



STEC Infections Associated with Attending the 2015 Red River Valley Fair

On July 19, 2015, a Fargo physician notified the NDDoH that he was caring for three patients with shiga-toxin producing *Escherichia coli* (STEC) gastroenteritis. All three patients reported attending the Red River Valley Fair in West Fargo. One of the patients was diagnosed with hemolytic uremic syndrome (HUS), a potentially life-threatening complication of E.coli infections that affects the kidneys and blood clotting system.

The NDDoH developed an online survey, questioning individuals about their attendance at the Red River Valley Fair and whether they went into any of the animal barns, saw or touched any of the animals, or ate any food served by food vendors at the fair, all of which could provide possible exposures to STEC. Of the 117 people that completed the online survey, 62 (52%) reported diarrheal illness after attending the fair. The most commonly reported symptoms were diarrhea (100%), nausea (88%), abdominal cramps (80%), and fatigue (62%). Duration of illness was reported to range from 1 to 18 days (median 5 days).

Five laboratory-confirmed E.coli O157:H7 isolates from five individuals who attended the fair matched by pulse field gel electrophoresis (PFGE). Epidemiological analysis of survey data did not yield any association with a specific exposure and becoming ill.

STEC is a bacterial infection that can cause nausea, vomiting, diarrhea (often bloody), and severe abdominal cramping. The incubation period for STEC can range from 2 to 10 days, but it is usually about 3 to 4 days. Most people recover within 5 to 7 days. However, the toxins produced by STEC can cause hemolysis, which may result in damage to the kidneys. About 5 to 10 percent of people who have an STEC infection will develop HUS. Symptoms of HUS include decreased frequency of urination, fatigue, and loss of pink color in the cheeks and inside the lower eyelids. Although most people with HUS will recover completely, the complication can result in permanent kidney damage or even death.

If you have additional questions about STEC, please visit <http://www.ndhealth.gov/disease/info/Ecoli.aspx> or contact the NDDoH at 800.472.2180 or 701.328.2378.