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Maine Health Alert Network (HAN) System

PUBLIC HEALTH ADVISORY

To: All HAN Recipients
From: Dr. Siiri Bennett, State Epidemiologist
Subject: **2017 Lyme and other Tickborne Disease Information**
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Abstract:

Lyme disease is the most common vectorborne disease in Maine. Ticks are already out and we expect the number of Lyme disease cases to increase as the weather continues to get warmer. **May is Lyme Disease Awareness Month in Maine** and we want to encourage Mainers to be tick smart.

The purpose of this advisory is to:

- Provide general information regarding ticks and Lyme disease
- Remind providers to report cases of Lyme disease, including those diagnosed by erythema migrans
- Provide resources on diagnosis and treatment of Lyme disease
- Remind providers that anaplasmosis, babesiosis and other tickborne diseases are also increasing in Maine

2017 Lyme and other Tickborne Disease Information

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Background:

Lyme disease is a bacterial infection that is carried by *Ixodes scapularis* (the deer tick). Cases have increased over the last decade in Maine, and occur in all 16 counties. Providers reported over 1,485 cases of Lyme disease statewide in 2016, an increase from 2015. Lyme disease is most common among school age children and mature adults over the age of 65. Most infections occur during the summer months, and as the weather continues to warm up, more ticks will be out in the open, and we are likely to see more cases of Lyme disease. Providers have already reported cases in 2017, and the number will rise as we enter the summer months.

Symptoms:

The most common early symptom of Lyme disease is an expanding red rash (erythema migrans) that occurs 3-30 days after being bitten. Fever, joint and muscle pains may also occur. Untreated infections can lead to clinical findings in skeletal, cardiac, and nervous systems. Disseminated manifestations of disease include: arthritis characterized by recurrent, brief attacks of joint swelling; lymphocytic meningitis; cranial neuritis (such as Bell's palsy); encephalitis; and second or third degree atrioventricular block. Lyme disease is treatable, and the majority of patients recover after receiving appropriate therapy.

What to do after a tick bite:

- Remove the tick properly, ideally using tweezers or a tick spoon.
- Identify the tick and the engorgement level, or length in time of attachment. Tick identification is available for free through the University of Maine Cooperative Extension and more information can be found at <http://extension.umaine.edu/ipm/tickid/>
- Clean the area around the bite, and instruct the patient to watch for signs and symptoms for 30 days.
- Testing of the tick is not routinely recommended because even if the tick tests positive for Lyme, that does not mean it was attached long enough to transmit the disease. Even if the tick tests negative that does not mean that was a patient's only exposure, and it does not eliminate the possibility of anaplasmosis or babesiosis.
- Prophylaxis after a tick bite is **not** routinely recommended, but can be considered under specific circumstances including:
 - Tick has been identified as an engorged deer tick that has been attached for over 24 hours
 - Exposure occurred in an area where there is a high rate of infected ticks. Areas south of Bangor have the highest rate of infected ticks in the state. There are limited data from the more northern counties on the rate of infection among ticks.

- Prophylaxis can be started within 72 hours. **Even if prophylaxis is used, monitoring for symptoms for 30 days is recommended.**
- There are no data showing if prophylaxis is effective in preventing anaplasmosis, and a single dose of doxycycline will not have an effect on babesiosis. Therefore, **even if prophylaxis is used, monitoring for symptoms for 30 days is recommended.**

If Lyme disease is suspected:

- Preferred laboratory testing is a two tier method, with an EIA or IFA test followed by Western Blot for both IgG and IgM
- IgM is only considered reliable in the first month after exposure
- IDSA guidelines for assessment, treatment, and prevention of Lyme disease are available at <http://cid.oxfordjournals.org/content/43/9/1089.full>

What to report:

Lyme disease is a reportable condition in the state of Maine. Report all diagnosed erythema migrans rashes and all positive lab diagnoses. Cases can be reported by fax at 1-800-293-7534 or by phone at 1-800-821-5821.

Other tickborne diseases:

Other diseases that are carried by ticks in Maine include anaplasmosis, babesiosis, and Powassan. Symptoms of anaplasmosis include: fever, headache, malaise and body aches. Symptoms of babesiosis include: extreme fatigue, aches, fever, chills, sweating, dark urine, and possibly anemia. Symptoms of Powassan include: fever, headache, vomiting, weakness, confusion, loss of coordination, speech difficulties, seizures, and encephalitis and meningitis. Preferred testing for anaplasmosis, babesiosis, and Powassan is by PCR. Testing for all three diseases can be performed at Maine's Health and Environmental Testing Laboratory (HETL), and many reference and commercial laboratories offer testing for anaplasmosis and babesiosis.

In 2016, providers reported 372 cases of anaplasmosis, a significant increase from 2015. Providers reported 82 cases of babesiosis, a significant increase from 2015. A single case of Powassan was identified in 2016. Maine providers reported eight anaplasmosis cases and five babesiosis cases to date in 2017. Anaplasmosis, babesiosis, ehrlichiosis, Powassan, and Rocky Mountain spotted fever are all reportable in Maine; however ehrlichiosis and Rocky Mountain spotted fever are uncommon in the state.

A Physician's Reference Guide is available and describes the most common tickborne diseases in Maine. This guide can be found on our website at: <http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/vector-borne/index.shtml> under Resources. Paper copies can be requested through disease.reporting@maine.gov.

Additional information:

- Lyme disease data is available on Maine CDC's website at www.maine.gov/idepi and then navigating to Maine Tracking Network: Lyme disease on the left navigation pane.
- For more information on tickborne diseases including Lyme: <http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/vector-borne/index.shtml>
- For IDSA Lyme disease treatment guidelines: <http://cid.oxfordjournals.org/content/43/9/1089.full>
- To order Lyme educational materials: <http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/order-form-wn.shtml>
- Disease consultation and reporting available through Maine CDC at 1-800-821-5821
- HETL requisition www.mainepublichealth.gov/lab