PENNSYLVANIA DEPARTMENT OF HEALTH
2019 - PAHAN–451–07-17-2019 - ADV
2019 West Nile Virus Season in Pennsylvania

DATE:	July 17, 2019
TO:	Health Alert Network
FROM:	Rachel Levine, MD, Secretary of Health
SUBJECT:	**2019 West Nile Virus Season in Pennsylvania**
DISTRIBUTION:	Statewide
LOCATION:	Pennsylvania
STREET ADDRESS:	n/a
COUNTY:	n/a
MUNICIPALITY:	n/a
ZIP CODE:	n/a

This transmission is a "Health Advisory" provides important information for a specific incident or situation; may not require immediate action.

HOSPITALS: PLEASE SHARE WITH ALL MEDICAL, PEDIATRIC, INFECTION CONTROL, NURSING AND LABORATORY STAFF IN YOUR HOSPITAL

EMS COUNCILS: PLEASE DISTRIBUTE AS APPROPRIATE

FQHCs: PLEASE DISTRIBUTE AS APPROPRIATE

LOCAL HEALTH JURISDICTIONS: PLEASE DISTRIBUTE AS APPROPRIATE

PROFESSIONAL ORGANIZATIONS: PLEASE DISTRIBUTE TO YOUR MEMBERSHIP

Summary

- WNV-positive mosquitoes have been found in seven PA counties- Beaver, Berks, Bucks, Delaware, Erie, Franklin and Philadelphia.
- Health care providers should have a heightened clinical suspicion for West Nile infection in persons with clinically compatible symptoms.

As of July 17, 2019, routine seasonal monitoring conducted by the Pennsylvania Department of Environmental Protection (DEP) West Nile virus (WNV) surveillance program has detected WNV in pooled mosquito samples from seven counties: Beaver, Berks, Bucks, Delaware, Erie, Franklin and Philadelphia. This indicates that WNV has begun to circulate in Pennsylvania. Risk of human WNV infection is likely to remain elevated over the next several months.

DOH would like to remind health care providers to consider the diagnosis of arboviral infection in persons presenting with undifferentiated febrile illness or signs of meningoencephalitis, to ask about recent travel history, and to collect appropriate diagnostic specimens. All arbovirus infections (e.g., infections due to West Nile, dengue, chikungunya, Zika, Powassan, etc.) are reportable within 24 hours in Pennsylvania.

EPIDEMIOLOGY OF WEST NILE VIRUS INFECTIONS IN PENNSYLVANIA

In Pennsylvania, WNV is the most commonly reported locally-acquired arbovirus and is most commonly seen during the months of July through September. Risk continues until the first hard frost. Most human WNV infections (80%) are asymptomatic. Approximately 20% of infections result in a non-specific febrile illness (West Nile fever), and <1% of infections develop into severe neuroinvasive disease (e.g., meningitis, encephalitis, acute flaccid paralysis, etc.). Neuroinvasive disease is more likely to occur in patients ≥50 years of age or those with compromised immunity. During the 2018 WNV season, Pennsylvania reported 95 neuroinvasive and 35 non-neuroinvasive cases, the most WNV cases in over a decade.

WHEN TO CONSIDER WEST NILE VIRUS TESTING FOR YOUR PATIENT

1. Remember to ask about each patient's recent (past 3 weeks) travel history, as this can help determine for which arbovirus to test. The following clinical syndromes presenting during summer months among patients with no recent travel history should prompt consideration for WNV testing: **Viral encephalitis, characterized by:**
   - Fever >38°C or 100°F and,
   - CNS involvement, including altered mental status (altered level of consciousness, confusion, agitation, or lethargy) or other cortical signs (cranial nerve palsies, paresis or paralysis, or convulsions) and,
   - Abnormal CSF profile suggesting a viral etiology (negative bacterial Gram stain and culture with a pleocytosis [WBC between 5 and 1500 cells/mm^3] and/or elevated protein level [≥40 mg/dl]).
2. **Viral meningitis, characterized by:**
   - Fever >38°C or 100°F and,
   - Headache, stiff neck and/or other meningeal signs and,
   - Abnormal CSF profile suggesting viral etiology (negative bacterial Gram stain and culture with a pleocytosis [WBC of 5-1500 cells/mm^3] and/or elevated protein level [≥40 mg/dl]).
3. **Poliomyelitis-like syndromes:**
   - Acute flaccid paralysis or paresis, which may resemble Guillain-Barré syndrome, or other unexplained movement disorders such as tremor, myoclonus or Parkinson's-like symptoms, especially if associated with atypical features, such as fever, altered mental status and/or a CSF pleocytosis. Afebrile illness with asymmetric weakness, with or without areflexia, has also been reported in association with WNV.
4. **Unexplained febrile illness:**
   - Especially if accompanied by headache, fatigue, myalgias, stiff neck, or rash.

DIAGNOSIS OF WEST NILE VIRUS INFECTIONS

For most arboviral infections, serology and/or nucleic acid testing (e.g., PCR) can facilitate diagnosis. WNV diagnosis is usually serological, by detection of WNV-specific IgM antibody in serum or CSF. **WNV IgM may not be detectable until day 8 of illness**. Specimens collected less than 8 days after onset may be negative for IgM, and testing should be repeated 2-3 weeks later.

Specimens (serum and/or CSF) collected from patients with suspected WNV can be submitted to the DOH Bureau of Laboratories. WNV IgM testing is performed free-of-charge. Instructions for submitting specimens can be found at http://files.dep.state.pa.us/Water/WNV/WNVSubmissionForm.pdf.

For questions, please call your local health department or DOH at 1-877-PA HEALTH.

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.
Health Update: provides updated information regarding an incident or situation; unlikely to require immediate action.

This information is current as of July 17, 2019 but may be modified in the future.