

Health Advisory

Continued Seasonal Risk for West Nile Virus Infection: Clinical Recognition and Testing Reminders September 19, 2025

SUMMARY POINTS

- The first Philadelphia resident with locally acquired symptomatic West Nile virus infection has been identified for the 2025 season.
- Collect serum and CSF from patients with encephalitis, meningitis, or acute flaccid myelitis for WNV IgM testing.
- Report suspected and confirmed WNV cases to PDPH immediately.
- Advise patients to use repellent when outdoors and remove standing water.

The Philadelphia Department of Public Health (PDPH) has recently identified the City's first locally acquired, symptomatic West Nile virus (WNV) infection for the 2025 season in an adult resident who was hospitalized with WNV meningitis in early September. One other resident developed WNV fever earlier this season following potential exposures outside Philadelphia. To date, for the 2025 mosquito season in Philadelphia, the proportion of mosquitoes testing positive for WNV is slightly lower (22%) than previous peak seasons (24%-46%). Over the next few weeks, the risk of human WNV infection will remain higher and persist through October while infected mosquito pools are present. Testing and prompt reporting of suspected and confirmed WNV infections enable us to direct mosquito-control efforts and accurately monitor severe WNV.

WNV is caused by an arthropod-borne Flavivirus and transmitted by the bite of infected mosquitoes. Symptoms develop 2-14 days after exposure. About 20% of infected persons develop WNV fever, which is generally characterized by fever, headache, muscle and joint pain, vomiting, diarrhea, or 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 WNV fever or meningitis fully recover without long-term effects. Recovery from WNV encephalitis or acute flaccid myelitis can take several weeks to months with long-lasting neurologic deficits. The case fatality rate among persons with severe illness is 10%.

Laboratory Testing for WNV Confirmation: Clinicians should collect both serum and cerebrospinal fluid (CSF) for WNV testing from patients who have onset of unexplained encephalitis, meningitis, or acute flaccid myelitis. Serum can be tested for those with suspected WNV Fever. WNV-specific IgM in serum or CSF is preferred for laboratory confirmation. Antibodies in serum are typically detectable 3–8 days after symptom onset. Absence of detectable antibodies in serum within 8 days of illness does not rule out WNV. Recollect serum after day 8 if there is ongoing concern for WNV. Testing of patients with neuroinvasive infections for other arboviral infections (e.g., Powassan, Jamestown Canyon virus, Eastern Equine Encephalitis, etc.) may also be considered, given detections of infected vectors in Pennsylvania and New Jersey.

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 or other arbovirus testing assistance, contact the Acute Communicable Disease Program at 215-685-6741.

Report Suspected and Confirmed WNV Cases Immediately: All suspected and confirmed cases of WNV infection (neuroinvasive and non-neuroinvasive) should be reported **immediately** to the PDPH Division of Disease Control at 215-685-6741 during business hours (M-F, 8:30am–5:00pm) or 215-686-4514 after-hours, weekends, and holidays (press 1 for Unified Dispatch and ask for the Division of Disease Control on-call staff).

Prevention: Advise patients to use an [EPA-registered repellent](#) with DEET ($\geq 20\%$ to also prevent tick bites), Picaridin, oil of lemon eucalyptus, or other approved ingredient when outdoors, especially during peak mosquito hours (dusk and dawn). Indoors, use screens on windows and doors along with air conditioning. To reduce mosquito breeding sites, regularly check and remove standing water outside the home (e.g., unused pools, tires). Residents can report mosquito problems to the PDPH Vector Control Program's Mosquito Complaint hotline at 215-685-9000. Report sick, injured, or dead wild bird or mammal sightings to the Pennsylvania Game Commission by calling 1-833-PGC-WILD (742-9453) or emailing pgc-wildlifehealth@pa.gov.

For seasonal updates on local WNV activity, visit: <https://hip.phila.gov/data-reports-statistics/west-nile-virus>.