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CITY OF PHILADELPHIA

Philadelphia Department of Public Health
Division of Disease Control

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Health Advisory

First Confirmed Symptomatic West Nile Virus Cases in Philadelphia for 2018 Season

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The Philadelphia Department of Public Health (PDPH) has identified the city's first symptomatic human West Nile Virus (WNV) cases for the 2018 season in two adult residents hospitalized with neuroinvasive disease in late July. Since June, mosquitoes infected with WNV have been detected throughout Philadelphia and surrounding counties in Pennsylvania and New Jersey. Over the next few weeks, the risk of human WNV infection is expected to increase in the area and persist through October while infected mosquito pools are present. Providers should consider WNV infection when evaluating patients with unexplained encephalitis or aseptic meningitis. Testing and prompt reporting of suspected and confirmed WNV infections enables us to direct mosquito-control efforts and accurately monitor severe WNV illness in Philadelphia.

SUMMARY POINTS

- First Philadelphia residents with West Nile Virus (WNV) infection during the 2018 season have been confirmed.
- Collect serum and CSF from patients with unexplained encephalitis or aseptic meningitis for WNV-specific IgM testing.
- Report suspected and confirmed WNV cases to PDPH immediately.
- Advise patients to use repellent when outdoors and remove standing water.

West Nile Virus is caused by an arthropodborne Flavivirus transmitted through the bite of infected mosquitoes. Symptoms develop 2-14 days after exposure, and infection is generally characterized by fever, headache, muscle and joint pain, vomiting, diarrhea and a transient rash. Neuroinvasive disease, most commonly meningitis, encephalitis or acute flaccid myelitis, develops in <1% of infected individuals. Treatment for WNV infection is supportive. Most patients with nonneuroinvasive disease or meningitis fully recover without long term effects but recovery from WNV encephalitis or acute flaccid myelitis can take several weeks to months with long lasting neurologic deficits. The case fatality rate is 10%.

Laboratory Testing for WNV Confirmation: Clinicians should collect both serum and cerebrospinal fluid (CSF) for WNV testing from patients with suspected WNV infection. WNV-specific IgM in serum or CSF is preferred for laboratory confirmation. Consider specimen type and timing of collection when ordering WNV-specific IgM.

- Serum: Collect 8 to 14 days after illness onset. Repeat test on a convalescent sample if initial test is sent <8 days from illness onset.
- CSF: Collect within 8 days of illness onset.

Many commercial laboratories offer serologic or Polymerase Chain Reaction (PCR) testing for WNV. Any positive specimen should be forwarded to the Pennsylvania Department of Health Bureau of Laboratories (PADOH BOL) for confirmatory testing. For WNV testing assistance or inquiries, contact the Acute Communicable Disease Program at 215-685-6742.

Reporting Suspected and Confirmed WNV Cases Immediately: All suspected and confirmed cases of WNV infection (neuroinvasive and non-neuroinvasive) should be reported **immediately** to PDPH Division of Disease Control at 215-685-6740 during regular business hours or 215-686-4514 after-hours. Report mosquito problems and dead bird sightings to the PDPH Vector Control Program's Mosquito Complaint hotline at 215-685-9000.

Prevention: Advise patients to use repellent with DEET (≥20% to also prevent tick bites), Picaridin, or oil of lemon eucalyptus when outdoors, especially during peak mosquito hours (dusk and dawn). To reduce mosquito reservoirs, regularly check and remove standing water outside home (e.g., unused pools, tires). Visit the following websites for regular updates on local, state, and national WNV surveillance:

- PDPH: https://hip.phila.gov/DataReports/WestNileVirus
- Pennsylvania Department of Health: http://www.westnile.state.pa.us/
- Centers for Disease Control and Prevention: http://www.cdc.gov/westnile/statsMaps/