



111 North County Farm Road  
Wheaton, IL 60187  
(630) 682-7400  
www.dupagehealth.org

Linda Kurzawa  
President, Board of Health

Karen Ayala, MPH  
Executive Director

Rashmi Chugh, MD, MPH  
Medical Officer

### General Information

Communicable Disease  
and Epidemiology  
(630) 221-7553

Environmental Health  
(630) 682-7400

Immunizations  
(630) 682-7400

Sexually  
Transmitted Diseases  
(630) 221-7553

HIV/AIDS  
(630) 221-7553

Tuberculosis  
(630) 221-7522

School Health  
(630) 221-7300

Travel Clinic  
(630) 682-7400

Animal Care & Control  
(630) 407-2800

Please contact  
Communicable Disease  
and Epidemiology at  
(630) 221-7553  
with suggestions  
or to be added to the  
distribution list.

The purpose of this two-page surveillance update is to promote the control and prevention of **communicable disease (CD)** by providing clinically relevant information and resources to healthcare professionals in DuPage County.

## Under the Microscope West Nile Virus

For questions or to report suspect and known cases of West Nile virus disease, please call the DuPage County Health Department at (630) 221-7553.

Arthropod-borne viruses (arboviruses) are transmitted to humans primarily through the bites of infected vector mosquitoes and ticks. West Nile virus (WNV) is the leading cause of domestically acquired arboviral disease in the continental U.S.<sup>1</sup> WNV emerged in the U.S. in the New York metropolitan area in the fall of 1999. Since then, the virus, which can be transmitted to humans by the bite of an infected mosquito, has quickly spread across the country.<sup>2</sup>

**Surveillance:** In 2017, a total of 2,002 WNV disease cases, including 1,339 (67%) neuroinvasive cases, have been provisionally reported in the U.S.<sup>3</sup> Most people are infected from June through September. Serious illness can occur in people of any age. However, **people over 60 years of age are at the greatest risk** for severe disease. People with **certain medical conditions**, such as cancer, diabetes, hypertension, kidney disease, and people who have received organ transplants, are also at greater risk for serious illness, which may rarely progress to coma and death.<sup>4</sup>

In Illinois, 90 WNV disease cases were reported in 2017, including 8 deaths (8.9%). As of 8/30/18, 22 WNV cases have been reported in Illinois in 2018, including one death.<sup>5</sup> **Seven WNV cases have been reported in DuPage County to date this year**, surpassing the six cases reported for all of 2017.

The key factors in determining the degree of West Nile virus activity are temperatures and rainfall. In **hot, dry weather**, mosquitoes that carry West Nile virus (primarily *Culex* mosquitoes) breed in stagnant water, like street catch basins and ditches, and multiply rapidly.<sup>6</sup>

**Diagnosis:** WNV disease should be considered in any person with a **febrile or acute neurologic illness who has had recent exposure to mosquitoes, blood transfusion, or organ transplantation**, especially during the summer months. The diagnosis should also be considered in any infant born to a mother infected with WNV during pregnancy or while breastfeeding. All cases should be reported to local public health authorities in a timely manner, toward early recognition of outbreaks and to implement control measures to reduce future infections.<sup>7</sup>

The **incubation period for WNV disease is typically 2 to 6 days but ranges from 2 to 14 days** and can be several weeks in immunocompromised people. An estimated **70-80% of human WNV infections are subclinical or asymptomatic**. Most symptomatic persons experience an **acute systemic febrile illness** that often includes headache, weakness, myalgia, or arthralgia; gastrointestinal symptoms and a transient maculopapular rash also are commonly reported. **Less than 1% of infected persons develop neuroinvasive disease**, which typically manifests as meningitis, encephalitis, or acute flaccid paralysis. Rarely, cardiac dysrhythmias, myocarditis, rhabdomyolysis, optic neuritis, uveitis, chorioretinitis, orchitis, pancreatitis, and hepatitis have been described in patients with WNV disease.<sup>7</sup>

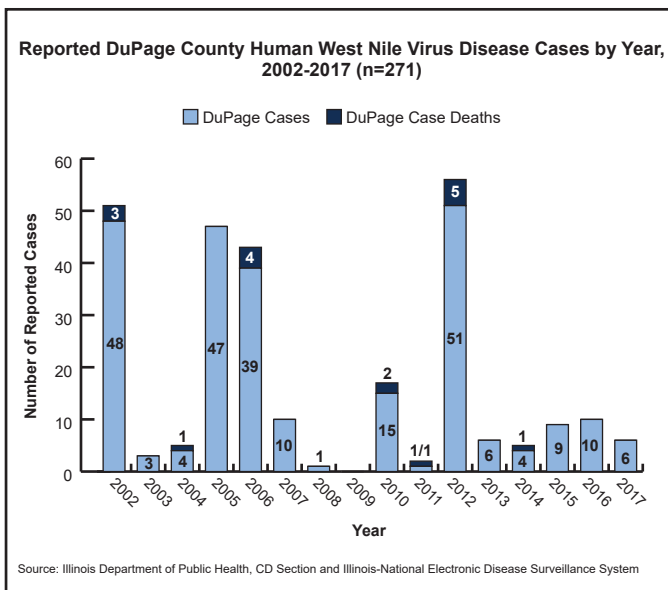
Diagnosis of WNV infection is based on a high index of clinical suspicion and obtaining **specific laboratory tests (e.g., detection of IgM antibody to WNV in serum and/or cerebral spinal fluid)**. Treatment is supportive, often involving hospitalization, intravenous fluids, respiratory support, and prevention of secondary infections for patients with severe disease.<sup>8</sup>

**Prevention:** In 2013, DuPage County launched the **Personal Protection Index (PPI)** to alert residents each year of the current WNV risk level and provide measures to protect themselves. The PPI was developed in conjunction with guidance from the Centers for Disease Control and Prevention and Association of State and Territorial Health Officials. Research and operational experience show that increases in WNV infection rates in mosquito populations can provide an indicator of developing outbreak conditions several weeks in advance of increases in human infections.<sup>9</sup>

Based on the DuPage County Health Department's review of human and mosquito surveillance data, the PPI widget is updated by 3:00 p.m. each Wednesday throughout the WNV season (see [www.dupagehealth.org/WestNileVirus/PPI](http://www.dupagehealth.org/WestNileVirus/PPI)). The PPI recommends prevention tips based on the "4 Ds of Defense," which include **draining** standing water, using insect repellent to **defend** yourself, being especially careful between **dusk and dawn** (when mosquitoes are most active), and **dressing** with long sleeves and pants to cover your skin.

### References:

1. [www.cdc.gov/mmwr/volumes/67/wr/mm6701a3.htm?s\\_cid=mm6701a3\\_w](http://www.cdc.gov/mmwr/volumes/67/wr/mm6701a3.htm?s_cid=mm6701a3_w)
2. [www.dph.illinois.gov/topics-services/diseases-and-conditions/west-nile-virus](http://www.dph.illinois.gov/topics-services/diseases-and-conditions/west-nile-virus)
3. [www.cdc.gov/westnile/statsmaps/index.html](http://www.cdc.gov/westnile/statsmaps/index.html)
4. [www.cdc.gov/westnile/index.html](http://www.cdc.gov/westnile/index.html)
5. [www.dph.illinois.gov/topics-services/diseases-and-conditions/west-nile-virus/surveillance](http://www.dph.illinois.gov/topics-services/diseases-and-conditions/west-nile-virus/surveillance)
6. [www.dupagehealth.org/news/NewsReleaseIncreaseInWNVInDuPageCounty](http://www.dupagehealth.org/news/NewsReleaseIncreaseInWNVInDuPageCounty)
7. [www.cdc.gov/westnile/healthCareProviders/healthCareProviders-ClinLabEval.html](http://www.cdc.gov/westnile/healthCareProviders/healthCareProviders-ClinLabEval.html)
8. [www.dph.illinois.gov/topics-services/diseases-and-conditions/west-nile-virus/hcp-info/clinician-info](http://www.dph.illinois.gov/topics-services/diseases-and-conditions/west-nile-virus/hcp-info/clinician-info)
9. [www.cdc.gov/westnile/resources/pdfs/wnvGuidelines.pdf](http://www.cdc.gov/westnile/resources/pdfs/wnvGuidelines.pdf)



DUPAGE COUNTY HEALTH DEPARTMENT

CASES<sup>1</sup> OF REPORTABLE DISEASES\*

\* Last updated by the Illinois Department of Public Health in April 2016

CD REVIEW

Volume 14, No. 8 August 2018

	Report Within	2018		2017		2016		2015		2014		Median	
		Jul	Jan-Jul	Jan-Jul	Total	Jan-Jul	Total	Jan-Jul	Total	Jan-Jul	Total	Jan-Jul	Total (*14-'17)
<b>Vaccine Preventable Diseases</b>													
Chickenpox (varicella)	24 hrs	5	26	18	35	31	56	21	36	44	76	26	46
Diphtheria	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
<i>Haemophilus influenzae</i> , invasive	24 hrs	1	11	6	9	4	13	9	15	2	5	6	11
Hepatitis A	24 hrs	1	5	2	3	1	2	3	5	6	8	3	4
Hepatitis B	7 days	0	1	0	1	1	2	2	2	1	5	1	2
Hepatitis B (carriers)	7 days	6	50	59	99	66	122	77	137	52	112	59	117
Influenza, deaths in < 18 yrs old	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Influenza, ICU admissions	24 hrs	0	112	68	121	63	69	36	43	46	152	63	95
Measles (rubeola)	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Mumps	24 hrs	1	9	7	8	7	11	4	8	2	2	7	8
<i>Neisseria meningitidis</i> , invasive	24 hrs	0	0	0	0	1	1	1	1	0	0	0	0.5
Pertussis (whooping cough)	24 hrs	2	10	10	36	62	105	16	49	11	22	11	42.5
Polio	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rubella	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
<i>Streptococcus pneumoniae</i> , invasive disease, in those < 5 yrs old	7 days	0	2	1	1	2	2	0	0	2	3	2	1.5
Tetanus	7 days	0	0	0	0	0	0	0	0	0	0	0	0
<b>Other Communicable Diseases</b>													
Anaplasmosis <sup>2</sup>	7 days	0	0	1	1	1	1	2	3	1	3	1	2
Anthrax	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Botulism, foodborne	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Botulism, other	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Brucellosis	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
California encephalitis <sup>3</sup>	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Campylobacteriosis	7 days	17	85	95	161	100	173	NR	NR	NR	NR	95	167
Chikungunya virus disease <sup>3</sup>	7 days	1	1	0	0	0	4	2	2	0	0	0	1
Cholera	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Creutzfeldt-Jakob disease	7 days	0	0	2	2	1	3	1	1	2	2	1	2
Cryptosporidiosis	7 days	5	19	6	18	7	18	2	5	0	2	6	11.5
Cyclosporiasis	7 days	97	122	7	7	3	5	1	1	0	1	3	3
Dengue fever <sup>3</sup>	7 days	0	1	0	1	0	3	3	3	1	1	1	2
Ehrlichiosis <sup>4</sup>	7 days	0	0	0	0	1	2	1	1	0	0	0	0.5
Enteric <i>E. coli</i> infections <sup>4</sup>	24 hrs	4	22	16	23	19	24	9	14	8	18	16	20.5
Glomerulonephritis <sup>5</sup>	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Hantavirus pulmonary syndrome	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Hemolytic uremic syndrome	24 hrs	0	0	0	0	0	0	0	0	1	2	0	0
Hepatitis C (cases & carriers)	7 days	9	102	171	294	160	255	156	237	137	242	156	248.5
Hepatitis D	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Histoplasmosis	7 days	0	4	7	9	6	8	3	3	3	7	4	7.5
Influenza A, novel virus	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Legionellosis	7 days	9	18	18	28	13	34	7	18	13	26	13	27
Leprosy	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Leptospirosis	7 days	0	0	1	1	0	0	0	0	0	0	0	0
Listeriosis	7 days	0	0	3	4	0	0	1	2	1	2	1	2
Lyme disease <sup>2</sup>	7 days	4	17	25	36	21	34	23	30	16	22	21	32
Malaria	7 days	1	4	0	3	8	10	2	4	1	2	2	3.5
Ophthalmia neonatorum	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Plague	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Psittacosis	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Q fever	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rabies, animal case	24 hrs	1	2	2	12	6	10	1	16	2	6	2	11
Rabies, human case	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rabies, potential exposure	24 hrs	28	70	28	84	24	59	29	73	18	51	28	66
Reye syndrome	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Rheumatic fever <sup>5</sup>	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rocky Mountain spotted fever <sup>2</sup>	7 days	0	1	0	1	3	3	0	0	0	0	0	0.5
Salmonellosis	7 days	10	63	68	105	58	119	77	133	49	115	63	117
Severe Acute Respiratory Syndrome	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Shigellosis	7 days	2	4	6	14	13	21	10	27	8	18	8	19.5
Smallpox	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Smallpox vaccination, complications	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
St. Louis encephalitis <sup>3</sup>	7 days	0	0	0	0	0	0	0	0	0	0	0	0
<i>Staphylococcus aureus</i> , methicillin resistant (MRSA), in those < 61 days old	24 hrs	0	6	1	3	7	11	4	10	5	9	5	9.5
<i>Staphylococcus aureus</i> , methicillin resistant (MRSA), community cluster <sup>6</sup>	24 hrs	0	0	1	1	0	1	0	0	0	0	0	0.5
<i>Staphylococcus aureus</i> (vancomycin-resistant)	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Streptococcal infections, group A invasive disease <sup>7</sup>	24 hrs	3	23	18	24	12	18	15	22	23	29	18	23
Toxic shock syndrome <sup>8</sup>	7 days	0	1	0	0	0	0	0	0	0	0	0	0
Trichinosis	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Tuberculosis	7 days	4	27	19	43	20	42	12	39	14	34	19	40.5
Tularemia	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Typhoid fever	24 hrs	0	3	3	4	0	0	2	3	1	5	2	3.5
Typhus	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Vibriosis (non-cholera)	7 days	2	5	5	6	4	6	1	4	0	3	4	5
West Nile virus disease <sup>3</sup>	7 days	2	2	1	6	0	10	0	9	0	5	0	7.5
Yersiniosis	7 days	0	1	0	1	3	4	1	1	1	3	1	2
Zika virus disease <sup>3</sup>	7 days	0	1	1	1	6	11	NR	NR	NR	NR	1	6
<b>STDs, HIV and AIDS</b>													
AIDS <sup>9</sup> (July - September)	7 days	--	5	4	5	8	8	11	12	16	17	8	10
Chancroid	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Chlamydia	7 days	97	1072	1376	2495	1452	2417	1365	2382	1213	2056	1365	2399.5
Gonorrhea	7 days	22	156	222	451	225	390	175	307	135	242	175	348.5
HIV infection <sup>9,10</sup> (July - September)	7 days	--	12	11	16	26	30	40	47	33	42	26	36
Syphilis <sup>11</sup>	7 days	3	28	35	55	39	59	20	42	23	41	28	48.5

DuPage County healthcare providers and hospitals **must report any suspected or confirmed case of these diseases** to the local health authorities within the number of hours or days indicated.

**REPORTING NUMBERS:**

**Communicable Diseases**

(630) 221-7553

24 hours: (630) 682-7400

**Tuberculosis**

(630) 221-7522

**STDs**

(630) 221-7553

**HIV/AIDS:**

(630) 221-7553

<sup>1</sup> Provisional cases, based on date of onset

<sup>2</sup> Listed in CD Rules and Regulations under "Tickborne Disease"

<sup>3</sup> Listed in CD Rules and Regulations under "Arboviral Infections"

<sup>4</sup> O157:H7, STEC, EIEC, ETEC, EPEC

<sup>5</sup> Listed in CD Rules and Regulations under "Streptococcal infections, group A invasive disease sequelae"

<sup>6</sup> Two or more laboratory-confirmed cases of community onset MRSA infection during a 14 day period

<sup>7</sup> Includes streptococcal toxic shock syndrome and necrotizing fasciitis

<sup>8</sup> Due to *Staphylococcus aureus*

<sup>9</sup> HIV/AIDS data are provided quarterly by IDPH and are provisional, based on date of diagnosis.

<sup>10</sup> HIV counts reflect all newly diagnosed HIV cases regardless of stage of disease at diagnosis.

<sup>11</sup> Cases are provisional, based on test date per local health department investigation.

NR = Not reported

**Websites**

**CDC:**

[www.cdc.gov](http://www.cdc.gov)

**IDPH:**

[www.dph.illinois.gov](http://www.dph.illinois.gov)

**DuPage:**

[www.dupagehealth.org](http://www.dupagehealth.org)

Archived issues of *CD Review* are available at: [www.dupagehealth.org/publications](http://www.dupagehealth.org/publications)