

EPI Update for Friday October 28, 2005

Center For Acute Disease Epidemiology

Iowa Department of Public Health

Items for this week's EPI Update include:

- **Human influenza update**
- **Influenza vaccination for healthcare workers**
- **The truth about canine influenza**
- **Avian Influenza Update/Pandemic Influenza Preparedness**
- **E. coli O157:H7**
- **Human rabies in Mississippi**
- **Syndromic surveillance - Part 2**
- **Announcements / Upcoming meetings**

Human Influenza

The Iowa influenza season is coming. Many Iowa laboratories and physicians are participating in the statewide sentinel influenza surveillance system, and are sending rapid test positive specimens to the University Hygienic Laboratory (UHL) for confirmation. To date, there is no confirmed influenza activity in the state of Iowa, and our rates of influenza-like illness remain at pre-flu season levels. Typically in Iowa, the first confirmed case of influenza is seen in the first week of December. Cases usually peak in late January.

Although distribution of influenza vaccine may seem to be somewhat slow, there should be ample supply of vaccine this year. Please be patient. The recommended time frame for receiving the influenza vaccine extends through the end of November and the vaccine can be effective even if received after this recommended period. If you do have questions regarding vaccine orders, please contact your distributor directly. The public health system is not involved in vaccine distribution this year.

Influenza vaccination for health care workers

Health care workers with direct patient contact are considered a priority group for influenza vaccination. The purpose of this recommendation is to prevent the health care worker from spreading influenza to patients that may be at high risk for complications if they contract influenza. When considering which people in your facility should receive the influenza vaccine, it is most important to consider the opportunities each staff member may have for patient contact. Any health care worker, who routinely has patient contact in performing his or her job, should receive the influenza vaccine. For example, some laboratory staff may remain in the lab for all of their work responsibilities, but other laboratory staff have patient contact when performing phlebotomy. The laboratory staff who have patient contact when performing phlebotomy should be given priority for influenza vaccination.

The truth about canine influenza

Since we are now embarking on the human influenza season, IDPH would like to take this opportunity to provide folks with the URL to the American Veterinary Medical Association's website, which has accurate and current information regarding the recent identification of canine influenza in racing greyhounds in January 2004 in Florida, and what has been learned so far about this new disease in dogs:

http://www.avma.org/public_health/influenza/canine_guidelines.asp

Avian Influenza Update/Pandemic Influenza Preparedness

International

As of October 20th and according to the WHO, there have been 121 confirmed cases in Indonesia, Thailand, Vietnam and Cambodia. Of those 121 cases, 62 have died. The most recent cases are in Indonesia and Thailand.

Though the reported mortality rate is high, it is important to note that there are likely mild cases of H5N1 infection not captured by local, national and WHO surveillance efforts.

U.S.

Federal public health officials are working to finalize a national pandemic influenza response plan and to provide guidance to state health departments for the development of state plans.

Iowa

Fact sheets on pandemic and avian influenza are now available on our website at: <http://www.idph.state.ia.us/adper/flu.asp>. Please also review the latest Public Health Bulletin on **Recommendations for Health Care Providers**

Regarding Stockpiling Influenza Antiviral Medication.

E. coli O157:H7

Infection with *E. coli* O157:H7 causes an estimated 70,000 diarrheal illnesses per year in the U.S. and can result in hemolytic-uremic syndrome (HUS) and death. Klein et. Al. ((J. Pediatrics 2002; 141:172-7) showed that *E. coli* O157 incidence was similar to that of *Salmonella*. While most children had bloody stools, not all did, therefore it is important to look for *E. coli* O157:H7 regardless of whether blood is seen in the stool. Further studies have shown that while antigen detection systems are extremely useful, they are not sufficiently sensitive to detect all of the *E. coli* O157:H7's. Therefore, culture methods are still necessary. While some labs routinely examine for *E. coli* O157:H7, not all do. Therefore, it is important for physicians to order it specifically, especially when bloody diarrhea is involved.

Rabies update: human case confirmed in Mississippi

On October 5, 2005, the Centers for Disease Control confirmed that a 10-year-old boy in Mississippi died from rabies. Unfortunately, no specimens were available to identify the specific strain of rabies from which the child died.

This is the first human case of rabies in the U.S. for 2005, and the first occurrence of human rabies in Mississippi since 1956. The last time rabies was identified in a Mississippi “land animal” such as a dog, cat, raccoon, or fox was 1965. However, Mississippi does typically have at least two rabid bats a year. The child had been hospitalized with encephalitis of undetermined origin in September 2005. The child had not traveled outside the U.S., and had no history of any definitive animal exposure or animal bite. Additional investigation, however, revealed the child had found and removed a live bat in his bedroom this spring, so it is most likely the child was exposed from this bat.

Human rabies PEP (post-exposure prophylaxis) is recommended when saliva from a rabid animal or human is introduced by a bite, or comes into direct contact with a fresh bleeding wound, broken skin, or mucous membranes (eyes, nose, mouth). Additionally, when a bat is physically present and a bite may have occurred or the bat is not available for rabies testing, human rabies PEP should be considered if there is reasonable probability an exposure may have occurred (i.e. a bite cannot be excluded).

The Iowa Department of Public Health is available 24/7 for consultation in rabies exposure assessment and post-exposure treatment recommendations. During normal business hours contact Dr. Susan L. Brockus, State Public Health Veterinarian, at 515-281-4933; and after hours by calling 800- 362-2736 for referral to the on-duty officer. Information on rabies is available on the IDPH web site in the Epi Manual at: http://www.idph.state.ia.us/adper/common/pdf/epi_manual/rabies.pdf and rabies exposure assessment flow charts are available at: http://www.idph.state.ia.us/adper/common/pdf/cade/rabies_exposure_all_animals.pdf and http://www.idph.state.ia.us/adper/common/pdf/cade/rabies_exposure_bats.pdf

The University Hygienic laboratory maintains Iowa’s rabies data at: <http://www.uhl.uiowa.edu/services/diseases/rabies/index.html>

The CDC also has a web site on rabies available at: <http://www.cdc.gov/ncidod/dvrd/rabies/>

Syndromic surveillance - Part 2

Syndromic surveillance is the name given to procedures and systems developed for early detection of outbreaks of illness based on pre-diagnostic information and before laboratory testing is performed. Part one discussed the challenge of reducing ‘noise’ or expected levels of symptoms occurring in any given population for a given period of time. This is necessary in order to identify unexpected instances of symptoms that may be associated with an outbreak. For example, recently in Essex County, New York, the over-the-counter detection system generated a signal indicating a large spike in anti-diarrhea medicine. Investigation determined that sales sharply increased among runners participating in the 10K leg of the Iron Man competition scheduled for the next day to prevent a common ailment among long-distance runners - runner’s trots. This is an example of an unusual, yet knowable event that triggered an investigation that was able

to rule-out an enteric outbreak. Accounting for events such as this and other noise is just one of the many complexities encountered in syndromic surveillance.

The 2005 Syndromic Surveillance Conference was recently held in Seattle, WA. A number of topics were addressed, but one of the major themes of the conference turned out to be the question of usefulness of syndromic surveillance. Significant resources have been devoted to developing methods and systems to conduct syndromic surveillance and there have been many lessons learned through this work. Is the return worth the cost? When detection is unable to separate true outbreaks from the 'noise,' an investigation to uncover that a generated signal is not really an outbreak still takes time and diverts resources from other important work. Syndromic surveillance is still in its infancy and efforts continue to proceed to address this question, among others, at national, state, and local levels throughout the United States and in other countries. Iowa is not currently expanding syndromic surveillance activities. For more information on syndromic surveillance, see http://www.syndromic.org/con_2005.html.

Meeting announcements and training opportunities

- The next and last Fall Epidemiology Update is taking place on Tuesday, December 6, 2005, in Mason City. See the Fall Epidemiology Updates Brochure, now available online at the Iowa Department of Public Health's website, for more details.

http://www.idph.state.ia.us/common/pdf/conferences/disease_prevention_fall.pdf

- **Food-borne illness and pregnancy**

The FDA launched a new website for pregnant women with information on food-borne illness and what's safe to eat during pregnancy.

<http://www.cfsan.fda.gov/~pregnant/pregnant.html>

- See the **IAFooDSS October newsletter** for information on *Vibrio spp* infections, reportable enteric pathogen activity, and other information about food-borne disease surveillance in Iowa. [Iowa Laboratory Food-borne Disease Surveillance](http://www.uhl.uiowa.edu/newsroom/upcomingevents/IAFooDSS%20Newsletter%20October%202005.pdf)
<http://www.uhl.uiowa.edu/newsroom/upcomingevents/IAFooDSS%20Newsletter%20October%202005.pdf>.