



DuPage County Health Department R E V I E W

Volume 8, No. 7

July 2012

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

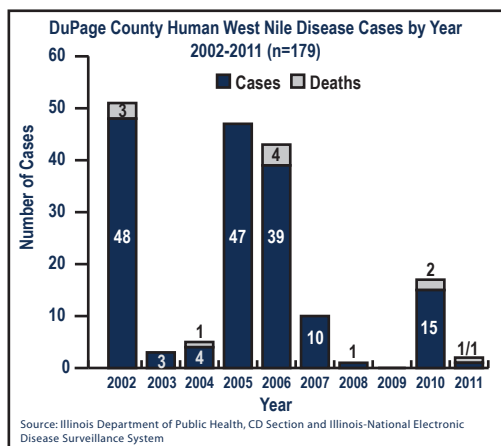
For questions or to report suspect and known cases of West Nile virus disease, please call the DuPage County Health Department at (630) 221-7553.

West Nile virus (WNV) emerged in the United States 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.¹

Surveillance: In Illinois, West Nile virus was first identified in September 2001 when laboratory tests confirmed its presence in two dead crows found in the Chicago area. In 2002, the state's first human cases and deaths from West Nile disease were recorded and all but two of the state's 102 counties eventually reported a positive human, bird, mosquito or horse case. By the end of 2002, Illinois had counted more human cases (884) and deaths (67) than any other state in the U.S. In 2003, the epicenter of West Nile disease moved westward. Colorado reported the highest number of cases (2,947), easily surpassing the caseload record for the mosquito-borne disease set the previous year by Illinois. The number of West Nile human cases in Illinois fell dramatically with just 54 reported and one death.¹

Illinois' caseload in 2004 was slightly higher than the previous year with 60 reported cases and four deaths. In 2005, Illinois recorded 252 cases and 12 deaths, both totals the second highest in the nation to California's 880 cases and 19 deaths. In 2006, there were 215 cases and 10 deaths reported, the sixth highest number of cases in the U.S.¹ The following numbers of human WNV cases in Illinois have been reported in subsequent years: 2007—101, 2008—20, 2009—5, 2010—61, and 2011—34. As of July 31, two Illinois human cases have been reported in 2012 (both from Cook County).¹

To date, West Nile virus positive birds and mosquitoes have been reported in 30 Illinois counties, including DuPage County. **State public health officials report increasing risk for WNV infection this year with prolonged hot, dry weather.** Dry conditions have eliminated "floodwater mosquitoes," which are very rarely infected with WNV. In contrast, the extreme heat and dry weather are producing more *Culex* mosquitoes, the primary carriers of WNV, which breed in street catch basins (storm drains) and similar locations. Also, high temperatures accelerate WNV multiplication in mosquitoes and mosquitoes feeding on birds.²



The timely identification and reporting of persons with acute WNV or other arboviral infections may have significant public health implications and will likely augment the public health response to reduce the risk of additional human infections.³ Approximately 80 percent of people who are infected with WNV will not show any symptoms at all.³ In the 20 percent of persons developing symptoms, West Nile virus disease may be classified as **non-neuroinvasive disease (e.g., West Nile fever)** or **neuroinvasive disease cases**, based on clinical and laboratory criteria.⁴ Mild cases of West Nile infections (e.g., West Nile fever) may cause a slight fever or headache. More severe infections (e.g., neuroinvasive disease, including West Nile encephalitis and meningitis) are marked by a rapid onset of a high fever with head and body aches, disorientation, tremors, convulsions and, in the most severe cases, paralysis or death. Usually symptoms occur from 3 to 14 days after the bite of an infected mosquito, and generally last for 3 to 6 days. Persons at the highest risk for serious illness are those 50 years of age or older.¹

Diagnosis of West Nile virus infection is based on a high index of clinical suspicion and obtaining specific laboratory tests (e.g., serum, cerebrospinal fluid). Procedures for submitting specimens to the Illinois Department of Public Health Laboratory and requisition forms can be found at www.idph.state.il.us/envhealth/wnvguidelines.htm. **Treatment** is supportive, often involving hospitalization, intravenous fluids, respiratory support, and prevention of secondary infections for patients with severe disease.⁵

The best way to **prevent** West Nile encephalitis and other mosquito-borne illnesses is to reduce the number of mosquitoes around your home and neighborhood and to take personal precautions to avoid mosquito bites.¹ Recommended precautions include:

- **Reduce** exposure: Avoid being outdoors when mosquitoes are most active, especially between dusk and dawn.
 - Make sure doors and windows have tight-fitting screens. Repair or replace screens that have tears or other openings. Try to keep doors and windows shut, especially at night.
 - Eliminate all sources of standing water where mosquitoes can breed, including water in bird baths, ponds, flowerpots, wading pools, old tires and any other receptacles.
- **Repel:** When outdoors, wear shoes and socks, long pants and a long-sleeved shirt, and apply insect repellent that contains DEET, picaridin, oil of lemon eucalyptus or IR 3535, according to label instructions. A physician should be consulted before using repellents on infants.
- **Report:** In communities where there are organized mosquito control programs, contact your municipal government to report dead birds and areas of stagnant water in roadside ditches, flooded yards and similar locations that may produce mosquitoes.²

References:

1. www.idph.state.il.us/envhealth/wnv.htm
2. www.dupagehealth.org/news/WNVJULY2012
3. www.cdc.gov/ncidod/dvbid/westnile/clinicians/reporting.htm
4. www.cdc.gov/osels/ph_surveillance/nndss/casedef/arboviral_current.htm
5. www.idph.state.il.us/envhealth/wnvincinians.htm



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

Linda Kurzawa
President, Board of Health

Maureen McHugh
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 or
ebarajas@dupagehealth.org
to send suggestions
or to be added to the
distribution list.

DUPAGE COUNTY HEALTH DEPARTMENT

CASES¹ OF REPORTABLE DISEASES*

* Last updated by the Illinois Department of Public Health in March 2008

CD REVIEW

Volume 8, No. 7 July 2012

Vaccine Preventable Diseases	Report Within	2012		2011		2010		2009		2008		Median	
		Jun	Jan - Jun	Jan - Jun	Total	Jan - Jun	Total	Jan - Jun	Total	Jan - Jun	Total	Jan - Jun	Overall ('08-'11)
Chickenpox (varicella)	24 hrs	1	51	40	82	69	95	85	146	110	236	69	120.5
Diphtheria	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Haemophilus influenzae, invasive	24 hrs	1	6	8	15	4	7	5	11	1	6	5	9
Hepatitis A	24 hrs	0	1	3	8	2	3	2	6	9	11	2	7
Hepatitis B	7 days	0	3	0	0	1	4	4	8	0	3	1	3.5
Hepatitis B (carriers)	7 days	2	48	49	113	53	108	58	127	69	128	53	120
Influenza, deaths in < 18 yrs old	7 days	0	0	0	0	0	0	0	1	0	0	0	0
Influenza ICU admissions	24 hrs	0	8	24	24	0	3	NR	NR	NR	NR	8	13.5
Measles (rubeola)	24 hrs	0	0	0	0	0	0	1	1	14	14	0	0.5
Mumps	24 hrs	0	1	2	4	0	2	2	2	2	2	2	2
Neisseria meningitidis, invasive	24 hrs	0	0	1	2	1	1	3	6	1	4	1	3
Pertussis (whooping cough)	24 hrs	16	123	83	268	17	92	10	26	2	13	17	59
Poliomyelitis	24 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
Streptococcus pneumoniae, invasive disease, in those < 5 yrs old	7 days	0	2	9	13	4	8	6	8	1	6	4	8
Tetanus	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Other Communicable Diseases													
Anaplasmosis ²	7 days	0	0	2	3	0	0	0	0	0	0	0	0
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 ³	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Cholera	24 hrs	0	0	0	0	0	0	0	0	0	1	0	0
Creutzfeldt-Jakob disease	7 days	0	0	1	2	0	0	0	0	0	0	0	0
Cryptosporidiosis	7 days	0	1	1	5	2	5	3	5	0	1	1	5
Cyclosporiasis	7 days	0	0	0	0	0	0	1	1	0	0	0	0
Dengue fever ³	7 days	0	0	1	1	2	4	0	4	0	0	0	2.5
Ehrlichiosis ²	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Enteric E. coli infections ⁴	24 hrs	2	7	13	22	9	18	6	12	8	21	8	19.5
Giardiasis	7 days	4	19	14	44	24	49	17	40	21	53	19	46.5
Glomerulonephritis ⁵	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	1	0	0	0	0	0	1	0	0.5
Hepatitis C (cases & carriers)	7 days	4	83	93	189	101	187	119	213	135	246	101	201
Hepatitis D	7 days	0	0	0	1	0	0	0	0	0	0	0	0
Histoplasmosis	7 days	0	2	0	1	2	2	1	2	3	6	2	2
Influenza A, novel virus	3 hrs	0	0	0	0	11	11	44	181	0	0	0	5.5
Legionellosis	7 days	1	6	3	14	6	11	4	13	1	5	4	12
Leprosy	7 days	0	0	0	0	0	0	0	0	1	1	0	0
Leptospirosis	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Listeriosis	7 days	0	0	1	2	1	6	1	3	0	1	1	2.5
Lyme disease ²	7 days	3	8	13	32	7	19	5	17	7	16	7	18
Malaria	7 days	0	1	1	7	1	4	2	4	3	4	1	4
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 ⁸	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rabies, human case	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rabies, potential exposure	24 hrs	7	18	12	30	15	54	7	15	8	45	12	37.5
Reye syndrome	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Rheumatic fever ⁵	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rocky Mountain spotted fever ²	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Salmonellosis	7 days	16	50	45	95	54	136	40	89	51	105	50	100
Severe Acute Respiratory Syndrome	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Shigellosis	7 days	1	8	7	22	258	277	5	12	13	24	8	23
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 ³	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Staphylococcus aureus, methicillin resistant (MRSA), in those < 61 days old	24 hrs	0	2	1	3	5	6	4	6	0	3	2	4.5
Staphylococcus aureus, methicillin resistant (MRSA), community cluster ⁷	24 hrs	0	1	0	0	1	1	0	1	1	4	1	1
Staphylococcus aureus (vancomycin-resistant)	24 hrs	0	0	0	1	1	1	0	0	0	0	0	0.5
Streptococcal infections, group A invasive disease ⁸	24 hrs	1	13	19	30	11	20	9	14	10	16	11	18
Toxic shock syndrome ⁹	7 days	0	0	1	1	0	0	0	0	1	1	0	0.5
Trichinosis	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Tuberculosis ¹⁰	7 days	0	10	13	23	17	26	14	29	15	43	14	27.5
Tularemia	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Typhoid fever	24 hrs	0	1	3	3	2	3	3	5	1	3	2	3
Typhus	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Vibriosis (non-cholera)	7 days	0	1	0	3	0	1	1	2	0	0	0	1.5
West Nile disease ³	7 days	0	0	0	2	0	17	0	0	0	1	0	1.5
Yersiniosis	7 days	0	3	2	3	0	0	2	5	0	1	2	2
STDs, HIV and AIDS													
AIDS ¹¹ (April - June)	7 days	**	9	7	16	17	26	8	19	6	22	4.5	20.5
Chancroid	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Chlamydia ¹²	7 days	103	769	762	1599	766	1539	798	1555	635	1587	766	1571
Gonorrhea ¹²	7 days	14	96	103	241	108	223	106	225	121	268	106	233
HIV infection ¹¹ (April - June)	7 days	**	10	11	24	21	27	20	40	6	23	8.5	25.5
Syphilis	7 days	0	7	18	24	10	25	17	33	10	18	10	24.5

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

- 1 Provisional cases, based on date of onset
 - 2 Listed in CD Rules and Regulations under "Tickborne Disease"
 - 3 Listed in CD Rules and Regulations under "Arboviral Infections"
 - 4 O157:H7, STEC, EIEC, ETEC, EPEC
 - 5 Listed in CD Rules and Regulations under "Streptococcal infections, group A invasive disease sequelae"
 - 6 Q fever case in 2004 not related to any suspected bioterrorism threat or event
 - 7 Two or more laboratory-confirmed cases of community onset MRSA infection during a 14 day period
 - 8 Includes streptococcal toxic shock syndrome and necrotizing fasciitis
 - 9 Due to Staphylococcus aureus
 - 10 Provisional cases, based on count date per IDPH
 - 11 HIV/AIDS data are provided quarterly by IDPH and are provisional, based on date of diagnosis
 - 12 Provisional cases, based on date of test
- NR = Not reported
** = Count of less than 5 cases

Websites

- CDC:**
www.cdc.gov
- IDPH:**
www.idph.state.il.us
- DuPage:**
www.dupagehealth.org

Archived issues of CD Review are available at:
www.dupagehealth.org/publications