

## West Nile Virus Information – 2007 Season

**DATE:** April 6, 2007  
**TO:** Health Alert Network  
**FROM:** Calvin B. Johnson, MD, MPH  
Secretary of Health  
**SUBJECT:** **West Nile Virus Information – 2007 Season**

**DISTRIBUTION:** Statewide Distribution  
**LOCATION:** Statewide  
**STREET ADDRESS:** Statewide  
**COUNTY:** Statewide  
**MUNICIPALITY:** Statewide  
**ZIP CODE:** Statewide

**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

The Pennsylvania Department of Health (PADOH) is releasing the following information in preparation for the beginning of the 2007 West Nile Virus (WNV) season.

In 2006, the Centers for Disease Control and Prevention (CDC) reported 4256 human cases and 165 deaths (as of March 6, 2007) of WNV in the United States. In Pennsylvania, 9 human cases of WNV and two deaths (where WNV was a contributing factor) were reported to the Department of Health. To date, the virus has been detected throughout the United States except in AK and HI. In Pennsylvania, 48 of the 67 counties had WNV detected either in birds, mosquito pools, sentinel chickens, horses or humans. Some counties had positives in all surveillance areas. Because these findings indicate ongoing and widening enzootic transmission, we need to be vigilant and prepared for the re-emergence of WNV as the adult mosquito season progresses. As we enter a new mosquito season, PADOH wants to keep you apprised of our surveillance activities and how you can help the Commonwealth deal with this emerging disease threat.

The PA Departments of Health, Environmental Protection and Agriculture continue to implement a comprehensive WNV surveillance and control program. In this regard, we are emphasizing education, source reduction and larval mosquito control. Mosquitoes, sentinel chickens, horses, crows and other wild birds are being monitored for the presence of West Nile virus. The Department of Environmental Protection has awarded grants to counties to carry out mosquito surveillance and control activities. Citizens are encouraged to eliminate mosquito-breeding sites on their property and in their communities to reduce the risk of being bitten by mosquitoes. Areas with mosquito larvae problems will be treated with such products as *Bacillus thuringiensis israelensis* and *Bacillus sphaericus*. These two products are naturally occurring bacteria found throughout the world. They have shown very low environmental impact when used in mosquito control. If it becomes necessary to implement adult mosquito control, all products used will be EPA-approved products. With these efforts, it is hoped that WNV activity in the Commonwealth will be minimized.

PADOH asks the following of you and your colleagues:

1. Please review the enclosed information to assist you in evaluating suspected human cases of WNV.
2. PADOH encourages you to submit all WNV-related specimens to PADOH's Public Health State Laboratory in Lionville. Enclosed are instructions for submitting specimens. Laboratory testing is performed free-of-charge and the turn-around time is very short.
3. CDC has issued guidelines for infants born of West Nile infected mothers. The article can be viewed at <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5307a4.htm>.

Please share this information with appropriate personnel in your facility or practice. If you have questions or need additional information, please log onto our West Nile website at [www.westnile.state.pa.us](http://www.westnile.state.pa.us). You can report dead birds on the WNV website. In 2007, dead birds (corvids and raptors only) will be collected and shipped by DEP WNV County coordinators, 5 birds per county per week. You can also call 1-877-PA HEALTH for health related WNV questions or the Division of Infectious Disease Epidemiology at 717-787-3350, or you may contact the Arbovirus Coordinator, Dr. Marjorie Ebenezer, MD, MPH at [mebenezer@state.pa.us](mailto:mebenezer@state.pa.us)

---

### **Pennsylvania Department of Health** **Surveillance Criteria for Diagnostic Testing of Suspect Cases of West Nile Virus Infection**

Pennsylvania physicians are reminded that encephalitis and meningitis of any etiology, and all arboviral infections (such as West Nile Fever), are reportable conditions under existing Pennsylvania health regulations (Chapter 27). Report such cases online via PA-NEDSS (email [PA-NEDSS@state.pa.us](mailto:PA-NEDSS@state.pa.us) to register), or call your county/municipal health department or local State Health Center.

Consider West Nile Virus testing for patients meeting the following criteria:

1. Any adult or pediatric patient with **suspected viral encephalitis** (Criteria a, b and c below) with or without associated muscle weakness (Criteria d):
  - a. Fever = 38.0°C or 101°F (most patients with West Nile disease had higher fevers), **and**
  - b. Altered mental status (altered level of consciousness, agitation, lethargy) and/or other evidence of cortical involvement (e. g. , focal neurological findings, seizures), **and**

- c. CSF pleocytosis with predominant lymphocytes and/or elevated protein and a negative Gram stain and culture, **with or without**
  - d. Muscle weakness (especially flaccid paralysis) confirmed by neurological exam or by EMG.
2. Any adult or pediatric patient with **presumptive aseptic meningitis**:  
(Please note that enteroviral meningitis is common among young children during the summer months, and should be considered first when assessing cases of aseptic meningitis in children aged 2 years or older):
- a. Fever, **and**
  - b. Headache, **and**
  - c. Stiff neck and/or other meningeal signs, **and**
  - d. CSF pleocytosis with predominant lymphocytes and moderately elevated protein, and a negative Gram stain and culture.

Patients with milder illnesses (*e. g. , fever and headache, fever and rash, fever and lymphadenopathy*) may also be tested for WNV.

The following are the epidemiologic criteria we use to classify reported cases of Wile Nile Virus meningo-encephalitis:

**Confirmed Case**: an encephalitis or meningitis case that is laboratory confirmed:

- 1. Virus specific immunoglobulin M (IgM) antibodies demonstrated in CSF by antibody-capture enzyme immunoassay (EIA), or
- 2. Virus-specific IgM antibodies demonstrated in serum by antibody-capture EIA and confirmed by demonstration of virus-specific serum immunoglobulin G (IgG) antibodies in the same or later specimen by another serological assay (e.g. neutralization or hemagglutination inhibition), or
- 3. 4-fold or greater change in virus-specific antibody titer, or
- 4. Isolation of virus from or demonstration of specific viral antigen or genomic sequences in tissue, blood, cerebrospinal fluid (CSF), or other body fluid.

**Probable Case**: an encephalitis or meningitis case occurring during a period when arboviral transmission is likely, and with the following supportive serology:

- 1. Serum IgM detected by antibody-capture EIA but with no available results of a confirmatory test for virus-specific serum IgG antibodies in the same or a later specimen, or
- 2. A single or stable (less than or equal to twofold change) but elevated titer of virus-specific serum antibodies.

**Non-Case** (an illness with at least one of the following):

1. Negative test for IgM antibody to WNV by EIA in serum or CSF collected 8-21 days after onset of illness, or
2. Negative test for IgG antibody to WNV by EIA or PRNT in serum collected =22 days after onset of illness.

Therefore, ordering physicians must ensure that convalescent sera is obtained on all suspected case-patients with encephalitis of unknown etiology, if acute sera or CSF obtained <8 days after illness onset is negative for WNV.

Revised: 3/2004

**West Nile Reporting Form**

Pesticide is used for mosquito abatement. Persons who have Pesticide Hypersensitivity can register with the PA Department of Agriculture (PDA). The form should be filled by the person and their medical provider and submitted to PDA.

[Pesticide Hypersensitivity Registration Information](#) (PA Dept. of Ag)

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 April 6, 2007, but may be modified in the future.
---