Hemolytic Uremic Syndrome (HUS)

Agent: Serious sequelae associated with infection from Shiga toxin-producing bacteria (*E. coli* or *Shigella). E. coli* O157:H7 is the bacterium most commonly associated with HUS.
Mode of Transmission: Ingestion of food or water contaminated with human or animal feces, or direct transmission from infected persons or animals. Fomites and contaminated environment may also play a role in transmission of Shiga toxin-producing bacteria.
Signs/Symptoms: Classic signs of hemolytic uremic syndrome include red blood cell destruction (hemolytic anemia), low number of platelets (thrombocytopenia), and acute kidney failure. Symptoms include decreased frequency of urination, fatigue, progression to kidney failure often requiring dialysis, as well as neurological impairment (e.g., stroke or seizures). HUS, if it occurs, develops on average seven days after the first symptoms of infection.
Prevention: Hands should be washed carefully after using the bathroom, after changing diapers or cleaning a child who has used the bathroom, after handling animals or their feces, and before preparing and eating food. All ground beef should be cooked thoroughly to an internal temperature of at least 160°. Raw milk, unpasteurized dairy products, and unpasteurized juices should not be consumed. Persons with diarrhea caused by *E. coli* O157:H7 should not use recreational waters for 2 weeks after symptoms have resolved. Outbreaks occurring in child care centers should immediately involve public health assistance to prevent further disease.
Other Important Information: Five to ten percent of persons diagnosed with Shiga toxin-producing *E. coli* infection develop HUS. The syndrome occurs in up to 15% of children with *E. coli* O157:H7 infection. For more information, see the section of this report on *E. coli* Infection, Shiga Toxin-Producing.

Hemolytic Uremic Syndrome (HUS): 2013 Data Summary	
Number of Cases:	6
5-Year Average Number of Cases:	2.4
% Change from 5-Year Average:	+150%
Incidence Rate per 100,000:	0.1

Six cases of HUS were reported during 2013. This doubles the three cases reported in 2012, and represents a 150% increase from the five-year average of 2.4 cases per year. Three of the reported cases occurred following an infection with Shiga toxin-producing *E. coli* O157:H7, and one occurred following infection with Shiga toxin-producing *E. coli* O104:H4. The two remaining cases had bacterial testing performed and were found to be Shiga toxin positive, but the laboratories were unable to isolate the actual Shiga toxin-producing organism. Two cases occurred in the 60 year and older age group, while the remaining cases occurred in persons less than 30 years of age. Four cases were female and two were male. Three cases were reported from the northwest region, two were from the northern region, and the remaining case was from the southwest region. Cases occurred throughout the year with three having onset during the third quarter. No deaths occurred as a result of the infections.