EPI Update for Friday, August 31, 2007
Center for Acute Disease Epidemiology (CADE)
Iowa Department of Public Health (IDPH)

Items for this week's EPI Update include:

- **Cryptosporidium: it's not just in the water**
- **Testing for West Nile virus (WNV): acute and convalescent testing**
- **Reducing human and animal rabies risks**
- **Meeting announcements and training opportunities**

Cryptosporidium: it's not just in the water
Many people with Cryptosporidium in Iowa counties have a history of swimming in indoor and outdoor recreational water. But it is important to remember that there are multiple potential sources of exposure to Cryptosporidium in our environment. These sources include contaminated food or drinking water, ill people or infected animals.

Cryptosporidium can cause illness not only in humans, but also in other animals. The most common species of Cryptosporidium identified in human infection are *C. parvum* and *C. hominis*. While *C. hominis* is primarily a human pathogen, *C. parvum* is usually found in other animals, particularly in calves.

The following people have an increased risk of Cryptosporidium infection:

1) Persons who have contact with infected animals,
2) Persons who consume unpasteurized dairy products, unpasteurized juices / cider, or unwashed fruits and vegetables.
3) Persons who have ingested recreational (e.g., lake, river, pool, or hot tub) or drinking water.
4) Persons in close contact of infected persons (e.g., those in the same family or household or attend the same child care facility).
5) Travelers to disease-endemic areas.

Previously, there was no reliable treatment for cryptosporidium enteritis. Certain medications such as paromomycin, atovaquone, nitazoxanide, and azithromycin have been used but they usually have only temporary effects. A new drug, nitazoxanide, has been approved for treatment of diarrhea caused by Cryptosporidium in people with healthy immune systems. For more information, visit www.cdc.gov/ncidod/dpd/parasites/cryptosporidiosis/default.htm.

Testing for West Nile virus (WNV): acute and convalescent testing
The best method to diagnose WNV in a patient is to test for early (IgM) antibodies in a patient's serum or cerebrospinal fluid (CSF). IgM antibodies are

produced shortly after symptoms occur. Both serum and CSF are positive in most WNV-infected people within 8 days of illness onset.

An acute serum result may be negative for IgM antibody in a patient with clinical symptoms consistent with WNV infection if it is collected and tested less than eight days after symptom onset, before the body has had time to mount an IgM immune response. It is recommended that a second serum specimen be been drawn at a later date after symptom onset for patients with clinical signs of WNV when a serum sample is negative for IgM antibody and drawn within the first week or two and when an initial test result for IgM antibody is equivocal or indeterminate. Note: West Nile virus IgM tests can remain positive for over 500 days after infection, so clinical presentation in addition to exposure history should be considered when diagnosing new cases.

IDPH has received several questions lately regarding the necessity of performing convalescent serologic (IgG) testing for WNV human cases. Serologic IgG testing for WNV involves the detection of IgG antibodies, which form later in the infection. However, the IgG test for West Nile virus is not virus-specific, i.e. the IgG antibody test could be positive in a patient who had been infected in years past or infected with a different flavivirus. Thus, IgG antibody tests are not useful in the diagnosis of acute WNV infection. And an IgG positive test result in the absence of an IgM positive result is not diagnostic for acute infection.
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Reducing human and animal rabies risks

Rabies prevention starts with the animal owner. Please remember:

- All dogs, cats, and ferrets should be vaccinated against rabies. Also consider vaccinating valuable livestock and horses. Domesticated animals that have frequent contact with humans should be vaccinated.
- Pet owners can reduce possible pet exposure to rabies by not letting pets roam free and having contact with rabid animals.
- Spaying or neutering your pet may reduce any tendency it might have to roam or fight and thus reduce the chance of exposure to rabid animals.

Reduce the risk of exposure to rabies from wildlife. Tips include:

- Don’t feed or water your pet outside. Even empty bowls will attract wild and stray animals.
- Keep your garbage securely covered. Open garbage can also attract wild or stray animals.
- Wild animals should not be kept as pets. Enjoy all wild animals from a distance and teach children never to handle unfamiliar animals – even if they appear friendly.
- If you see a wild animal acting strangely, report it to city or county animal control officials.
- Bat-proof your home.

What to do when your pet bites someone or you are bitten:

- The person who was bitten should contact their health care provider to determine if further treatment is necessary.
- Contact your local health department or local animal control.
- The local public health official may recommend/require monitoring the pet at home or at a veterinary clinic for 10 days.

What to do when your pet gets bitten by another animal:

- Consult your veterinarian immediately and have your veterinarian examine your pet and assess your pet's vaccination needs.
- Contact local animal control if the bite was from a stray or wild animal.
- Monitor your pet at home or in a veterinary clinic for six months if an unvaccinated or wild animal bit your pet. Report any unusual behavior by your pet to your veterinarian immediately

For more information about rabies, visit www.idph.state.ia.us/adper/rabies.asp. The Center for Acute Disease Epidemiology (CADE) provides 24hr consultation for Rabies. During business hours call 800-362-2736 and after-hours 515-323-4360 (the State Patrol will contact CADE on call staff).

Meeting announcements and training opportunities

Epi Update Fall Conference dates and locations

Region 1 – Marshalltown – Sept. 21, 2007
Region 2 – Mason City – Oct. 8, 2007
Region 3 – Cherokee – Oct. 11, 2007
Region 4 – Creston – Oct. 2, 2007
Region 5 – Ottumwa – Sept. 14, 2007
Region 6 – Cedar Rapids – Sept. 26, 2007
For more information, visit:
http://www.idph.state.ia.us/adper/common/pdf/epi_update_fall_2007.pdf

Have a healthy and happy holiday weekend and week!

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