



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 Rabies

Rabies is a preventable viral disease of mammals most often transmitted from the bite of a rabid animal. The most common wild reservoirs of rabies are **bats, raccoons, skunks, foxes, and coyotes**, but the disease also has been found in deer and in large rodents, such as woodchucks. Domestic mammals can also acquire rabies, including cats, dogs, and livestock, if they are not vaccinated.^{1,2} The virus is present primarily in the **saliva, brain tissue, and spinal fluid** of a rabid animal.²

Most of the recent cases of human rabies that have occurred in the U.S. have been caused by rabies virus from bats. Rabid bats can be found in any county in Illinois.² Bats are the primary carrier of rabies in Illinois and already this year (as of June 28, 2017), two bats have tested positive for rabies in DuPage County.

Bats, like all wild animals, should never be handled. People usually know when they have been bitten by a bat, but there are instances when a bite may not be apparent. **Bats have very small teeth and a physical inspection cannot be used to establish whether a bite occurred.** Exposure may occur if the animal's saliva enters an open cut or mucous membrane (e.g., nose, mouth, eyes).²

The presence of a bat in a home, or any contact with a bat, represents a possible hazard for rabies and should be reported to a physician and the local health department so that the circumstances can be evaluated.^{2,3} For example, if a person awakens and finds a bat in the bedroom, or sees a bat in the room of an unattended young child, or sees a bat near a mentally impaired or intoxicated person, a physician and local health department should be consulted and prophylaxis considered if the bat cannot be tested negative.^{2,4} **The bat should not be discarded, and the bat's head should not be damaged, so the bat may be tested for rabies immediately.**

One to three people die in the U.S. every year from rabies, usually due to exposures to indigenous rabid bats, skunks, or raccoons, or to exposure to rabid dogs while traveling overseas. For this reason, **it is important that rabies be considered in all cases of unexplained encephalitis.** Rabies is nearly always fatal once symptoms appear, but it **can be prevented almost 100% of the time when postexposure prophylaxis including rabies vaccine and immunoglobulin is administered soon after a rabies exposure occurs.**¹ In the U.S., human fatalities associated with rabies occur in people who fail to seek medical assistance, **usually because they were unaware or do not recognize the risk of their exposure.**¹ The last human case in Illinois was reported in 1954.²

Post-exposure Prophylaxis (PEP)

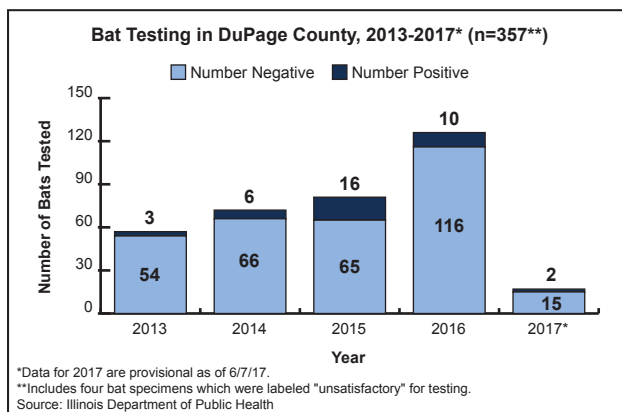
If an animal suspected of having rabies cannot be submitted for testing (e.g., escaped bat, skunk) or observed (domestic dogs, cats, or ferrets only), or if it tests positive for rabies, PEP of the individual with **(1) rabies immune globulin and (2) the vaccine series must begin immediately.**² The 2008 recommendations of the Advisory Committee on Immunization Practices (ACIP) were revised and updated in 2010, reducing the 5-dose rabies vaccination regimen to 4 doses.^{4,5} Evidence from various studies and epidemiologic surveillance indicated that **4 vaccine doses in combination with rabies immune globulin (RIG) elicited adequate immune responses** and that a fifth dose of vaccine did not contribute to more favorable outcomes.⁵ ACIP recommendations for the use of **rabies immune globulin (RIG)** remain unchanged. In addition to prompt wound care, PEP consists of a regimen of **one dose of RIG (for immediate passive immunization) and four doses of rabies vaccine over a 14-day period (on days 0, 3, 7, and 14)** for most individuals (five doses are recommended for immunosuppressed persons), initiated as soon as possible after exposure.⁵ **For persons traveling who receive PEP abroad**, it might be necessary to provide additional therapy when the patient returns to the U.S. State or local health departments should be contacted for specific advice in such cases.⁶

Because animal rabies testing is a priority at the state laboratories, initiation of rabies PEP can await prompt testing of the animal brain. Current vaccines are relatively painless and are given **intramuscularly in the arm**, like an influenza or tetanus vaccine (e.g., **for adults, the deltoid area; for children, the anterolateral aspect of the thigh is also acceptable**). The **gluteal area should not be used** because administration of vaccine in this area might result in a diminished immunologic response. Children should receive the same vaccine dose (i.e., vaccine volume) as recommended for adults.⁵

References:

1. www.cdc.gov/rabies/
2. www.dph.illinois.gov/topics-services/diseases-and-conditions/diseases-a-z-list/rabies
3. www.dph.illinois.gov/topics-services/environmental-health-protection/structural-pest-control/bats-exclusion
4. www.cdc.gov/mmwr/PDF/rr/rr5703.pdf
5. www.cdc.gov/mmwr/pdf/rr/rr5902.pdf
6. www.cdc.gov/rabies/specific_groups/travelers/treatment_outside_us.html

All animal bites to humans that occur in DuPage County must be reported to Animal Care and Control at (630) 407-2800; fax reports to (630) 407-2801. All potential human rabies exposures, cases, and animal rabies cases must be reported to the DuPage County Health Department at (630) 221-7553.



DUPAGE COUNTY HEALTH DEPARTMENT

CASES¹ OF REPORTABLE DISEASES*

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

CD REVIEW

Volume 13, No. 6 June 2017

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

Table with columns for Disease Name, Report Within, 2017 (Jan-May, Total), 2016 (Jan-May, Total), 2015 (Jan-May, Total), 2014 (Jan-May, Total), 2013 (Jan-May, Total), and Median (Jan-May, Total '13-'16). Rows include Vaccine Preventable Diseases, Other Communicable Diseases, and STDs, HIV and AIDS.

- 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 Two or more laboratory-confirmed cases of community onset MRSA infection during a 14 day period
7 Includes streptococcal toxic shock syndrome and necrotizing fasciitis
8 Due to Staphylococcus aureus
9 HIV/AIDS data are provided quarterly by IDPH and are provisional, based on date of diagnosis.
10 HIV counts reflect all newly diagnosed HIV cases regardless of stage of disease at diagnosis.
11 Cases are provisional, based on test date per local health department investigation.
NR = Not reported

Websites

CDC: www.cdc.gov

IDPH: www.dph.illinois.gov

DuPage: www.dupagehealth.org

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