

West Nile Virus in California: Guidelines for Human Testing and Surveillance
Within the Regional Public Health Laboratory Network

Diagnostic Testing Guidelines

West Nile virus (WNV) testing within the regional public health laboratory network (i.e., the California Department of Health Services Viral and Rickettsial Disease Laboratory and participating local public health laboratories) is recommended on individuals with the following:

- A. Encephalitis
- B. Aseptic meningitis (Note: consider enterovirus for individuals ≤ 18 years of age)
- C. Acute flaccid paralysis; atypical Guillain-Barré Syndrome; transverse myelitis; or
- D. Febrile illness*
 - a. Illness compatible with West Nile fever and lasting ≥ 7 days
 - b. Must be seen by a health care provider

* The West Nile fever syndrome can be variable and often includes headache and fever ($T \geq 38^{\circ}\text{C}$). Other symptoms include rash, swollen lymph nodes, eye pain, nausea or vomiting. After initial symptoms, the patient may experience several days of fatigue and lethargy.

Identification of human cases is important early in the West Nile virus season to assess the burden of human illness and target mosquito control and public education activities to reduce exposure risk. However, depending on the volume of tests requested and laboratory capacity, local public health laboratories may need to consider limiting testing to individuals in categories A – C (encephalitis, meningitis, acute flaccid paralysis) once West Nile virus is established in a given area.

Submitting Specimens to Regional Public Health Laboratory Network for Testing

Required specimens:

- Acute serum: $\geq 2\text{cc}$ serum
- Cerebral Spinal Fluid (CSF): 1-2cc CSF if lumbar puncture is performed

If West Nile virus is highly suspected and acute serum is negative or inconclusive, request:

- 2nd serum: $\geq 2\text{cc}$ serum collected 3-5 days after acute serum

Paired acute and convalescent serum specimens are useful for demonstration of sero-conversion to WNV. Paired samples should be collected whenever WNV is suspected. Although a single acute serum may provide evidence of recent WNV infection, a negative acute serum does not necessarily rule out infection. Occasionally, a specimen may be collected too soon to show antibody related to a current illness (e.g. with immunocompromised individuals).

Specimens must be submitted with a completed specimen submittal form (See **Appendix A: Instructions for Submitting Specimens**; and **Appendix B: West Nile Virus Specimen Submittal Form**).