



County of Erie

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Testing and Reporting of Arboviral and Tick-Borne Illnesses

Please distribute immediately to the Infection Control Department, Emergency Department, Infectious Disease Department, Director of Nursing, Medical Director, Laboratory Service, and all acute and primary care patient 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, human monocytic ehrlichiosis (HME), human granulocytic anaplasmosis (HGA), and Rocky Mountain Spotted Fever (RMSF).

SUMMARY

- Mosquito-borne (arboviral) illnesses:
 - During the mosquito season (June 1 through November 1), providers should consider arboviral infections in the differential diagnosis and immediately report to the local health department (LHD) by telephone any adult or pediatric patient with clinical evidence of viral encephalitis or viral meningitis.
 - Wadsworth Center, the NYSDOH public health laboratory, provides testing for a number of domestic and exotic, common and rare viruses. The tests performed will vary with the clinical status of the patient.
- 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 are spreading geographically within NYS and have the potential to cause severe sequelae.
 - 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. Last year, NYS had a fatal human case of EEE. WNV continues to be detected at low rates, causing about 3 human fatalities every year. The NYSDOH continues to conduct surveillance activities for suspected WNV and EEE infections to facilitate the prompt recognition of a human outbreak. A critical component of surveillance 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 95,000 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 HGA. Disease surveillance trends show that both of these diseases are spreading geographically along the Hudson River to affect areas in the north and west parts of the state. This trend is also true of HME which is transmitted by the Lone star tick. RMSF, transmitted by the American dog tick, is rarer than other tick-borne diseases; nevertheless, 86 cases have been reported across NYS since 2003.

REPORTING CASES OF ARBOVIRAL AND TICK-BORNE ILLNESS

During the mosquito season (June 1 through November 1), providers should *report immediately* by telephone to their LHD any adult or pediatric patient with clinical evidence of viral encephalitis or viral meningitis. 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.

TICK IDENTIFICATION

Contact the Erie County Department of Health Vector Control Program for information on tick identification at (716) 961-6800. The protocol for tick collection and form for tick submission can be found at:

http://www.erie.gov/health/offices/eh_pest_control.asp

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/communicable/lyme/>
<http://www.health.state.ny.us/diseases/>

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 the Erie County Department of Health at (716) 858-7697 or the NYSDOH Bureau of Communicable Disease Control at (518) 473-4439 or via email at: arbobml@health.state.ny.us.

The ECDOH Health Alert & Advisory System is an e-mail notification system designed to alert community partners about important health related information. You can sign up to receive alerts & advisories at www.erie.gov/health/services/health_professionals.asp.

Health Category Definitions:

Health Alert FLASH: conveys the highest level of importance due to a large-scale, catastrophic public health emergency; warrants immediate action or attention

Health Alert Priority: conveys the highest level of importance; warrants immediate action or attention to a health problem or situation

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; no immediate action necessary

The Erie County Department of Health does not provide medical advice. The information provided herein and on the Erie County Department of Health website is not intended as a substitute for professional medical advice, diagnosis, or treatment. Always seek the advice of your personal physician or other qualified health provider with any questions you may have regarding a medical condition or issue. Never disregard professional medical advice or delay in seeking it because of the content found on the Erie County Department of Health website or this correspondence.