Chicago Department of Public Health

Health Alert

CDPH Chicago Department of Public Health

City of Chicago
Brandon Johnson, Mayor

www.chicagohan.org

Chicago Department of Public Health
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First West Nile virus Human Cases in Chicago

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Summary and Action Items

- The Chicago Department of Public Health is reporting the first 3 cases of human West Nile virus (WNV) infection this year in Chicago residents.
- West Nile virus disease should be suspected in patients presenting with viral meningitis or encephalitis, acute flaccid paralysis, and/or symptoms compatible with West Nile fever, particularly between now and October 31.
- The most sensitive screening test for WNV in humans is the IgM enzyme immunoassay (EIA) on cerebrospinal fluid and/or serum. Testing is widely available at commercial laboratories. Tests to detect viral RNA (e.g. reverse transcriptase-polymerase chain reaction [RT-PCR]) can be performed on specimens that are collected early in the course of illness and, if results are positive, can confirm an infection. Negative results of these tests do not rule out WNV infection.

REPORTING/CONTACT INFORMATION: Report all cases of West Nile virus or any laboratory evidence of current or recent infection with West Nile virus or other arboviral infection to CDPH through INEDSS or by calling 312-743-9000, option number 7. Human and mosquito case counts are available at chicago.gov/westnilevirus.

Background: The Chicago Department of Public Health (CDPH) is reporting the first 3 cases of human West Nile virus (WNV) infection this year in Chicago residents. Patients ranged in age from their 40s to their 80s and reside on the Northwest and South sides of Chicago. Symptom onset dates ranged from late July to early August. All patients were hospitalized due to illness and had neuroinvasive disease. The Illinois Department of Public Health (IDPH) reported the first non-Chicago human WNV case in Southern Illinois on June 24, 2025.

Clinical Characteristics: An estimated 70-80% of WNV infections are subclinical or asymptomatic. About 20% of patients develop West Nile fever, which includes fever, headache, and fatigue; a rash and gastrointestinal symptoms may also be present. Less than 1% of persons develop neuroinvasive disease, with clinical syndromes ranging from febrile headache to aseptic meningitis to encephalitis with flaccid paralysis.

Laboratory: Healthcare providers should send all human specimens (serum and cerebrospinal fluid) to private/reference laboratories for diagnostic testing. For other arboviral infections, private providers should contact CDPH for approval to test at the IDPH Chicago laboratory. Specimens authorized for SLE testing will also be tested for WNV.

Reporting: All human arboviral infections, including, but not limited to, WNV, Zika, Dengue, CHIKV, EEE, SLE, CE, and WEE are reportable diseases in Illinois. Please use the IDPH INEDSS system to submit arboviral disease reports. Cases may also be reported through the provider reporting line at 312-743-9000, then select option number 7.

Prevention: No WNV vaccines are licensed for use in humans. The risk of human infection with WNV will continue as long as mosquitoes are active, which typically ends with the first hard frost. Until then, healthcare providers are encouraged to educate their patients on WNV and on ways to prevent mosquito bites including applying an EPA-registered insect repellent that contains active ingredients such as DEET, picaridin, oil of lemon eucalyptus or IR3535 before going outdoors (especially between dusk and dawn when mosquitoes are most likely to bite), and when outdoors, wearing loose-fitting, light-colored clothing including long pants, long sleeve shirts, socks and shoes. Senior citizens and patients who are immunocompromised are especially vulnerable to WNV. Healthcare providers are also encouraged to educate their patients on ways to prevent mosquitoes from coming indoors by ensuring windows and doors are tight-fitting and screens are free of holes or tears and on ways to reduce the number of mosquitoes by emptying standing water from containers such as flowerpots, gutters, buckets, pool covers, pet water dishes, discarded tires and birdbaths.

The successful detection and control of West Nile virus in Chicago has been due in large part to our ongoing partnership with the city's medical and laboratory communities. Thank you for your continuing efforts.

What Public Health is doing:

- Requesting clinical and laboratory diagnostic information on all suspect arboviral disease conditions
- Trapping mosquitoes, then collecting, identifying and testing mosquitoes for WNV and SLE
- Placing larvicide in Chicago neighborhoods
- Educating the public
- Investigating reports of standing water and implementing control measures
- Providing data on mosquitoes and humans testing positive for West Nile virus at chicago.gov/westnilevirus

Additional Resources:

For additional information on WNV, please visit the following websites:
https://www.chicago.gov/city/en/depts/cdph/provdrs/healthy_communities/svcs/report_standing_water.html
http://www.idph.state.il.us/envhealth/wnv.htm
http://www.dph.illinois.gov/topics-services/diseases-and-conditions/west-nile-virus/surveillance