

EPI Update for Friday, June 30, 2006  
Center for Acute Disease Epidemiology  
Iowa Department of Public Health

*Items for this week's EPI Update include:*

- **A Cluster of Syphilis Cases**
- **West Nile returns to Iowa**
- **Influenza in the “off-season”**
- **No stool in the “kiddie” pool**
- **Meeting announcements and training opportunities**

**A Cluster of Syphilis Cases**

A cluster of primary and secondary syphilis cases in two counties in north central Iowa were detected in the past week. The cases involved heterosexual transmission among drug users, sex workers, and their partners. There is significant travel associated with one case and several partners live out of state.

The causative agent in syphilis is the spirochete bacterium, *Treponema pallidum*. Primary syphilis is characterized by a lesion, called a chancre, at the point of entry. The chancre is generally painless and may be located where it is not noticed. The time from infection to symptoms ranges from 10 to 90 days, with an average of 21 days. The chancre generally lasts 3 to 6 weeks and heals without treatment. Without treatment, however, the infection progresses to the secondary stage, characterized by a skin rash and mucous membrane lesions.

Syphilis is often referred to as “the great imitator” because many of the signs and symptoms are indistinguishable from other diseases. Other symptoms of secondary syphilis may include fever, swollen lymph glands, sore throat, patchy hair loss, headaches, weight loss, muscle aches, and fatigue. Late stage or latent syphilis may involve the central nervous system or other organs and may cause paralysis, numbness, dementia, or even death.

Penicillin G, administered parenterally, is the recommended drug for all stages of syphilis, although late stages require increased dosage and longer periods of treatment. An HIV test is also recommended. Sexual partners exposed within the 90 days preceding the diagnosis of primary, secondary, or early latent syphilis should be treated presumptively, even if seronegative.

**West Nile Virus returns to Iowa**

The first Iowan has been diagnosed this year with West Nile virus (WNV). The adult male from Marion County is recovering. In addition to the human case, a dead crow found in Black Hawk County tested positive for WNV and a blood donor in eastern Iowa tested positive for WNV. Confirmatory testing was performed by the University of Iowa Hygienic Laboratory.

WNV, along with other mosquito-borne viruses (LaCrosse, Saint Louis, Western Equine, Dengue), are reportable diseases in the state of Iowa. Symptoms of WNV infection include fever, headache, tiredness, and body aches, occasionally with a skin rash (on the trunk of the body) and swollen lymph glands. While the illness can be as short as a few days, even healthy people have reported being sick for several weeks. Eighty percent of people who are infected with WNV have no illness.

Confirmation of infection requires laboratory testing. The most commonly used WNV laboratory test measures IgM antibodies that are produced very early in the infected person, and can be measured in blood or cerebrospinal fluid (CSF). This test is positive in most infected people within eight days of onset of symptoms. Positive IgM tests must be considered in relation to clinical presentation because most infected persons are asymptomatic and because IgM antibodies may persist for up to a year.

IDPH often receives WNV IgG positive test results from healthcare providers as West Nile cases. IgG antibody is produced later in the course of the infection, and are not useful in the diagnosis of acute WNV infection. An IgG positive test result, either alone or in conjunction with an IgM negative test, is NOT considered a case of WNV by public health. IgG may also be present in blood for reasons not related to a recent WNV infection, such as 1) yellow fever or Japanese Encephalitis vaccination, 2) infection with a virus related to WNV or 3) evidence of a past exposure to a related virus. Remember, 80 percent of people who are bitten by an infected mosquito will never develop symptoms.

### **Influenza in the “off-season”**

Currently, there are no reports of influenza virus activity in Iowa; however, influenza can occur throughout the year. At this time, a rapid test result is not sufficient to determine if there is influenza virus activity since the rapid influenza tests are unreliable when the disease is not present or at very low levels in the community. In short, a positive rapid test result in June may be a false positive. To determine if the rapid test result is a true positive, a virus culture and PCR test should be performed at the University Hygienic Lab (UHL).

The FDA posted “Cautions in Using Rapid Tests for Detecting Influenza A Viruses” on November 14, 2005 (<http://www.fda.gov/cdrh/oivd/tips/rapidflu.html>). The FDA alerts us to the fact that clinicians should use clinical experience, further laboratory testing, surveillance information about circulating influenza strains and the current level of influenza activity, along with an understanding of the limitations of these rapid tests.

UHL has shipped transport media to laboratories in Iowa to confirm a positive rapid test result with virus culture and PCR testing. For further information regarding confirmatory testing of a rapid influenza test, contact UHL at 319-335-4500.

### **No stool in the “kiddie” pool**

Your child may share more than a good time in the wading pool. Historically, Iowa has seen many diarrheal illnesses related to “kiddie” wading pools (such as *Cryptosporidium*, *Shigella*, and *Giardia*). Since these pools are often used by toddlers who are not toilet trained, the water in the pool can quickly become contaminated with stool if a child goes to the bathroom while in the pool (even if the toddler is wearing a diaper or swimming suit). Also “kiddie” pools are usually filled with water from a garden hose, which is drinking water, not swimming pool water which has appropriate levels of chlorine or other chemicals to prevent disease spread.

As a result, kiddie pools can provide an excellent environment to spread organisms that cause diarrhea and other diseases. CADE has several recommendations folks should follow to help keep their children healthy while enjoying time in kiddie pools:

- Never allow children with diarrhea, open sores, and/or respiratory infections in a pool with others.
- Always clean the kiddie pool before each use and fill with fresh water. Chlorine bleach (6.0 percent sodium hypochlorite solution containing approximately 5.7 percent available chlorine by weight) should be added to the kiddie pool in the amounts listed in below:

Diameter	Water Depth	Chlorine Bleach Amount
4 feet	6 inches	1/16 Cup
6 feet	6 inches	1/8 Cup
8 feet	6 inches	1/4 Cup

If using a test kit, maintain a chlorine level at/or between 0.4 ppm (parts per million) and 2.0 ppm. This level does not cause harm to the child, but will kill organisms that can cause diarrhea and other diseases.

- Childcare providers (i.e., day care centers) should either not use “kiddie” pools or use them only with strict adherence to guidelines.
- A sprinkler can provide a much safer alternative to the fill-and-drain pools.
- All children should use the toilet before entering the pool.
- All children should wear clean bathing suits, a clean change of underwear or fresh swimming diapers in the pool.
- If a child defecates while in the pool, all children should be immediately removed from the pool. The pool should then be emptied and thoroughly cleaned and disinfected before being refilled even if extra chlorine was added.

**Meeting Announcements and Training Opportunities**  
None this week.

**Have a healthy and happy Fourth of July Holiday**  
**Center for Acute Disease Epidemiology**  
**Iowa Department of Public Health**  
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