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PUBLIC HEALTH ADVISORY

To: Health Care Providers
From: Siiri Bennett, State Epidemiologist
Subject: Eastern Equine Encephalitis Positive Horse – Maine, 2019
Date / Time: Tuesday, September 3, 2019 at 4:39pm
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Abstract:

The purpose of this health advisory is to alert clinicians to the potential for human Eastern Equine Encephalitis (EEE) disease activity in Maine and to consider testing for EEE in patients presenting with unexplained encephalitis, meningitis or high fever ($\geq 100.4^{\circ}\text{F}$ or 38°C) during the summer and early fall.

Maine Department of Agriculture, Conservation, and Forestry notified Maine CDC of a case of Eastern Equine Encephalitis (EEE) in a horse from York County late Friday August 30th. The Animal Health Diagnostic Center at Cornell University in New York confirmed the EEE result in this horse. Maine has not detected EEE to date in mosquito collections. However, public health officials in other Northeast states have seen significant increases in EEE activity this year. Massachusetts has reported four human cases and one human death, as well as four animal deaths from EEE. New Hampshire has reported one animal death from EEE. Maine has not identified a human case of EEE since 2015.

EEE is a rare, but potentially fatal arboviral disease. It is the most severe arboviral infection found in the United States. EEE virus is transmitted to humans through the bite of an infected mosquito. Signs and symptoms can include fever, headache, myalgias, vomiting, weakness, confusion, seizures, and memory loss. In more serious cases, the illness may progress to encephalitis, coma, and death. The case-fatality rate for infected individuals is approximately 33% and up to 50% for those who show symptoms. Most survivors are left with significant and long-term brain damage. Symptoms can begin anytime from four to ten days after the mosquito bite, and usually last one to two weeks. It is possible some people will not show any signs of EEE illness. There is no specific treatment, but people with severe EEE illness often need to be hospitalized.

Eastern Equine Encephalitis Positive Horse – Maine, 2019

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Prevention:

Maine CDC recommends the following preventative measures to protect against Eastern Equine Encephalitis (EEE), West Nile Virus (WNV) and other mosquito-borne illnesses:

- **Use an EPA approved repellent when outdoors, especially around dawn and dusk** – always follow the instructions on the product's label
- Wear protective clothing when outdoors, including long-sleeved shirts, pants, and socks
- Use screens on your windows and doors to keep mosquitoes out of your home
- Avoid being outdoors at dawn and dusk when many species of mosquitoes are most active
- Drain artificial sources of standing water

Testing:

If providers suspect arboviral infection based on clinical evidence, they should submit serum samples and CSF for arboviral testing. Maine's Health and Environmental Testing Laboratory (HETL) and many reference laboratories perform arboviral testing. All samples of CSF submitted to HETL should be accompanied by a serum sample, and require completion of the Human Arboviral Specimen Submission Form. Ideally providers should submit an acute and a convalescent serum sample for each patient. If providers suspect EEE, they should submit EDTA whole blood (purple cap) for PCR testing along with the serum and CSF. Testing for Jamestown Canyon virus is performed at CDC Fort Collins, and providers should coordinate samples submission through HETL.

- Acute serum samples should be collected within 14 days of onset of symptoms
- Convalescent serum samples should be collected 10 days to 4 weeks following the acute specimen

Reporting:

Arboviral illness is reportable in Maine. All suspect cases, and positive laboratory reports should be reported by phone to the 24/7 disease reporting and consultation line at **1-800-821-5821** or by fax to 1-800-293-7534.

Additional information:

- Maine CDC EEE webpage: www.maine.gov/dhhs/eee
- Federal CDC EEE webpage: www.cdc.gov/eee
- HETL Laboratory Submission Information Sheet:
www.maine.gov/dhhs/mecdc/public-health-systems/health-and-environmental-testing/micro/documents/Detection-of-WNV-SLE-and-EEE-LSIS.docx
- HETL Arbovirus Specimen Submission Form:
www.maine.gov/dhhs/mecdc/public-health-systems/health-and-environmental-testing/micro/documents/ARB_Sub_Form_Interactive.pdf
- Weekly arboviral reports will be posted throughout the season at:
www.maine.gov/dhhs/mecdc/infectious-disease/epi/vector-borne/arboviral-surveillance.shtml
- Maine CDC disease reporting and consultation line: **1-800-821-5821** (available 24/7)