SPECIAL POINTS OF INTEREST

- In 2013, there was one human case of West Nile virus in Washtenaw County. In 2012, there were five human cases and one resident death. West Nile virus will continue to return as a potential threat each summer for the foreseeable future. Other mosquito-borne diseases are also likely to spread to our area as climate change occurs and new diseases emerge.
- While ticks in Washtenaw County have not been found to carry Lyme disease yet, it's likely only a matter of time until they are here. In 2013, 13 Washtenaw County residents were diagnosed with Lyme disease; they were believed to have been exposed elsewhere.
- Once a human who is infected with rabies develops symptoms, the disease is always 100% fatal. On June 2nd of this year, a bat tested positive for rabies in Washtenaw County. In 2013, 105 animals were tested for rabies and 3 bats were positive in Washtenaw County.

Washtenaw County Public Health Post

Biting Pests and the Diseases they Carry

Mosquitoes and West Nile Virus (WNV)

West Nile virus is transmitted by the bite of an infected mosquito. Mosquitoes become infected when they feed on infected birds. Most people infected with WNV have no symptoms; only about 1 in 4 people experience fever, headache, body aches, skin rash and swollen lymph glands. Less than 1% of those infected develop a serious illness, including encephalitis or meningitis (inflammation of the brain). The risk of serious illness is higher in those over age 50. There is no specific treatment for WNV infection other than supportive care for any symptoms or associated serious illnesses caused by the virus.

Hot, dry weather conditions appear to increase the numbers of mosquitoes most likely to transmit the virus to humans. Culex mosquitoes like to breed in foul, stagnant water such as that found in clogged gutters, unmaintained swimming pools and storm water catch basins. Infrequent rainfall does not allow for the flushing of mosquito larvae out of these locations. As such, August and September are the months of greatest risk to humans for becoming infected, and hot, dry summers are associated with increased human infections.

West Nile virus will likely remain an issue, causing the need for annual prevention efforts:

- Wear long sleeves, long pants, shoes and socks when outdoors.
- Wear insect repellent containing DEET, picaridin (KBR 3023), or oil of lemon eucalyptus (p-menthane 3,8-diol or PMD) when outdoors where mosquitoes are present.
- Eliminate sources of standing water in the yard and around the home.
- Report dead birds to the Washtenaw County West Nile Virus Information Line, 734-544-6750.

What is WCPH doing to address this issue?

- We monitor and encourage testing of ill humans for West Nile virus, St. Louis Encephalitis (SLE) and Eastern Equine Encephalitis (EEE).
- We encourage residents to call the West Nile Virus Information Line (734-544-6750) to report dead birds, as they can be a good predictor of West Nile activity in a particular area.
- We consult with local municipalities regarding larvaciding catch basins and other standing water sites for mosquito control.
- This summer, we are partnering with the Michigan Department of Community Health to trap, identify and test mosquitoes for WNV at several locations in Washtenaw County. If mosquitoes tests positive, we will know that the virus is in the community, and we can provide information to the public to take appropriate precautions. This is an enhancement from solely relying on dead bird reports to know that the virus is circulating locally.

For more information:

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Ticks and Lyme Disease

Lyme disease is caused by the bacterium Borrelia burgdorferi. It is transmitted to humans through the bite of an infected blacklegged (deer) tick, which are different from ticks commonly found on pets. Typical symptoms include fever, headache, fatigue and a characteristic "bullseye" skin rash called erythema migrans. If left untreated, infection can spread to joints, the heart and the nervous system. Lyme disease is diagnosed based on symptoms and the possibility of exposure to infected ticks. Most cases of Lyme disease can be treated successfully with antibiotics. Patients treated with antibiotics in the early stages of Lyme disease usually recover rapidly and completely.

To date, there is no evidence that transmission of Lyme disease has occurred in Washtenaw County. However, infected tick populations are present along the west Michigan lakeshore. County residents may be exposed in other parts of Michigan or in other states. Be extra vigilant in warmer months (April-September) when ticks are most active:

- Avoiding wooded and bushy areas with high grass and leaf litter. Walk in the center of trails.
- Use repellents that contain 20% or more DEET on exposed skin. Use products that contain permethrin on clothing.
- Bathe or shower soon after coming indoors. Conduct a full-body tick check using a hand-held or full-length mirror to view all parts of your body upon return from tick-infested areas. Remove any ticks. Also check gear and pets for ticks.
- If a tick is attached, it must feed for 36-48 hours to transmit the bacterium that causes Lyme disease. After feeding, the tick will be engorged (full of blood) and will have a globular shape and be larger than an unengorged tick.

What is WCPH doing to address this issue?

- Public Health follows up on every reported case of Lyme disease to determine if the person was recently infected and where the person may have been infected. Notably, area residents travel frequently, often to other parts of Michigan with infected tick populations.

Bats, Skunks, Other Critters and Rabies

Rabies is a viral disease that is usually transmitted from animal to animal, but can also infect humans as a result of a bite or scratch from an infected animal. Animal bites should always be reviewed carefully to determine if the animal may have rabies. Prompt treatment of the person can prevent the development of rabies, but if symptoms of rabies develop, it is always fatal. It may take several weeks, months, or up to one year to get sick after exposure. Early rabies symptoms include fever, headaches, fatigue, general anxiety or worry, and pain, tingling or numbness at the site of the bite. Later symptoms include trouble swallowing, paralysis, seizure, coma and eventual death.

Due to the rabies fatality rate, it is imperative to prevent bites and to take action when there is a potential exposure:

- Make sure pets are vaccinated against rabies, including cats, dogs, horses and ferrets.
- Do not handle stray or wild animals; call local animal control experts to help.
- If someone is bitten/scratched, clean the wound immediately with soap and warm water; this is the most effective prevention against rabies. Call your health care provider, as a series of four rabies shots, a single dose of immune globulin, a tetanus booster and/or treatment for infection may be needed. Also, call Public Health at (734) 544-6700 to report the bite or exposure.
- Call animal control to assist in the capture, isolation and testing of the animal. Do not try to capture it yourself.
- If you find a bat in your house, please don't let it outside until you consult with our office! Someone may have been bitten while sleeping and be unaware of it.

What is WCPH doing to address this issue?

- All animal bites and bat exposures should be reported to Public Health. Each bite report requires a detailed assessment to determine the likelihood of the victim(s) having been exposed to the rabies virus, as well as a follow up plan for those determined to be at risk. Public Health also coordinates the testing of suspect animals for rabies.
- In 2013, WCPH assessed 305 animal bites/bat exposures; 105 of those animals were tested for rabies and three bats were positive.
- As of June 20th this year, we have assessed 141 animal bites/bat exposures; 41 animals have been tested and one bat has been positive. This one positive animal represents a very small portion of the work involved in rabies surveillance and human risk reduction.