: A Clinical Perspective

Maria Circosta

This presentation focused on the speaker's personal journey with Lyme disease and co-infections which led her to become a healthcare professional. Concepts reviewed included the limitations

of two tired testing for Lyme disease, the clinical diagnosis of Lyme disease in the absence of testing and the use of alternative testing for Lyme disease. One challenge regarding patient management is the time healthcare professionals have to spend with their patients since a detailed history and work up may be necessary. In addition, healthcare providers need education about diagnosis and treatment and there needs to a concerted initiative to reconcile the two sets of guidelines, one from the Infectious Disease Society of America and one from International Lyme and Associated Disease Society, in this regard. Until guidelines are reconciled, Virginia healthcare providers should have access to education on the different guidelines. Education is important and not just a primary care provider issue. Specialists such as those in rheumatology, infectious disease, cardiology and neurology should be involved in tick-borne disease education as some conditions, such as Lyme disease, can have manifestations that affect various body systems. Education needs to start at the student level and be supported by hospital system leadership. One suggestion was that hospital systems could consider offering continuing education credits on a regular basis, making providers aware of the differences between the two sets of guidelines.

Final Discussion/Public Comment

Monte Skall stated that there should be a free one-day workshop for all physicians regarding the treatment and diagnosis of tick-borne diseases that includes various perspectives on Lyme disease as well as alpha-gal allergy and wants to work on reviving a workshop she had been coordinating with Virginia Commonwealth University before the COVID-19 pandemic. Maria Circosta stated that she could reach out to the Virginia Council of Nurse Practitioners to see if they are willing to include a lecturer at their annual conference. Samantha Adhoot will suggest that this type of education be added to the recurring pediatrician conferences that she attends. Linda Grace inquired about creating a one health symposium on Lyme which would include a human and a veterinary emphasis.

General public comment included the following:

Amanda Warren stated that she agrees that a collaborative effort like this is necessary and could give hope to the public, however her experience as a community advocate and nonprofit board member is that often the voice of those we are serving is left out of the conversation, so it's important that a conference is addressing patient needs. Diane Fore who works with primary care providers offered that we need to leverage technology for surveillance and investigation. Julia Murphy added that we focus on data modernization with electronic case reporting, but we also need a clinical interface in addition to laboratory information. Jennifer Platt, from Tick-Borne Conditions United, highlighted that there is a huge interest in seeing alpha-gal as a reportable disease. She recommended that campaign letters be sent to legislators of states including Virginia for this purpose.

The minutes will be shared from this meeting along with the next and final iteration of the report.

This meeting was adjourned at 3:05PM.