

TO: Vermont Health Care Providers and Health Care Facilities
FROM: Natalie Kwit, DVM; State Public Health Veterinarian

Changes to Lyme Disease Reporting for Surveillance Purposes

Background:

In 2019, Vermont had the second highest incidence of Lyme disease in the nation, estimated to be 113 confirmed cases per 100,000 people. To estimate the burden of diseases, the Vermont Department of Health (VDH) performs routine surveillance for [reportable infectious diseases](#) using [standardized national case definitions](#) set forth by the Council of State and Territorial Epidemiologists (CSTE). Historically, surveillance for Lyme disease required health care providers to report specific clinical information on all potential cases of Lyme disease.

Beginning in 2022, the [national case definition for Lyme disease](#) no longer requires the reporting of clinical information for cases in high-incidence states, like Vermont. This change to laboratory-based surveillance will improve standardization of reporting and comparability of case counting among high-incidence states, which represent approximately 95% of all reported cases of Lyme disease in the United States. We anticipate that using a laboratory-based approach will increase annual case estimation by about 20% compared to previously reported averages in recent years.

This change in reporting is only applicable to Lyme disease. Other reportable tickborne infections that are locally transmitted in Vermont from the bite of infected blacklegged ticks (*Ixodes scapularis*) include:

- Anaplasmosis
- Babesiosis
- *Borrelia miyamotoi* disease
- Powassan virus

Reportable tickborne infections that are less common because they are acquired outside of Vermont and transmitted by different species of ticks include:

- Ehrlichiosis
- Spotted fever rickettsiosis (e.g., Rocky Mountain spotted fever)

Requested Actions:

- **Report suspected or confirmed cases of non-Lyme tickborne diseases to VDH.** Health care providers are still required to report clinical information for cases of anaplasmosis, babesiosis, *Borrelia miyamotoi* disease, ehrlichiosis, spotted fever rickettsiosis (e.g., Rocky Mountain spotted fever) and Powassan virus disease. Report by calling the Infectious Disease Program at 802-863-7240 or 1-800-640-4374 (within VT only) 7:45 AM–4:30 PM on business days, sending paper reports by confidential fax to 802-951-4061, or by enrolling in [electronic case reporting](#).
- **Only report cases of Lyme disease with severe manifestations (e.g., Lyme carditis or neurologic manifestations).** Report by the same means as above. This allows VDH to continue to monitor for and increase health care provider and public awareness of severe and potentially fatal outcomes of Lyme disease. VDH will continue to track all other Lyme disease cases through laboratory-based reporting using the updated national case definition.
- **Consider testing for Lyme disease.** Test patients presenting with non-specific influenza-like illness in the summer or fall—especially if there is a history of a tick bite or exposure to tick habitat. CDC currently recommends a two-step testing process for Lyme disease. Both steps should be ordered using established clinical testing networks and performed on the same blood sample.
 - In addition to the standard two-tiered test (STTT) methodology – a sensitive enzyme immunoassay (EIA) or immunofluorescence assay, followed by a reflex western immunoblot assay for specimens yielding positive or equivocal results – FDA approved several Lyme disease serologic assays based on a modified two-tiered test (MTTT) methodology using a second EIA in place of a western immunoblot assay. Both first and second tier assays used for MTTT must be FDA-cleared for this purpose.
 - The overall result for STTT or MTTT is positive only when the first test is positive (or equivocal) **and** the second test is positive (or for some tests equivocal). Some tests give results for two types of antibodies, IgM and IgG. Positive IgM results should be disregarded if the patient has been ill for more than 30 days.
 - Both STTT and MTTT methodologies may be used for diagnostic and surveillance purposes.
- **Patients should be treated presumptively based on clinical suspicion while awaiting test results.** Most Lyme disease tests are designed to detect antibodies made by the body in response to infection. Antibodies can take several weeks to develop, so patients may test negative if infected only recently. Doxycycline may be used as first-line

treatment for suspected Lyme disease in patients of all ages.¹

- **Learn more about effectively diagnosing and treating Lyme disease.** New and updated resources are available for health care providers and organizations to assist with diagnosis and management of Lyme disease:
 - [2020 Guidelines for the Prevention, Diagnosis and Treatment of Lyme Disease](#)
 - [Association of Public Health Laboratories \(APHL\) Guidance and Interpretation of Lyme Disease Serologic Test Results](#)

If you have any questions, please contact the HAN Coordinator at 802-859-5900 or vthan@vermont.gov.

HAN Message Type Definitions

Health Alert: Conveys the highest level of importance; warrants immediate action or attention.

Health Advisory: Provides important information for a specific incident or situation; may not require immediate action.

Health Update: Provides updated information regarding an incident or situation; unlikely to require immediate action.

Info Service Message: Provides general correspondence from VDH, which is not necessarily considered to be of an emergent nature.

¹ American Academy of Pediatrics., In Kimberlin, D. W., In Brady, M. T., In Jackson, M. A., & In Long, S. S. (2018). *Red book: 2018-2021 report of the Committee on Infectious Diseases*.