

Health Alerts

Health Advisory #179 - Reports of Escherichia Coli O157:H7 Infections in Erie County - 09/08/2006

SUMMARY:

- In the past week, the Erie County Department of Health (ECDOH) has received reports of 5 cases of Escherichia coli (E. coli) O157:H7 infections.
- Providers are asked to consider E. coli O157:H7 infection when evaluating patients with bloody diarrhea.
- Testing for E. coli O157:H7 should be requested on stools collected from suspicious cases.
- Since hemolytic uremic syndrome (HUS) is a known sequelae, providers should consider following patients with bloody diarrhea with urinalysis and blood electrolyte laboratory testing.
- To report E. coli O157:H7 cases or for questions, please call the ECDOH at (716) 858-7697 (Monday - Friday, 8:30 AM - 4:30 PM) or (716) 898-4225 (evenings, weekends, and holidays).

BACKGROUND:

In the past week, the Erie County Department of Health has received reports of 5 cases of E. coli O157:H7 infections. Reported cases range in age from 13 to 66 years and are from towns throughout Erie County. Thus far, in-depth interviews with cases have not revealed a common etiology.

E. coli O157:H7 infection has emerged as an important cause of bloody diarrhea and HUS. Infection commonly occurs through ingestion of the bacteria usually through contaminated food products of bovine origin such as undercooked ground beef. Outbreaks have also been associated with consumption of foods other than ground beef including lettuce, alfalfa sprouts, and unpasteurized juices. Any food that can be contaminated by beef, cow manure, contaminated water, or an infected food handler may be a potential source of infection. Because the infectious dose is low, person-to-person transmission can be quite common, particularly in settings where hand washing facilities after toileting are inadequate. The peak incidence of infections occurs from June through September, though the reason for this seasonal pattern is not clearly known. There is no race or sex predilection.

The purpose of this alert is to advise healthcare professionals to consider E. coli O157:H7 in their differential diagnosis of patients presenting with gastrointestinal illness, particularly bloody diarrhea. E. coli O157:H7 infection can be entirely asymptomatic or can present with a wide variety of clinical features, including watery diarrhea, bloody diarrhea, hemolytic uremic syndrome (HUS) or thrombocytopenic purpura (TTP). The absence of high fever, presence of grossly bloody stools, and severity of abdominal findings can lead to the mistaken diagnosis of intussusception in children, and inflammatory bowel disease or ischemic colitis in the elderly. Illness typically begins 3-4 days after exposure and patients develop watery diarrhea; in 25-75% of patients, the diarrhea resolves without progression and the illness is mild. In those whom the

illness progresses, bloody diarrhea usually begins on the second or third day, with the amount of blood ranging from streaks to stools that are all blood.

E. coli O157:H7 infection should be considered in any patient presenting with bloody diarrhea or HUS. Because many clinical laboratories still do not test for *E. coli* O157:H7 as part of routine stool bacterial examination, it is incumbent on the physician to request such testing when infection is suspected, especially for patients with bloody diarrhea or HUS. *E. coli* O157:H7 is not detected by standard methods used for other common bacterial enteric pathogens. The medium of choice for isolation is sorbitol-MacConkey (SMAC) agar. Laboratories should attempt to isolate *E. coli* O157:H7 rather than conduct rapid testing for detection of Shiga-toxin producing bacteria.

Please contact the ECDOH at (716) 858-7697 (Monday - Friday, 8:30 AM - 4:30 PM) or (716) 898-4225 (evenings, weekends, and holidays) to report suspect cases or obtain additional information.

ADDITIONAL INFORMATION

Additional information is also available at the CDC's website:
http://www.cdc.gov/ncidod/dbmd/diseaseinfo/escherichiacoli_g.htm