EPI Update for Friday, November 9, 2007
Center for Acute Disease Epidemiology
Iowa Department of Public Health (IDPH)

Items for this week's EPI Update include:

- **Shiga toxin producing E. coli (STEC) incidence elevated**
- **Importance of culture confirmation of STEC infections**
- **Iowa influenza activity and vaccination**
- **Meeting announcements and training opportunities**

Shiga toxin producing E. coli (STEC) incidence elevated
Iowa is experiencing a higher than usual number of cases of Shiga toxin producing *E. coli* (STEC). Thirty cases have been reported since Sept. 30. (Only eight cases were reported in the same time period last year.) Of the 30 recent cases, 15 were under the age of 18, with two developing hemolytic uremic syndrome (HUS). O and one case with HUS also developed thrombolytic thrombocytopenic purpura (TTP). Twenty-eight cases were reported to have *E. coli* O157:H7 and two had E. coli O111.

Investigation of these cases is continuing, but two cases have possible exposures to recently recalled pizza, and one to recently recalled ground beef. Also, multiple clusters of cases have been associated with child care center attendance. For more information about recalls, visit www.fsis.usda.gov/Fsis%5FRecalls.

All Iowans should ensure that:

- food containing ground meats be thoroughly cooked;
- recalled foods be thrown away;
- hands be washed, particularly after handling raw meats and using the restroom; and
- children with diarrhea stay home from child care centers.

Importance of culture confirmation of STEC infections
E. coli O111 is a Shiga toxin producing *E. coli* (STEC) that belongs to the group of enterohemorrhagic *E. coli*; the most common strain in the U.S. is *E. coli* O157. Other STEC's found in the U.S. include O26, O54, O111, and O103. The true prevalence of *E. coli* O111 and other STECs in Iowa is not known since most clinical laboratories do not have the capability for culturing or identifying these organisms.

The University Hygienic Laboratory screens for Shiga toxin on all stools submitted for routine culture. From 2001 through 2006, the Hygienic Laboratory

isolated 90 STECs from stools. Of these 90, 34 (38 percent) were serotypes other than O157. Each year the percent of total STEC isolates that are non-O157 can vary from 38 to 62 percent. This past summer, UHL detected 6 isolates of O111.

Clinical laboratories should routinely include testing for Shiga toxin production in their bacterial enteric panel (along with Salmonella, Shigella, and Campylobacter) per CDC recommendations. The best way to detect STEC is to screen for Shiga toxin in all stool samples submitted for culture by using an enrichment broth followed by EIA or rapid cartridge testing. Ideally all labs should culture for STEC O157 on SMAC or Chromagar.

If the stool sample is positive for *E. coli* O157 or other STEC, the isolate or toxin positive broth should be sent to UHL for serotyping and pulsed field gel electrophoresis (DNA fingerprinting). For more information, visit www.cdc.gov/mmwr/preview/mmwrhtml/mm5538a3.htm.

Iowa influenza activity and vaccination
Two states are currently reporting local influenza activity – Hawaii and Florida. All other states are have reported either no or only sporadic cases. Iowa has not had a laboratory confirmed case yet this season. For more information on influenza activity and view the Iowa Influenza Surveillance Network weekly report, visit www.idph.state.ia.us/adper/iisn.asp.

Influenza vaccine is readily available this year and we recommend people be vaccinated now. We are particularly encouraging health care workers and school age children to be vaccinated. For more information on influenza vaccination, visit www.cdc.gov/flu/ .

Meeting announcements and training opportunities
None.

Have a healthy and happy week!
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