



Health Advisory

June 9, 2011

Department of Health Services
Public Health Division

Janet Berreman, MD, MPH
Health Officer

Shiga Toxin-producing *Escherichia Coli* O104 (STEC O104:H4) Infections in U.S. Travelers Returning from Germany and Europe

Please distribute to all providers in your practice

Current Situation

The CDC is monitoring a large outbreak of Shiga toxin-producing *Escherichia coli* (*E.coli*) O104:H4 (STEC O104:H4) infections ongoing in Germany. As of June 6, 2011, the Robert Koch Institute (RKI) reported 642 patients with hemolytic uremic syndrome, or HUS (a severe condition associated with STEC infection that can lead to kidney failure), and fifteen deaths. The strain of STEC that is causing this illness, STEC O104:H4 is very rare. The illness that it causes is similar to that caused by *E. coli* O157:H7 or STEC O157:H7, which is also a Shiga toxin-producing *E. coli*.

In the United States, there has been one confirmed and three suspected cases of STEC O104:H4 infections identified in persons who recently traveled to Hamburg, Germany, where they were likely exposed. German public health authorities advise against eating raw sprouts, tomatoes, cucumbers, and leafy salads from sources in northern Germany until further notice.

Recommendations

- Interview persons with acute-onset diarrhea and /or HUS to determine if they traveled to Germany or elsewhere in Europe during the three weeks preceding their illness.
- For those with a history of European travel on or after April 1, 2011, we request that you obtain a travel food history for the time they spent in Europe during their illness incubation period (10 days prior to onset of diarrhea or three weeks prior to onset of HUS). Consumption of fresh produce is of particular interest with type and detail of produce item, location of consumption, purchase information and date of consumption.

Symptoms of STEC infections

- Severe stomach cramps, diarrhea (which is often bloody), and vomiting.
- If there is fever, it usually is not very high.
- Most people get better within 5–7 days, but some patients go on to develop HUS, usually about a week after the diarrhea starts.
- The classic triad of findings in HUS is acute renal damage, microangiopathic hemolytic anemia (evidence of schistocytes and helmet cells on peripheral blood smear), and thrombocytopenia.

Please distribute to all providers in your practice



Health Advisory

June 9, 2011

Department of Health Services
Public Health Division

Janet Berreman, MD, MPH
Health Officer

Shiga Toxin-producing *Escherichia Coli* 0104 (STEC 0104:H4) Infections in U.S. Travelers Returning from Germany and Europe

Please distribute to all providers in your practice

Treatment

- It is not recommended to give antibiotics to patients with suspected STEC infections until complete diagnostic testing can be performed and STEC infection is ruled out. Some studies have shown that administering antibiotics in patients with STEC infections might increase their risk of developing HUS. However, clinical decision making must be tailored to each individual patient. There may be indications for antibiotics in patients with severe intestinal inflammation if perforation is of concern. Of note, isolates of STEC O104:H4 from patients in Germany have demonstrated resistance to multiple antibiotics.

Testing

- Coordinate **diagnostic testing** with [Berkeley Public Health Division](#).
- All stools submitted for testing from patients with acute community-acquired diarrhea should be cultured for STEC O157:H7. These stools should be simultaneously assayed for non-O157 STEC with a test that detects the Shiga toxins or the genes encoding these toxins.
- Clinical laboratories should report and send *E. coli* O157:H7 isolates and Shiga toxin-positive samples to state or local public health laboratories as soon as possible for additional characterization.
<http://www.cdph.ca.gov/pubsforms/forms/CtrlForms/cdph8555.pdf>

Immediately report all patients with Shiga toxin-positive diarrheal illness or HUS to the [Berkeley Public Health Division](#) at (510) 981-5300 regardless of a travel history.

Sources for Information

- Center for Disease Control (CDC)
http://www.cdc.gov/nczved/divisions/dfbmd/diseases/ecoli_o157h7/
<http://www.nlm.nih.gov/medlineplus/ency/article/000510.htm>
<http://www.cdc.gov/ecoli/2011/ecolio104/>
- City of Berkeley Public Health Division
<http://www.ci.berkeley.ca.us/publichealth>
- California Department of Public Health (CDPH)
<http://www.cdph.ca.gov/Pages/EColi2011.aspx>

Please distribute to all providers in your practice