

E. coli O157, O157:H7, or Shiga toxin-producing *Escherichia coli* (STEC)

2011 Case Total	88	2011 Incidence Rate	2.35 per 100,000
2010 Case Total	104	2010 Incidence Rate	2.82 per 100,000

Nationally, *E. coli* O157:H7 is the most commonly reported serotype of Shiga toxin-producing *E. coli* (STEC); however, the number of reported non-O157 STEC cases each year is increasing¹. This increase may be partially due to more widely used laboratory tests that identify other serotypes of STEC beyond O157:H7. The number of reported STEC cases reported in 2011 is a 13% decrease from the 104 cases reported in 2010.

STEC cases in 2011 occurred among residents of 29 Oklahoma counties. The five counties with the highest incidence rates were Major (66.43 per 100,000, n = 5), Harmon (34.22 per 100,000, n = 1), Mayes (16.97 per 100,000, n = 7), Jefferson (15.45 per 100,000, n = 1), and Payne (9.05 per 100,000, n = 7) counties. The highest incidence rate occurred among females less than ten years of age with an incidence of 10.55 per 100,000 (n = 27). The second highest incidence rate occurred among males less than ten years of age with an incidence of 9.34 per 100,000 (n = 25).

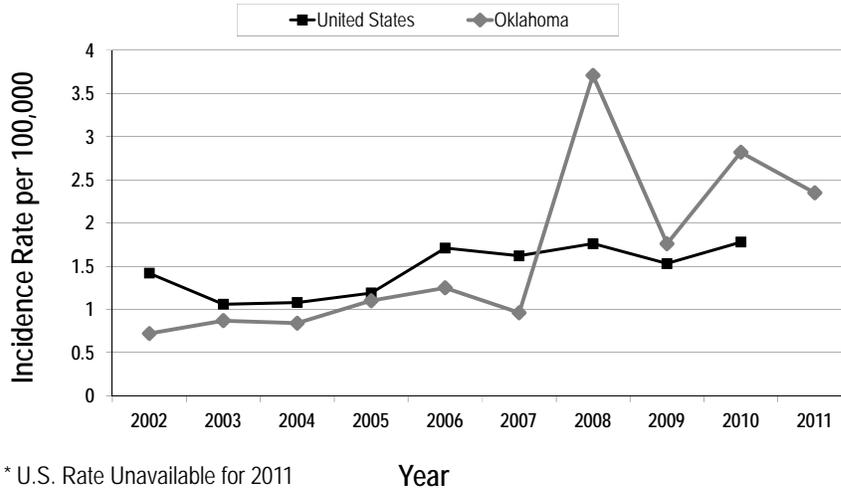
Demographic and Clinical Summary of Reported STEC Cases, Oklahoma, 2011 (N = 88)

	Number (%)	Incidence Rate per 100,000
Gender		
Male	40 (45%)	2.15
Female	48 (55%)	2.53
Age	Median Age: 5 years (Range: 8 months – 78 years)	
Race		
White	67 (76%)	2.48
African American or Black	4 (5%)	1.44
Two or more races	2 (2%)	0.90
American Indian or Alaska Native	6 (7%)	1.87
Asian	1 (1%)	1.54
Unknown	8 (9%)	--
Hispanic or Latino Ethnicity	7 (8%)	2.11
Hospitalized	22 (25%)	--
Hemolytic Uremic Syndrome	6 (7%)	--
Symptoms		
Diarrhea	85 (97%)	--
Abdominal Cramps	71 (81%)	--
Bloody Diarrhea	52 (59%)	--
Nausea	42 (48%)	--
Vomiting	30 (34%)	--
Fever	30 (34%)	--

Thirty (34%) cases reported involvement with high-risk settings. Of those, 22 (73%) were associated with child care settings, two (7%) resided in a correctional facility, and six (20%) were affiliated with a school. Secondary cases were reported in two child care settings. Eleven (13%) of the reported STEC cases were epidemiologically-linked symptomatic contacts identified by county health department public health nurses during case investigations.

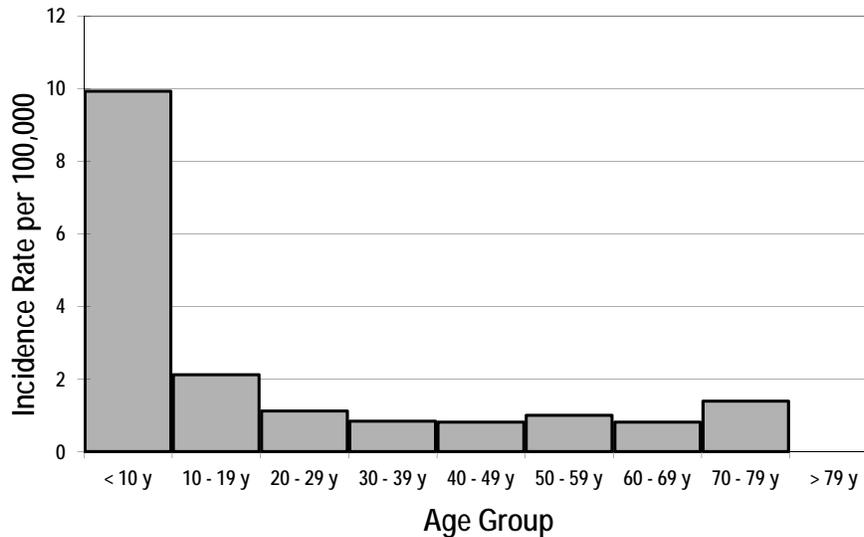
All suspected STEC isolates are required to be forwarded to the Oklahoma State Department of Health (OSDH) Public Health Laboratory (PHL) for confirmation and serogroup identification. In 2011, STEC isolates were forwarded to the OSDH PHL for 81 (100%) confirmed cases. Of the 81 isolates, 33 (41%) were confirmed *E. coli* O157:H7 and 48 (59%) were STEC non-O157.

Incidence Rate of Reported *Escherichia coli* O157:H7 and other Shiga toxin producing *E. coli* by Year, Oklahoma and U.S., 2002 – 2011*



* U.S. Rate Unavailable for 2011

Incidence Rate of Reported *Escherichia coli* O157:H7 and other Shiga toxin producing *E. coli* Cases by Age Group, Oklahoma, 2011



ⁱ Centers for Disease Control and Prevention. [Summary of notifiable diseases—United States, 2009]. Published May 12, 2011 for MMWR 2011;58(No. 53):74.