



2010 DOHMH Advisory 21: Peak West Nile Virus Activity in New York City, Unusually High Level of West Nile Virus Detected in New York City. September 2, 2010

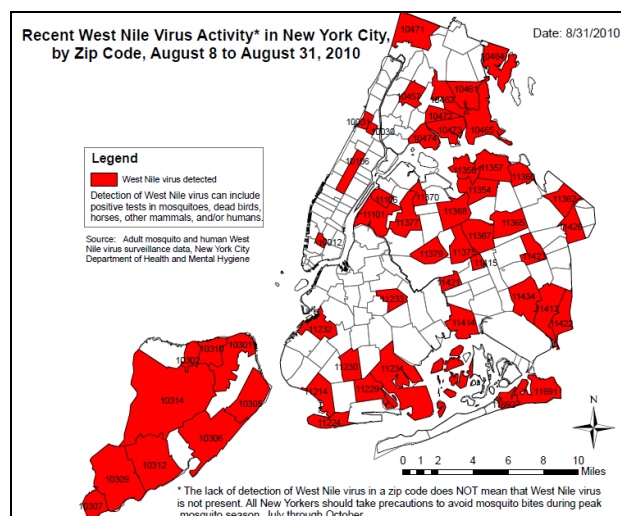
Please distribute to staff in the Departments of Critical Care, Emergency Medicine, Family Medicine, Infection Control, Infectious Disease, Internal Medicine, Laboratory Medicine, Nursing, Neurology, Obstetrics and Gynecology, and Pediatrics

The City is in the midst of peak West Nile virus season. We continue to see widespread and persistent West Nile virus activity in all 5 boroughs of New York City (see map below):

- An unusually high number of mosquito pools have tested positive for West Nile virus (331 pools to date);
- Fourteen human cases of West Nile disease have been identified;
- West Nile viral activity has been found in humans and in mosquitoes in all five boroughs;
- The surrounding metropolitan area is also experiencing an unusually high level of West Nile viral activity.

The New York City (NYC) Department of Health and Mental Hygiene (DOHMH) reminds providers to maintain vigilance and test for West Nile viral infection during peak adult mosquito season (July 1 – October 31):

- Consider West Nile viral infection in the differential diagnosis for all patients with viral meningitis, encephalitis, acute flaccid paralysis, and/or symptoms compatible with West Nile fever;
- Although the DOHMH Public Health Laboratory no longer performs routine testing for West Nile virus, testing is widely available through commercial laboratories;
- Routinely report cases of viral encephalitis and meningitis using the Universal Reporting Form (link to instructions at the end of this advisory).



Dear Colleagues,

We are writing to alert you that we are continuing to detect widespread and persistent West Nile viral activity throughout New York City's five boroughs.

(1) 13 cases of West Nile neuroinvasive disease, and one case of West Nile fever, have been identified in New York City so far in 2010.

New York City has already identified 14 human cases, affecting each of the five boroughs. This is the highest number of West Nile viral cases detected by this time of year since the virus was first introduced into New York City:

| Human Cases | NYC | the Bronx | Brooklyn | Manhattan | Queens | Staten Island |
|---------------------------------|-----|-----------|----------|-----------|--------|---------------|
| Total Number of Cases | 14 | 2 | 3 | 2 | 3 | 4 |
| West Nile Neuroinvasive Disease | 13 | 2 | 2 | 2 | 3 | 4 |
| West Nile Fever | 1 | 0 | 1 | 0 | 0 | 0 |

The average age of the neuroinvasive cases is 64 (range 21-79), and the cases include 8 males and 5 females. 7 of these cases were diagnosed with encephalitis, 4 with viral meningitis, one with acute flaccid paralysis, and one with unspecified neuroinvasive disease. The first case in 2010 had an onset date of July 10; this patient had not travelled outside of New York City during the exposure period. So far, no West Nile virus-related deaths in New York City residents have been reported.

(2) West Nile virus has been detected in 331 mosquito pools from all five of NYC boroughs.

Since June 29th, West Nile virus has been identified in 331 mosquito pools collected in all five boroughs. This is the largest number of pools to test positive in a single year since West Nile virus was first found in NYC in 1999. DOHMH has increased mosquito surveillance and larviciding in areas with new or persistent West Nile viral activity and has conducted adulticiding activities in localized areas where persistently high levels of West Nile viral activity have been detected. New Jersey, Nassau County, Suffolk County, and areas of southeastern Connecticut have also reported high numbers of mosquito pools testing positive for West Nile virus.

(3) Regional West Nile and eastern equine encephalitis viral activity.

New York State has reported an additional 24 human cases of West Nile virus infection (17 in Nassau County and 7 in Suffolk), New Jersey has reported 3 human cases, and Connecticut has reported 1 human case. Nationally 177 cases of human West Nile viral disease have been reported in the United States, including 96 cases of West Nile neuroinvasive disease.

In addition, eastern equine encephalitis (EEE) virus has been found in mosquito pools in New Jersey (Burlington and Cape May Counties), upstate New York (Oswego County) and in Massachusetts (primarily Plymouth and Bristol Counties in southeastern Massachusetts). EEE infection should be considered in the differential diagnosis for patients with encephalitis or viral meningitis and travel history to areas where EEE activity has been found. EEE virus has not yet been found to be transmitted in NYC. Consult with the DOHMH Bureau of Communicable Disease at 212-788-9830 to discuss testing if you suspect EEE in a patient.

(4) Providers should advise their patients, especially older residents, to protect themselves from mosquito bites.

With West Nile viral activity increasing in NYC and surrounding areas, health care providers should advise residents and visitors, especially adults 50 years of age or older, that West Nile virus is present

now in mosquitoes in NYC, and to take measures immediately to protect themselves from mosquito bites. With another 4 to 6 weeks of warm weather expected, combined with recent and expected rain, mosquitoes will likely be active until mid to late October. Prevention measures should include wearing protective clothing when outdoors from dusk to dawn, use of mosquito repellents, ensuring household screens are in good repair, and eliminating standing water where mosquitoes can breed.

(5) Report promptly by telephone or facsimile cases of West Nile virus infection with positive laboratory diagnostic tests, and routinely report all cases of encephalitis and viral meningitis.

The DOHMH reminds medical providers to be alert for possible cases of West Nile viral disease through the remainder of the peak adult mosquito season (through October). Currently, the most sensitive screening test for West Nile virus in humans is IgM enzyme immunoassay (EIA) on cerebrospinal fluid and/or serum. Refer to page 2 of the NYC DOHMH Guidelines for West Nile Testing and Reporting Cases of Viral Encephalitis and Meningitis (URL available at the end of this document) for more detail on how to test for West Nile virus. The Wadsworth Center Viral Encephalitis Laboratory offers free testing of CSF for the viral encephalitis polymerase chain reaction panel for patients currently hospitalized with encephalitis. Refer to page 3 of the Guidelines mentioned above for details. Any patient with laboratory evidence suggesting a current or recent West Nile virus infection must be reported immediately to DOHMH. To report:

- During business hours:
 - Call the Bureau of Communicable Disease (BCD) at 212-788-9830, or
 - Fax a completed *Universal Reporting Form* (URF) to BCD at 212-788-4268, or
 - Submit the URF electronically (downloadable form or instructions to set up online reporting at <http://www.nyc.gov/html/doh/html/hcp/hcp-urf.shtml>)
- After hours, call the NYC Poison Control Center at 1-800-222-1222 or 1-212-POISONS.

If you have questions regarding how to test for West Nile virus, you may contact the Bureau of Communicable Disease (BCD) at 212-788-9830.

As always, we appreciate our ongoing partnership with health care providers in NYC in reporting and investigating unusual disease manifestations or clusters.

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On Line Resources:

1. DOHMH West Nile Virus Guidelines and Recommendations for Health Care Providers, including recent Health Alerts (available at <http://www.nyc.gov/html/doh/html/wnv/wnvhcp.shtml>)
2. NYC DOHMH Guidelines for West Nile Testing and Reporting Cases of Viral Encephalitis and Meningitis (June 2010 version) <http://www.nyc.gov/html/doh/downloads/pdf/wnv/wnv-reportinstructions.pdf> (also attached to this alert)
3. Universal Reporting Form (September 2009 version) (download from <http://www.nyc.gov/html/doh/html/hcp/hcp-urf.shtml>)
4. New York State Infectious Diseases Requisition Form (on-line fillable form also available from <http://www.wadsworth.org/divisions/infdis/enceph/form.htm>). You can also access the document "Collection and Submission of Samples for Viral Encephalitis/Meningitis Testing Instructions" at this link.
5. New York State Viral Encephalitis/Meningitis Case Report Form (on-line fillable form also available from <http://www.wadsworth.org/divisions/infdis/enceph/form.htm>)
6. See where West Nile virus has recently been found at <http://www.nyc.gov/html/doh/html/wnv/wnvactivity.shtml>)