



TO: West Virginia Healthcare Providers, Hospitals and Other Healthcare Facilities

**FROM: Catherine Slemp, MD, MPH, Commissioner and State Health Officer
West Virginia Department of Health and Human Resources, Bureau for Public Health**

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LOCAL HEALTH DEPARTMENTS: Please distribute to community health providers, hospital-based physicians, infection control preventionists, laboratory directors and other applicable partners.

OTHER RECIPIENTS: Please distribute to association members, staff, etc.

With the spring and summer seasons comes an increase in mosquito and tick activity in West Virginia. Vector-borne diseases occur annually beginning in early spring and peaking in August and September when people and arthropod vectors are most active outdoors. Symptoms of arboviral diseases include fever, headache, body aches, joint pain, vomiting, diarrhea, rash, and lethargy. In the case of severe arboviral infections, symptoms can include encephalitis, seizures, coma, paralysis, and meningoencephalitis. Health providers can educate patients on preventive measures, including use of recommended insect repellents with DEET and permethrin, to prevent bites and control diseases spread by mosquitoes and ticks.

Mosquito-borne Diseases in West Virginia: La Crosse encephalitis (LAC) and West Nile virus (WNV) are endemic mosquito-borne diseases in West Virginia; six LAC cases and two WNV cases were reported in 2018 and three LAC cases and no WNV cases were reported in 2019. Lacrosse is seen in our central and southern regions of the state, notably Raleigh, Mercer, Greenbrier, Fayette and Kanawha counties. Severe LAC involving encephalitis occurs most commonly in children under age 16 and is often accompanied by seizures. Travel-related mosquito-borne diseases are occasionally reported in the state; two malaria cases and five dengue cases were reported in 2019.

Tickborne Diseases in West Virginia: In 2019, 947 cases of tick-borne diseases were reported in West Virginia of which 95% were Lyme disease cases. Tickborne rickettsial diseases (TBRDs), such as anaplasmosis, ehrlichiosis, and spotted fever rickettsiosis, are also reported annually. Clinical suspicion of any TBRD is sufficient to begin treatment as delays in treatment may result in severe illness and even death. Babesiosis is an emerging tickborne disease that has been reported in two eastern counties, Greenbrier and Pendleton. Babesiosis can cause hemolytic anemia and can be a life-threatening disease in persons without a spleen or in persons with weakened immunity or other serious health conditions. For comprehensive information on tickborne diseases, including general laboratory findings, diagnosis and treatment, please see the Centers for Disease Control and Prevention's (CDC) "[Tickborne Diseases of the United States. A Reference Manual for Healthcare Providers.](#)"

Laboratory testing is important in diagnosing vector-borne diseases. For WNV and LAC, immunoassays that detect virus-specific IgM antibodies in cerebrospinal fluid and serum are preferred. CDC recommends a two-tier testing approach for Lyme disease: an IFA/EIA screen followed by IgG and IgM Western blots. The gold standard test for TBRDs is IFA using pathogen-specific antigen performed on paired serum specimens (taken during the first week of illness and again two to four weeks later). Polymerase chain reaction (PCR) testing is also appropriate for TBRDs.

For more information on vector-borne diseases in West Virginia, visit the Office of Epidemiology and Prevention Services (OEPS) website at www.oeps.wv.gov. You may also contact your local health department or call the Division of Infectious Disease Epidemiology (DIDE) at (304) 558-5358, extension 2 or the 24/7 answering service at (304) 347-0843.

This message was directly distributed by the West Virginia Bureau for Public Health to local health departments and professional associations. Receiving entities are responsible for further disseminating the information as appropriate to the target audience.

Categories of Health Alert messages:

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.

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