

Communicable Disease Newsletter

In this edition:

Summer 2008

Volume 8
Issue 2



Salmonella



West Nile

West Nile Virus



West Nile Virus (WNV) is a mosquito-borne virus that can cause encephalitis (inflammation of the lining of the brain) or meningitis (inflammation of the lining of the brain and spinal cord). The virus was first discovered in a febrile adult woman in Uganda in 1937, and has been found in Africa, Europe, and West and Central Asia. It first appeared in North America within the United States during 1999 in New York City. Since it was new within our country, there were many questions and concerns in the early part of this decade as to the symptoms of the disease and how the virus was spread. The following are some things that we have learned about WNV:

- People do not get WNV from another person, mammal, or bird that has the disease. Transmission of WNV begins with a mosquito becoming infected by biting a bird which carries the virus. The mosquito then bites and transmits the virus to humans and animals. It is possible for pets such as dogs and cats, and other animals such as horses to become infected, but an animal cannot transmit the virus to a human. Although the risk is very low, there have been a few cases of WNV transmitted through blood transfusion. There have also been a few reports of fetuses of pregnant women becoming infected when the mother developed WNV.
- Less than 1% of mosquitoes in any area where carrier mosquitoes (Culex species) have been found are actually infected with WNV.
- Less than 1% of people who are bitten and infected with WNV will become seriously ill. Persons at higher risk for development of serious illness are those who are immune-compromised or over age 50.
- WNV disease occurs most frequently in late summer or early fall.

In 2007, CDC reported 3,630 positive cases of WNV in the United States which resulted in 124 deaths. Michigan had 17 positive cases and 4 deaths attributed to this disease. There were no cases of WNV diagnosed in Saginaw County.

The public have helped in tracking WNV infections patterns by reporting the appearance of dead infected birds to local health authorities. Discovery of the infected birds is an early warning of the presence of WNV in an area. Local mosquito control agencies also trap and test mosquitoes throughout the active season.

Continued surveillance is important. In Saginaw County, if a dead crow or blue jay is found on your property and it appears that it died within the last 24 hours, contact Mosquito Control at (989) 755-5751 and they will pick it up and test it. There is currently no evidence that WNV can be spread through casual contact from birds to people. However, dead birds can carry other disease and therefore should never be handled with bare hands. If you do have to dispose of a dead bird, use gloves to place the bird in double plastic bags and place in the outdoor trash. Mosquito Control sprays for mosquitoes on a regular basis and can also do priority spraying of private property for Saginaw County residents twice a year. In 2007, and so far in 2008, there have been no positive WNV cases of birds tested in Saginaw County.

Signs and Symptoms

Most people who are infected with WNV will either have no symptoms or experience mild illness such as fever, headache, and body aches. Some may develop a mild rash or swollen lymph glands. Symptoms of encephalitis include the rapid onset of severe headache, high fever, stiff neck, confusion, loss of consciousness (coma), or muscle weakness, and may be fatal.

Treatment

There is no specific treatment for WNV other than supportive therapy, including hospitalization, IV fluids, and respiratory support. No vaccine for the virus is currently available for humans. There is an equine vaccine for horses.

Prevention

From the months of April-October when mosquitoes are active WNV can be prevented by taking the following precautions:

- Try to stay indoors at dusk and dawn when mosquitoes are most active.
- Use screens on doors and windows to keep mosquitoes from entering the home and repair screens that are damaged or broken.
- Wear protective clothing, such as long pants, loose-fitting, long-sleeved shirts and socks.
- Use insect repellent containing DEET according to manufacturer's labeled instructions.
- Empty water from mosquito breeding sites, such as flower pots, pet bowls, clogged rain gutters, swimming pool covers, discarded tires, and similar sites in which mosquitoes can lay eggs.

West Nile Virus continued:

If you have further questions about this disease, please call the WNV Hotline at 1-888-668-0869 or the Health Department at 758-3887.

References:

Heymann, David MD, Ed. (2004) *Control of Communicable Disease Manual* 18th Edition pp. 45-48.

Michigan Department of Community Health. (2003). *What is West Nile Virus?* pamphlet.

www.cdc.gov

www.kidshealth.org.

www.michigan.gov/mdch

Salmonellosis



Salmonellosis is an infection with a bacteria called Salmonella. There are many different kinds of Salmonella bacteria. Salmonella serotype Typhimurium and Salmonella serotype Enteritidis are the most common in the United States. A more uncommon serotype, Saintpaul, has caused a multi-state outbreak since April. An epidemiologic investigation comparing foods eaten by ill and well persons has identified consumption of raw red plum, red Roma or round red tomatoes or any combination of these types of tomatoes as the likely source of the outbreak.

Symptoms

Most persons infected with Salmonella develop diarrhea, fever, and abdominal cramps 12-72 hours after infection. The illness usually lasts 4-7 days.

Transmission

Salmonella live in the intestinal tracts of humans and other animals. Salmonella are usually transmitted to humans by eating foods contaminated with animal feces. Contaminated foods are often of animal origin, such as inadequately cooked beef, poultry, milk, or eggs. However, all foods, including raw fruits and vegetables, may become contaminated. Food may also become contaminated by the hands of an infected food handler who did not wash their hands properly after using the bathroom.

Diagnosis and Treatment

Infection is usually diagnosed by culture or a stool sample. Although most people recover without treatment, severe infections may occur. Infants, elderly persons, and those with impaired immune systems are more likely than others to develop severe illness. When severe infection occurs, Salmonella may spread from the intestines to the bloodstream and then to other body sites, and cause death. In these severe cases, treatment with antibiotics may be necessary.

Prevention

There is no vaccine to prevent Salmonellosis. Because foods of animal origin may be contaminated with Salmonella, people should not eat raw or undercooked eggs, poultry, or meat. Cross-contamination of foods should be avoided. Uncooked meats should be kept separate from produce, cooked foods, and ready-to-eat foods. Cutting boards, counters, knives, and other utensils should be washed thoroughly after touching uncooked foods. Hand should also be washed before handling food, and between handling different food items. People who have Salmonellosis should not prepare food.

Reference: www.cdc.gov

**COMMUNICABLE DISEASE
REPORTED FOR SAGINAW COUNTY
1/1/2008 – 3/31/2008**

Disease	No. Reported
ANIMAL BITE	1
AMEBIASIS	1
CAMPYLOBACTER	1
CHLAMYDIA (Genital)	230
COCCIDIOIDOMYCOSIS	1
ESCHERICHIA COLI	1
FLU-LIKE DISEASE	10558
GIARDIASIS	2
GONORRHEA	75
HIV	5
HEPATITIS B CHRONIC	5
HEPATITIS C CHRONIC	70
INFLUENZA	9
LEGIONELLOSIS	1
SALMONELLOSIS	3
STREPTOCOCCAL DISEASE	1

This newsletter is provided to all Saginaw county healthcare providers, hospitals, schools, local colleges, universities, urgent care facilities and local media centers.

If you would like to get this newsletter by e-mail please submit your e-mail address to:

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Please visit our website at www.saginawpublichealth.org where our communicable disease pamphlets are available.

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