

Overview of Virginia's Vectorborne Disease Activity in 2025

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What does the health department do?



Receives select data for **reportable conditions**.



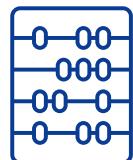
Information is **analyzed, shared**.



Cases are **investigated**.



Interventions may be **enacted**.



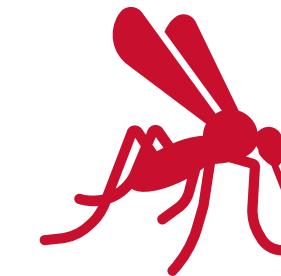
Cases are **classified and counted**.

Mosquitoborne Diseases

Reported Human Cases in Virginia, 2025

Disease Name	Confirmed + Probable (n)
West Nile	31
La Crosse Encephalitis	1
Malaria	94
Dengue	22
Chikungunya	3

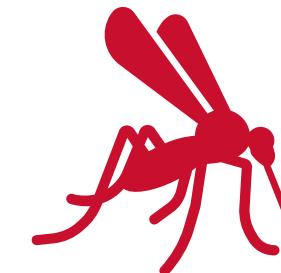
Imported



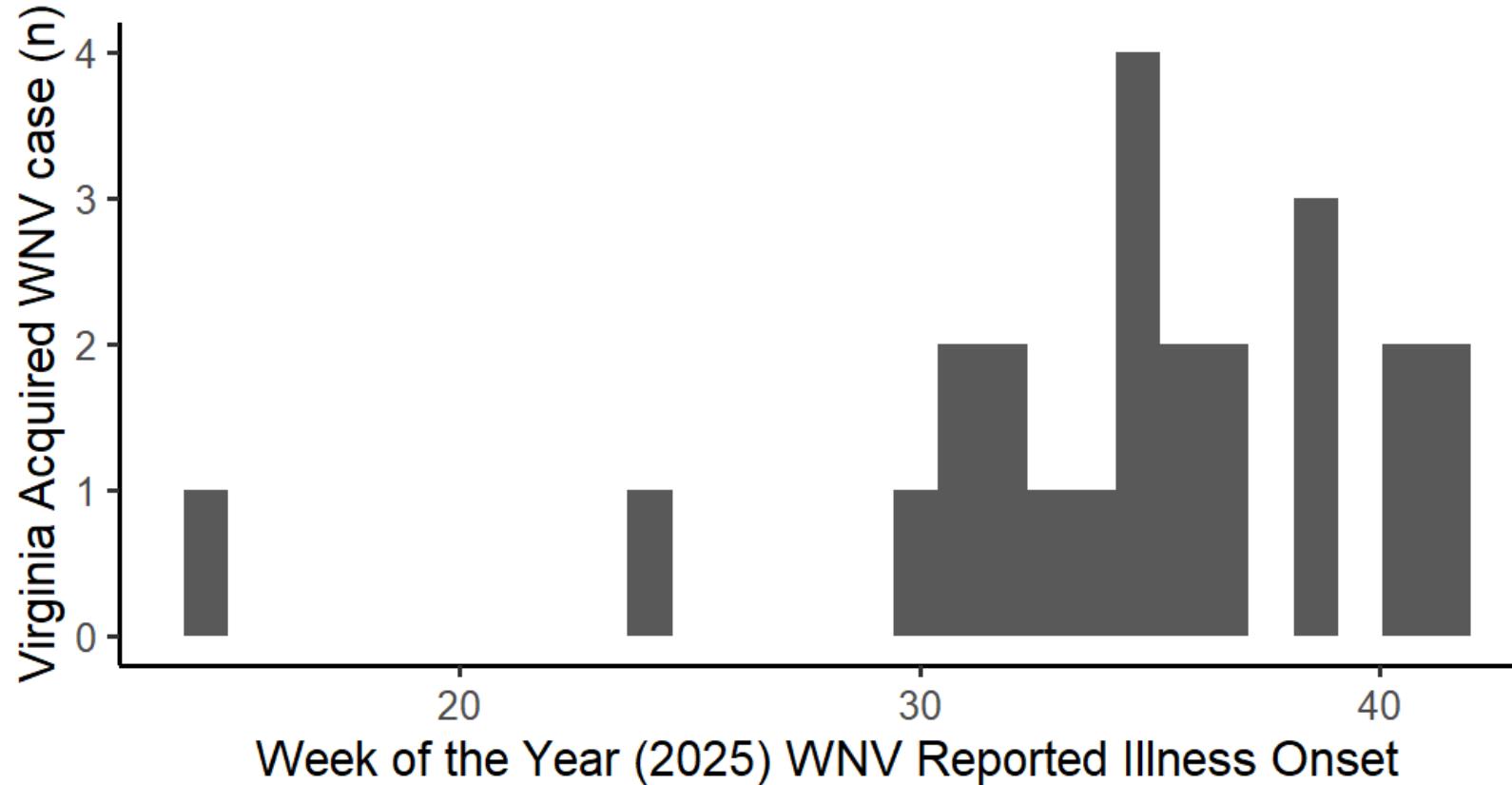
West Nile Virus in People, 2025

Confirmed and probable n = 31

- 20 neuroinvasive cases, 11 non-neuroinvasive
- Age range 22–86 (median 63)
- 24 cases determined to be acquired in Virginia
 - Unknown/Unlisted = 5
 - Out of State = 2

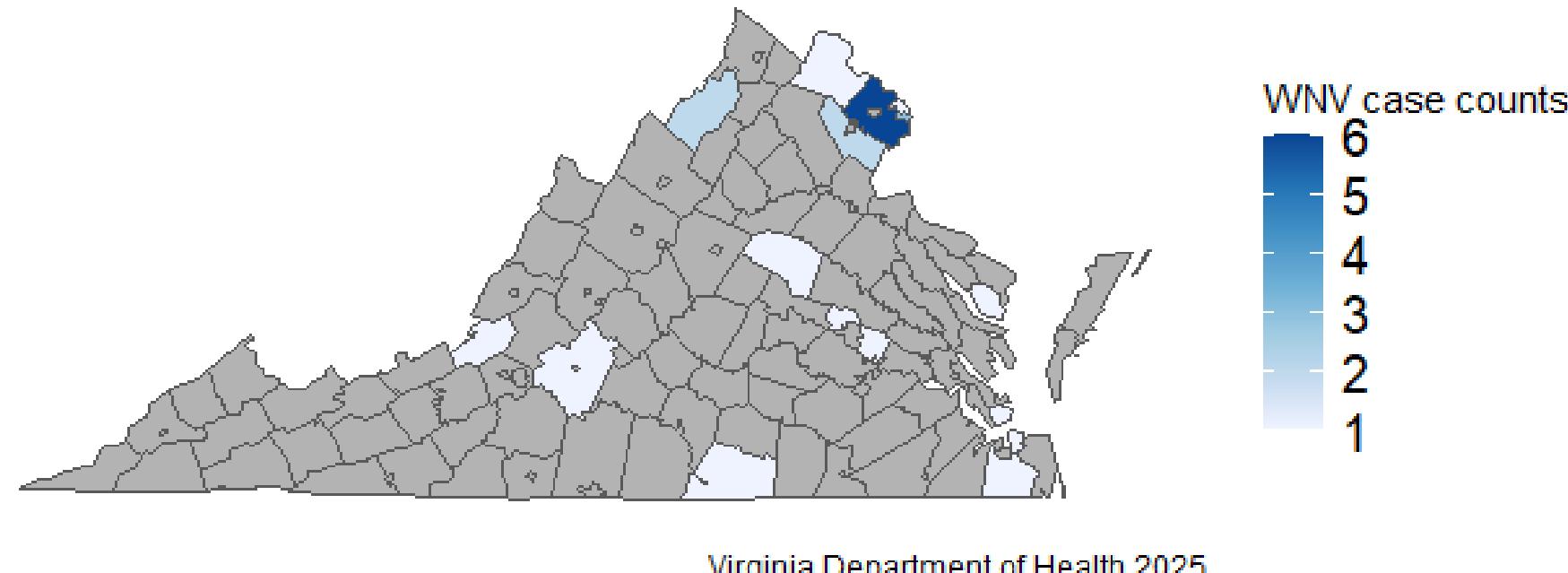


VA-acquired WNV cases' illness-onset week, 2025



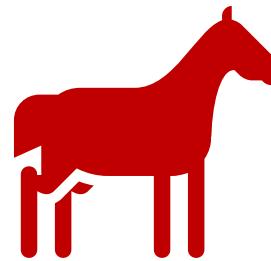
75% of Virginia-acquired cases occurred during WOTY 30–40

WNV Indigenous Case Counts by Counties, 2025

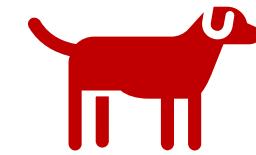


Confirmed and probable cases displayed by disease acquired location determined to be in-state (n = 24).

Animal Vector-borne Cases in 2025



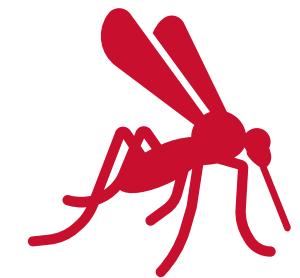
4 equine WNV cases
1 equine EEE case (fatal)



1 canine RMSF case (fatal)
under investigation

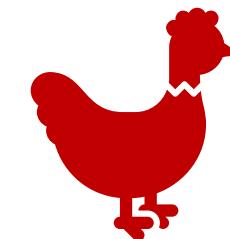
Mosquito Infection Data for 2025:

Jurisdiction	WNV Pos Pools	EEE Pos Pools
Chesapeake	23	1
Fairfax	58	
Fairfax Co.	514	
Falls Church	31	
Henrico Co.	72	
Norfolk	45	
Prince William County	229	
Suffolk	10	1
York Co.	18	



Sentinel Chicken Data, 2025

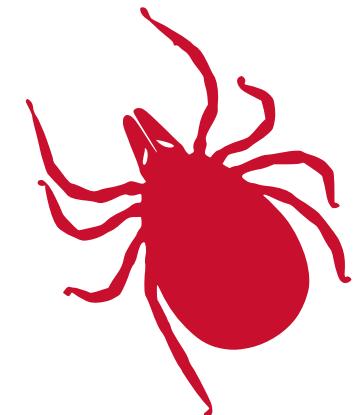
- 2 WNV positive chickens:
 - 1 reported in week 33 and 1 reported in week 37.
- 1 EEE positive chicken reported from week 38.



Tickborne Diseases

Reported Human Cases in Virginia, 2025

Disease Name	Confirmed + Probable (n)
Lyme disease	1634
Ehrlichiosis	170
Spotted Fever Rickettsiosis	87
Anaplasmosis	83
Babesiosis	23



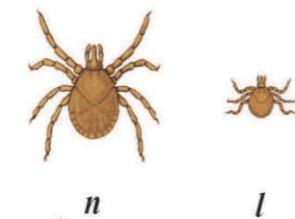
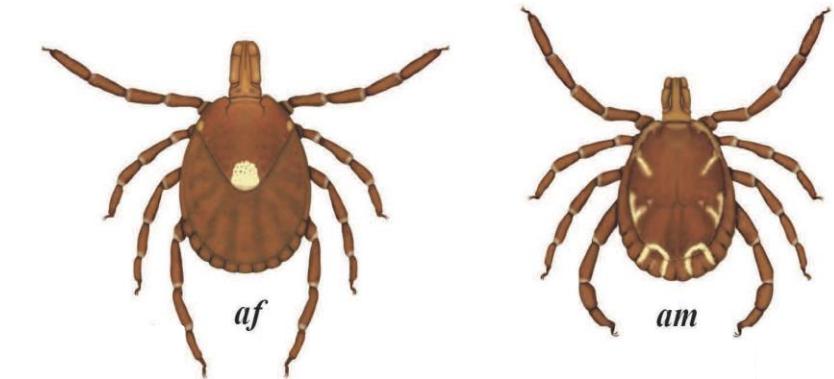
Alpha-gal Syndrome (AGS)

An acquired allergy to the galactose- α -1,3-galactose sugar molecule.

- Found in cattle, pigs, sheep, deer, and other mammals
- Mammal-derived products (gelatin, dairy)

AGS is primarily associated with the bite of a lone star tick (*Amblyomma americanum*).

- It is unclear why some people develop AGS and others do not
- One bite may be sufficient to induce AGS; multiple bites increase risk



AGS Illness Presentation

- Adult onset with broad clinical presentation
- Skin reactions such as hives and itching as well as anaphylaxis are common features; some patients may have gastrointestinal or respiratory symptoms
 - Typically, 3-6 hours after alpha-gal consumption

OR

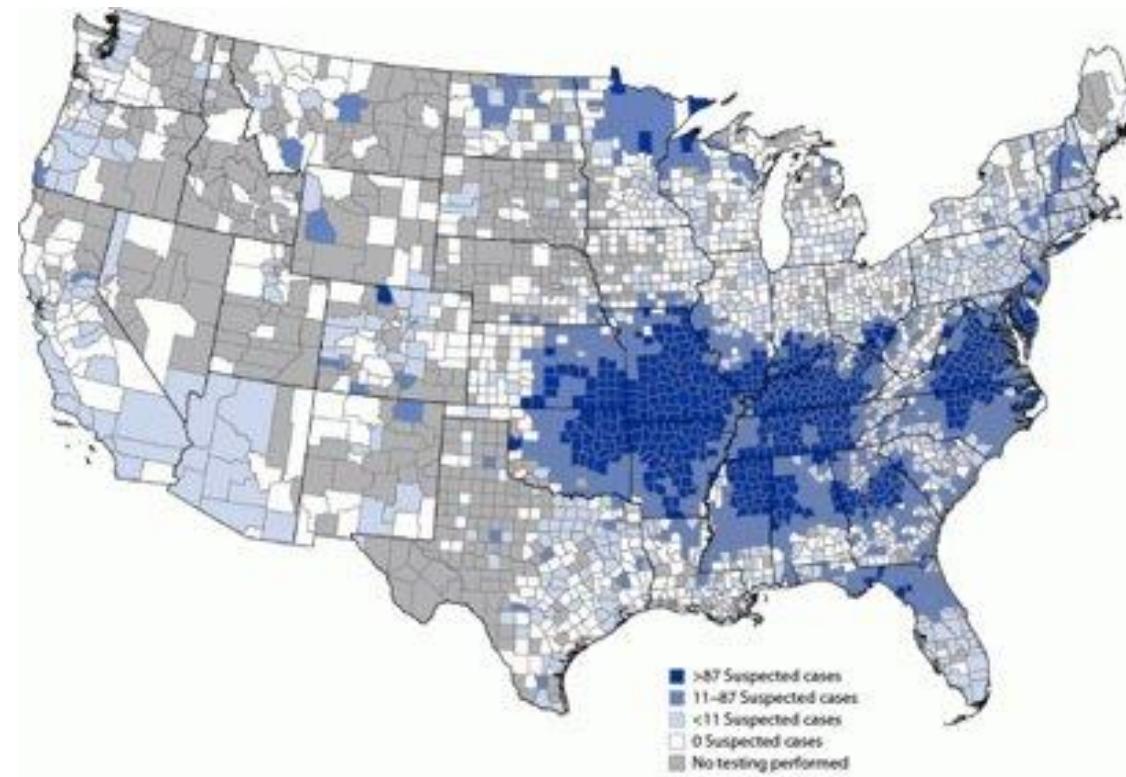
- Immediately after IM, IV, or SQ administration of alpha gal-containing medication/vaccination



Commins SP. Diagnosis & management of alpha-gal syndrome: lessons from 2,500 patients. *Expert Rev Clin Immunol*. 2020 July; 16(7): 667–677.

Tripathi A, et al. Delayed Anaphylaxis to Red Meat Masquerading as Idiopathic Anaphylaxis. *Allergy Clin Immunol Pract*; May/June 2014.

Geographic Distribution of Suspected Alpha-gal Syndrome Cases United States, January 2017–December 2022

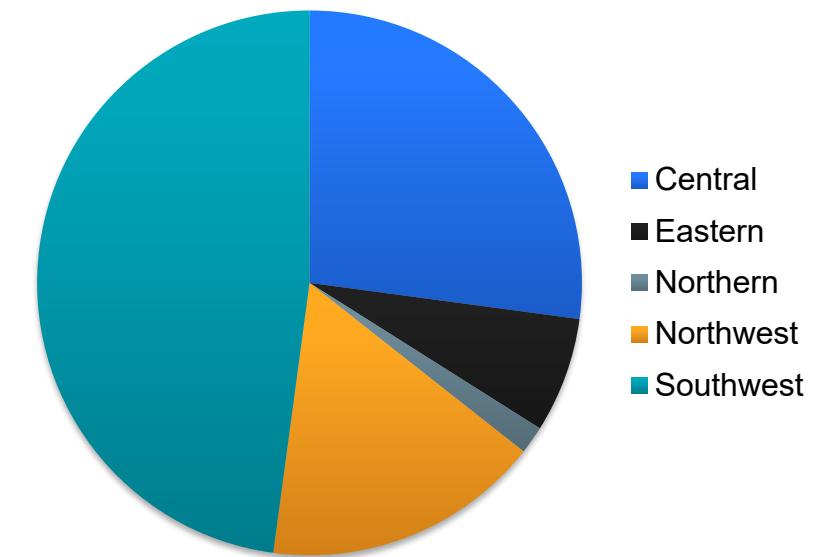


Thompson, et al. Geographic Distribution of Suspected Alpha-gal Syndrome Cases — United States, January 2017–December 2022. <https://www.cdc.gov/mmwr/volumes/72/wr/mm7230a2.htm>

Alpha-gal Syndrome is Now Reportable to VDH

- Voluntary lab reporting began in 2024
 - Able to assess anticipated volume
 - Identify regions for potential interventions
- Mandatory reporting began in September 2025
 - Sampling strategy for case investigations
- Data analysis and surveillance evaluation in progress

Positive Alpha-gal Laboratory Reports by VDH Region

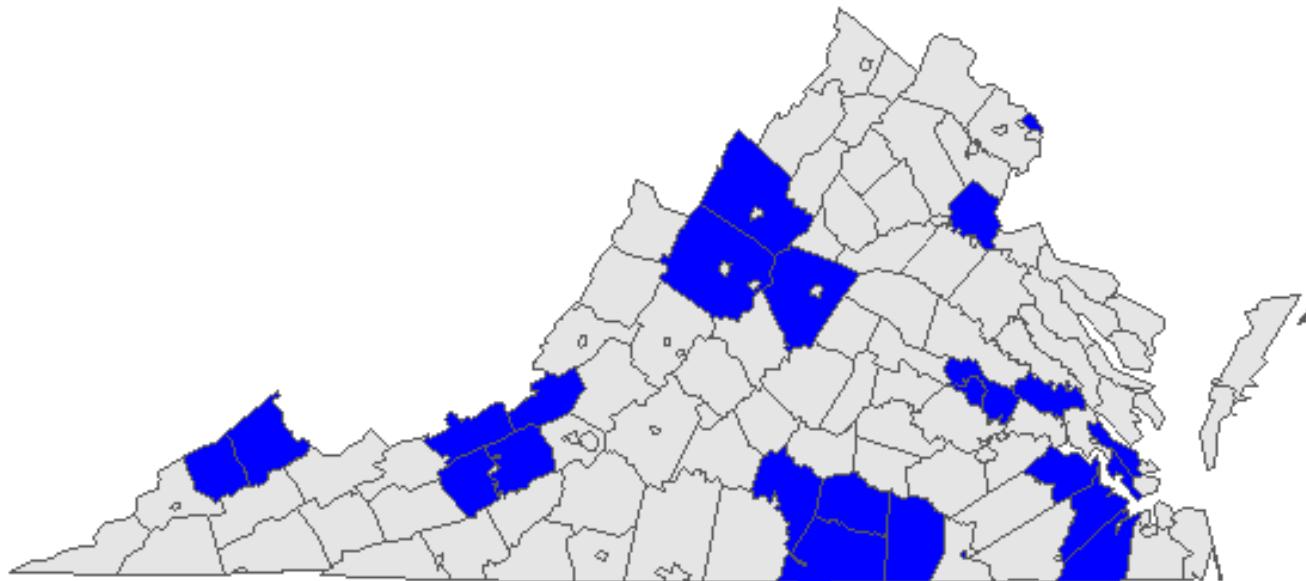


What AGS Might Mean for Vector Control:

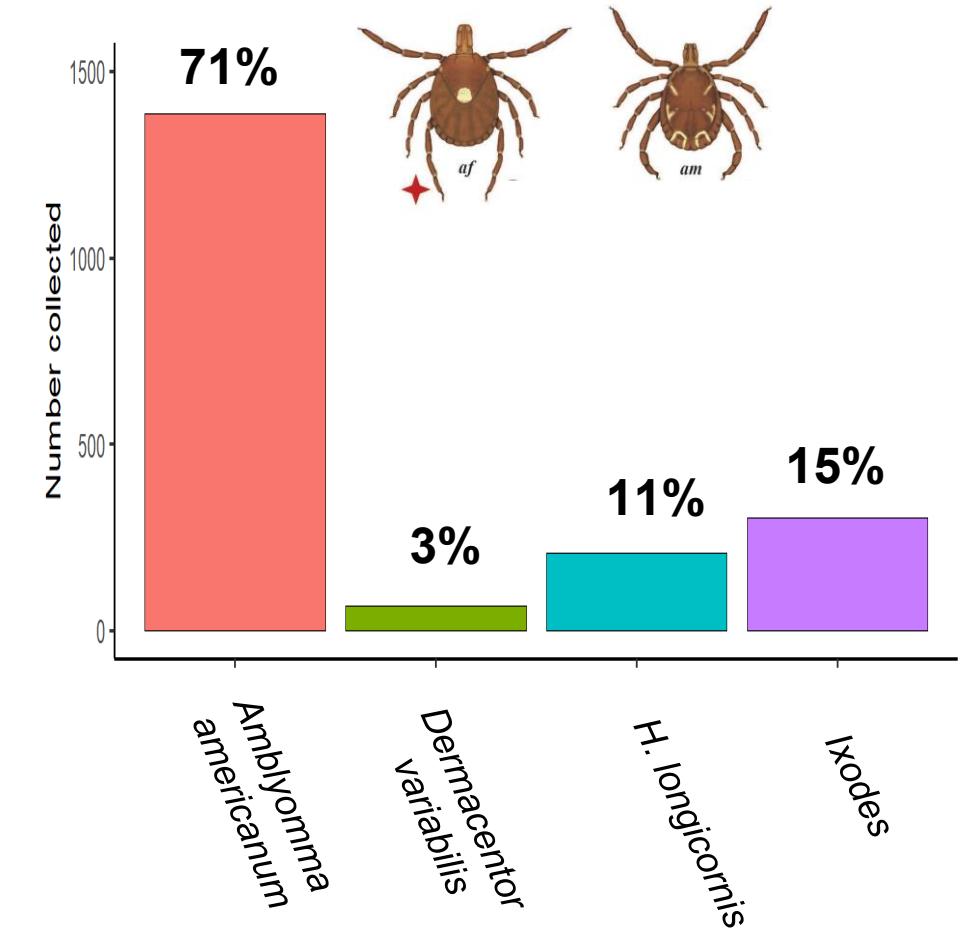
- There is no cure for AGS, preventing tick bites is the main strategy for AGS intervention.
- Increased attention on the range, density of *Amblyomma americanum* (lone star) tick to assess risk.
 - Tick testing not recommended/available for alpha-gal sugar molecule in ticks.
- Increased attention on developing/strengthening tick control measures and surveillance.



Tick Surveillance in 2025



Virginia Department of Health Tick Drags, April 2025-July 2025



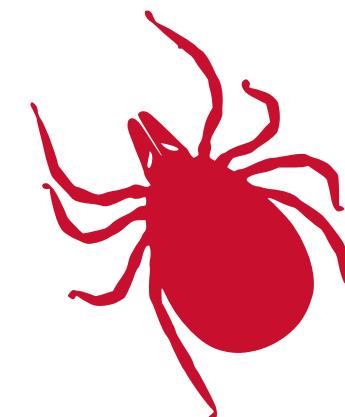
41 sites across 26 counties or independent cities

Tick Infection Data in 2025

300 *Ixodes* ticks were sent to CDC for pathogen testing from VDH active surveillance dragging efforts:

Ixodes scapularis (n = 253)

- *Borrelia burgdorferi*: 13% positive
- *A. phagocytophilum* (human strain): 1% positive
- *Babesia microti*: 0%
- *Ehrlichia muris eichlarrensis*: 0%

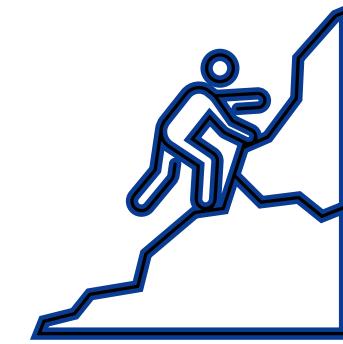


Ixodes affinis (n = 31)

- *Borrelia burgdorferi*: 55% positive

Plans for 2026

- Revisit printed materials
- Tick surveillance maps on VDH website
- Revive the internal mosquito activity report
- Draft emergency response & preparedness plans
- Conduct tick surveillance in under-surveyed counties
 - Provide support to counties beginning/engaging in surveillance
- Open citizen tick submissions to companion animals
- Outreach to counties without mosquito control districts



Questions?