

July 26, 2011

**TO: Healthcare Providers, Hospitals, Local Health Departments**

**FROM: NYSDOH Bureau of Communicable Disease Control**

**HEALTH ADVISORY: TESTING AND REPORTING OF  
ARBOVIRAL AND TICK-BORNE ILLNESSES**

**For healthcare facilities, please distribute immediately to the Infection Control Department,  
Emergency Department, Infectious Disease Department, Director of Nursing, Medical  
Director, Laboratory Service, and all patient care areas.**

The New York State Department of Health (NYSDOH) is advising physicians on the procedures to test and report suspected cases of mosquito-borne arboviral illnesses, including West Nile Virus (WNV) and eastern equine encephalitis (EEE), and tick-borne illness including Lyme disease, babesiosis, ehrlichiosis, anaplasmosis, and Rocky Mountain Spotted Fever (RMSF).

**SUMMARY**

- Mosquito-borne (arboviral) illnesses:
  - During the mosquito season, health care providers should consider arboviral infections in the differential diagnosis of any adult or pediatric patient with clinical evidence of viral encephalitis or viral meningitis.
  - All cases of suspected viral encephalitis and/or viral meningitis should be reported immediately to the local health department (LHD).
  - Wadsworth Center, the NYSDOH public health laboratory, provides testing for a number of domestic, exotic, common and rare viruses. The tests performed will depend on the clinical characteristics and status of the patient. Health care providers should contact the LHD of the patient's county of residence prior to submission of specimens.
- Tick-borne illnesses:
  - Tick-borne disease symptoms vary by type of infection and can include fever, fatigue, headache, and rash.
  - While Lyme disease continues to be the most prevalent tick-borne disease in New York State (NYS), other tick-borne diseases such as babesiosis and anaplasmosis, are spreading geographically within NYS.
  - While there is a seasonal trend in human tick-borne disease cases with a marked increase in July and August, providers should consider tick-borne illness in the differential diagnosis of patients with consistent symptoms year round, even if there is no known history of a tick bite. LHDs should be notified of all diagnosed cases of tick-borne disease.
  - Testing for tick-borne diseases is available through both commercial labs and the Wadsworth Center.

**BACKGROUND**

Mosquito-borne (arboviral) diseases, such as EEE and WNV, continue to occur annually in NYS. EEE is regarded as one of the most serious mosquito-borne diseases in the United States because of its high

mortality rate. NYS has had fatal human cases of EEE in each of the past two years. WNV continues to be detected across NYS, occasionally resulting in human fatalities. In partnership with LHDs, NYSDOH continues to conduct surveillance activities for EEE and WNV; a critical component of these efforts is the rapid detection and timely reporting of cases of viral encephalitis and viral meningitis by medical providers.

Lyme disease continues to be the most prevalent tick-borne disease in NYS with over 100,000 cases having been reported since 1986. The tick that carries the bacteria that causes Lyme disease (black-legged/deer tick) can also carry pathogens that cause babesiosis and anaplasmosis. Disease surveillance trends for both of these diseases show an expanding geographic range beyond the Hudson River valley to areas further north and west than they have been seen in previous years. This pattern is also true of ehrlichiosis which is transmitted by the Lone Star tick. RMSF, transmitted by the American dog tick, is rarer than other tick-borne diseases; nevertheless, 117 cases have been reported across NYS since 2001. Powassan encephalitis, a tick-borne viral illness that can cause encephalitis or meningitis, is found in low, but increasing, numbers in the State.

### **REPORTING CASES OF ARBOVIRAL AND TICK-BORNE ILLNESS**

During the mosquito season, from June through October, health care providers should *immediately report* by telephone any adult or pediatric patient with clinical evidence of viral encephalitis or viral meningitis. The report should be made to the LHD of the patient's county of residence. For the remainder of the year, viral encephalitis and viral meningitis are still reportable, but immediate notification is not required.

Providers should report all cases of tick-borne disease year round to the LHD as soon as possible after diagnosis.

### **TESTING AND COLLECTION OF SPECIMENS**

Wadsworth Center offers testing for several arboviruses including WNV and EEE. Cerebrospinal fluid (CSF) testing by polymerase chain reaction (PCR) may be less sensitive than testing serum by serology. Therefore, ideally, both CSF and acute/convalescent serum specimens should be submitted for testing. Convalescent specimens should be drawn at least 3 weeks after acute specimens.

Instructions on the collection and submission of clinical specimens and a detailed algorithm about which tests will be conducted on submitted specimens, and the Viral Encephalitis/Meningitis Case Report and History Forms can be found on the Wadsworth Center website at:

<http://www.wadsworth.org/divisions/infdis/enceph/form.htm>.

Wadsworth Center also offers testing for tick-borne diseases. Depending upon the disease, testing can involve whole blood smear examination, PCR, or serologic testing. Confirmation of cases of tick-borne disease via collection of both acute/convalescent specimens is necessary. Further information on tick-borne disease testing can be obtained by calling your LHD or the NYSDOH.

### **ADDITIONAL INFORMATION**

Additional information on mosquito and tick-borne diseases can be found at:

[http://www.nyhealth.gov/diseases/west\\_nile\\_virus/](http://www.nyhealth.gov/diseases/west_nile_virus/)

<http://www.nyhealth.gov/diseases/communicable/lyme/>

Information on communicable disease reporting, including the list of reportable diseases, reporting guidance, and contact information for LHDs, can be found at:

<http://www.nyhealth.gov/professionals/diseases/reporting/communicable/>.

If you have any questions regarding this information, please contact your LHD or the NYSDOH Bureau of Communicable Disease Control at (518) 473-4439 or via email at: [arbobml@health.state.ny.us](mailto:arbobml@health.state.ny.us)