

Epi Update for Friday, June 10, 2016
Center for Acute Disease Epidemiology (CADE)
Iowa Department of Public Health (IDPH)

Items for this week's EPI Update include:

- **False positive hepatitis A tests**
- **Human Micotil needle stick exposures**
- **Rabies exposure management for bat-related incidents**
- **Protecting workers from heat stress**
- **Meeting announcements and training opportunities**

False positive hepatitis A tests

Hepatitis A (HAV) infection includes the following: 1) clinical criteria consistent with HAV infection, and 2) a positive anti-HAV IgM. Clinical criteria includes discrete onset of at least one of the following symptoms: nausea, vomiting, fever, malaise, abdominal pain, jaundice, dark urine, clay-colored bowel movements, and joint pain. Individuals, especially children, can have HAV infection with a positive anti-HAV IgM but no clinical signs of hepatitis A infection. Liver function tests should be significantly elevated in any true HAV infection.

Recently, IDPH has had several elderly patients reported with positive anti-HAV IgM tests, no symptoms, no risk factors, and normal or nearly-normal liver function tests. These were determined to be false positives and no public health follow-up was recommended.

CDC has reported older individuals with false positive anti-HAV IgM (no symptoms) and upon re-testing, had negative results. Explanations for these results included asymptomatic hepatitis A infection, or past Hepatitis A infection with a prolonged elevation of anti-HAV IgM (which is typically undetectable by six months after symptom onset), or false positive results due to the presence of cross-reactive antibodies from other viral infections.

Recommendations: 1) only test for hepatitis A when the clinical criteria are met, 2) avoid using hepatitis panels which include hepatitis A unless clinical criteria are met, and 3) in patients with a positive anti-HAV IgM but without clinical evidence, check liver function tests and consider re-testing with anti-HAV IgM AND anti-HAV total in two to four weeks.

For the full MMWR report, visit www.cdc.gov/mmwr/preview/mmwrhtml/mm5418a1.htm.

Human Micotil needle stick exposures

An Iowa worker fatality earlier this year involved an accidental injection of tilmicosin phosphate, sold under the trade name Micotil 300®. It is an animal antibiotic developed to treat 'shipping fever,' a bovine and ovine respiratory disease. In the U.S., veterinarians give Micotil 300® to animals, but may also prescribe it for their clients to administer to cattle and sheep at livestock facilities.

Micotil is toxic to the human heart and cardiovascular system, causing increased heart rate and changes in heart tissue. Human fatalities have been reported following injected doses as low as 3 to 5 cc. The antibiotic persists in tissues for several days. There is no antidote. Basic life support measures should be instituted immediately. Since the cardiovascular system is the target of toxicity, watch for clinical signs of hypotension, tachycardia and other symptoms associated with cardiac or respiratory system dysfunction. Apply ice or cold pack to wound to slow absorption. Regardless of the amount injected, immediate ED referral via EMS is required.

Medical providers are advised to contact a poison control center (800-222-1222) or the company (800-722-0987 or 800-428-4441) prior to administering treatment medications, as some medicines such as epinephrine could negatively affect the patient.

For more information, visit www.cdc.gov/niosh/docs/wp-solutions/2007-124/default.html.

Rabies exposure management for bat-related incidents

Recently, CADE has received many calls from the public and health care providers regarding management of bat exposure and rabies. Iowa bats can carry rabies; thus, all potential bat exposures require a thorough evaluation.

The following are considered a bat exposure:

- A person is bitten by a bat
- A person has direct contact with a bat, and is unsure whether they were bitten (i.e., a bat flies into a person's arm)
- A bat is found in the same room as an unattended child, a sleeping person, or anyone who cannot reliably communicate what happened (i.e. cannot say, "I was not bitten by the bat.")

If possible, the bat in these situations should be captured and tested, and if negative, post-exposure prophylaxis (rabies vaccines and rabies immune globulin) is not needed. Post-exposure prophylaxis is recommended if the bat is not captured, is not testable, or if the bat tests positive or indeterminate for rabies.

For additional information on rabies, visit www.idph.iowa.gov/rabies. CADE has someone on call 24/7 for guidance on rabies exposure criteria and post-exposure prophylaxis recommendations. Between 8 a.m. and 4:30 p.m. Monday through Friday, call (800) 362-2736. After business hours, call (515) 323-4360 and ask to talk to an epidemiologist about rabies exposure.

Protecting workers from heat stress

This week's infographic features ways to prevent workers from heat stress. For more information, visit www.cdc.gov/niosh/topics/heatstress/infographic.html.

PROTECT YOUR WORKERS FROM HEAT STRESS

Develop an acclimatization plan

Acclimatization is the result of beneficial physiological adaptations (a.g., increased sweating efficiency and stabilization of the circulator) that occur after gradual increased exposure to a hot environment.

TIP 1

Gradually increase the time spent in hot environmental conditions over a 7-14 day period.

TIP 2

For new workers, the schedule should be no more than 20% exposure to heat on day 1 and an increase of no more than 20% exposure on each additional day.

TIP 3

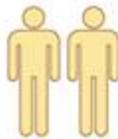
For workers who have had previous experience with the job, the acclimatization schedule should be no more than:

DAY 1	DAY 2	DAY 3	DAY 4
50% <small>exposure</small>	60% <small>exposure</small>	80% <small>exposure</small>	100% <small>exposure</small>

Set up a buddy system

Check your workers routinely to make sure...

- they make use of readily available water and shade.
- they don't have heat-related symptoms.



Schedule and encourage frequent rest breaks...

...with water breaks in shaded or air-conditioned recovery areas.



Emphasize the need for appropriate clothing

Encourage workers to wear clothing that is...



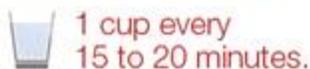
Cotton clothing can be soaked in water to aid cooling.



Encourage workers to drink plenty of fluids...

...such as drinking small amounts of water before becoming thirsty.

During moderate activity in moderately hot conditions, workers should drink about...



Learn more about heat stress at: www.cdc.gov/niosh/topics/heatstress

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health



Meeting announcements and training opportunities
None

Have a healthy and happy (and try to stay cool) week!

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