



CDInfo

**MONTHLY
MORBIDITY
REPORT**

Communicable Disease Information



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CDInfo is a surveillance newsletter intended to promote prevention of morbidity and mortality by providing useful data and practical recommendations for clinicians, laboratorians and infection control personnel who diagnose, treat and/or report infectious diseases in Chicago.

Did you know?

Take the Bite Out of West Nile pamphlets are available in seven languages:

- English
- Spanish
- Polish
- Vietnamese
- Cantonese
- Bosnian
- Russian

Pamphlets can be printed from PDFs posted on the CDPH WNV homepage.

West Nile Virus

West Nile virus (WNV) is transmitted through the bite of an infected mosquito and has the potential to cause prolonged disability or death in people who are infected. WNV was first detected in Chicago in 2001 among dead birds. The following year, Chicago faced its largest epidemic during which 225 human WNV cases were reported, including 22 fatalities. Although fewer human infections were reported annually from 2003 through 2006, WNV activity is expected to continue in Chicago for the foreseeable future. In 2006, CDPH identified an elevated risk of human WNV infection, prompting aggressive mosquito control efforts, as described below. Thus far in 2007, one human WNV infection has been reported in Illinois in a resident of DuPage County, and three Illinois counties have identified WNV-infected mosquitoes.

Summary of the 2006 Season

Mosquito Surveillance and Human Infections. From May through October, mosquitoes were trapped, identified, and tested for WNV to determine the risk of human infection in different areas of the city. Overall, the risk of WNV infection in Chicago in the summer of 2006 was high. CDPH tested 2,939 mosquito pools, of which 292 (9.9%) were positive for WNV. The WNV transmission period was greater than two months long, from early July to mid-September. The risk of human infection was highest in August and early September, with infection rates among wild mosquitoes as high as 20% during some weeks.

In 2006, 29 human cases of WNV infection including one fatality were reported in Chicago. The risk of human infections was higher than in previous years, primarily due to the distribution of heavy infestations of WNV-infected mosquitoes over a much larger area of the city beyond the traditional northwest and southwestern regions. In total, WNV-infected mosquitoes were identified in 48 of Chicago's 77 community areas. The long transmission period also contributed to the increase in risk.

Adult Mosquito Control. To reduce the danger of human infections, the Mayor's Task Force on WNV performed insecticide spraying of adult mosquitoes, also known as adulticiding. Adulticide (Anvil®) was used on three occasions in August and early September. The density of WNV-infected mosquitoes fell sharply after the adulticiding, indicating that the adulticide treatments were effective.

Larval Mosquito Control. All 219,560 catch basins within the city were treated in May and June of 2006 with larvicide (Altosid® and Vectolex®) to limit mosquito breeding and reduce the adult mosquito population density. Follow-up evaluations showed that the larvicide treatments were highly effective. After larvicide treatment, 94% of catch basins were not breeding mosquitoes during July, August, and September.

Dead Bird Surveillance. Dead crows, blue jays, robins, raptors and house sparrows found in the city were also tested for WNV. In 2006, a total of 75 birds were tested, 28 (37%) of which were positive for WNV.

2007 WNV Prevention and Control Activities

The *2007 WNV Prevention Plan* is available on the CDPH [West Nile Virus Homepage](#). Key elements are summarized here.

Surveillance for Human Infection. CDPH conducts surveillance for WNV and other arboviral infections in humans. Please report all suspect or confirmed arbovirus cases in Chicago to CDPH. WNV testing should be considered in cases of aseptic meningitis, encephalitis, or acute flaccid paralysis. Arbovirus testing of serum and cerebrospinal fluid from suspect human cases is available free of charge from the Illinois Department of Public Health (IDPH) Laboratory in Chicago. CDPH requests that specimens for arbovirus testing be forwarded to the IDPH Laboratory for testing and for confirmation of commercial laboratory positives. The case reporting form and laboratory submission form are attached. Additional information about WNV testing at the IDPH laboratory is available at <http://www.idph.state.il.us/envhealth/wnvguidelines.htm>.

Mosquito Surveillance. CDPH monitors mosquitoes citywide by collecting larval and adult mosquitoes. Surveillance for mosquito larvae is important for the identification of breeding sites that will, in turn, lead to targeted control measures. CDPH also tests adult mosquitoes collected in Chicago for WNV in order to monitor for risk of human infections.

Adult Mosquito Control. If WNV surveillance indicates that the level of WNV activity poses a significant threat to human health, insecticides may be applied to reduce the size of adult mosquito populations. If adult mosquito control becomes necessary, CDPH will provide advance notice to the public through media press releases. Mosquito population size and infection rates are measured before and after insecticide applications to monitor the efficacy of the treatments. Information on specific agents is available on the CDPH [West Nile Virus Homepage](#) under "Using Pesticides to Control Mosquitoes."

Larval Mosquito Control. A top priority for CDPH and other city agencies is to reduce mosquito breeding through the aggressive elimination of standing water. Residents are urged to reduce standing water around their homes and commercial properties, and to report to 311 potential breeding sites that they cannot eliminate themselves. To prevent the emergence of adult mosquitoes from catch basins, where standing water cannot be eliminated, a long-acting larvicide was applied to all city catch basins during May and June of this year.

Dead bird Surveillance. The public is asked to report locations of dead crows or blue jays by calling 311. Dead crows or blue jays in good condition may be collected and tested for WNV. Other birds may be safely disposed of using precautions listed on the CDPH [West Nile Virus Homepage](#) under "Information about Dead Birds."

Educating the General Public and Health Care Providers. West Nile educational brochures in seven languages are distributed to the public at park field houses, libraries, schools, health clinics, senior citizen centers, aldermanic offices, neighborhood fairs, Chicago Alternative Policing Strategy (CAPS) meetings, and more. Updates on WNV activity in Chicago will be distributed via the Health Alert Network to acute care hospitals and other health care providers.

- The CDPH [West Nile Virus Homepage](#) provides additional information on personal protection from mosquitoes and eliminating mosquito breeding sites.
- Additional WNV surveillance data for Illinois is available from the Illinois Department of Public Health: <http://www.idph.state.il.us/envhealth/wnvsurveillance07.htm>
- Additional WNV surveillance data for the United States is available from the Centers for Disease Control and Prevention: <http://www.cdc.gov/ncidod/dvbid/westnile/surv&control.htm>