

## Salmonellosis

**2005 Case Total 448**  
**2004 Case Total 422**

**2005 Rate 13.0 per 100,000**  
**2004 Rate 12.4 per 100,000**

Although the rate of *Salmonella* infections in Oklahoma increased by six percent from 2004 to 2005, the rates of salmonellosis have been equal to or slightly lower than the U.S. average for the last six years (see graph, next page). In 2005, fifty-nine of 77 (76.6%) Oklahoma counties had at least one case of salmonellosis. Counties with at least two cases and a disease rate two or more times higher than the state average included Adair (42.8 per 100,000; 9 cases), Alfalfa (32.7 per 100,000; 2 cases), Beckham (30.3 per 100,000; 6 cases), Jefferson (29.3 per 100,000; 2 cases), Le Flore (31.2 per 100,000; 15 cases), McIntosh (30.8 per 100,000; 6 cases), and Okfuskee (33.9 per 100,000; 4 cases).

*Salmonella* infections typically exhibit a seasonal distribution with higher incidence in the warmer months. The largest number of cases occurred in August (n=68, 15.2% of cases) and September (n=55, 12.3% of cases). May and June had 47 and 52 cases each (10.5 and 11.6% respectively), and July had 42 cases (9.4% of cases). The fewest number of cases occurred in February (16 cases, 3.6% of cases).

The median age of salmonellosis was 23 in 2005. Following a trend seen in earlier years, rates of disease were slightly higher in females than males, but not among all age groups. Overall, the rate of salmonellosis in females in 2005 was 13.6, and 12.2 in males. As can be seen in the accompanying graph, rates were more than twice as high in males age 5-14 than in females of that age. In women 25-39, this trend is reversed, with females having rates over twice that of males.

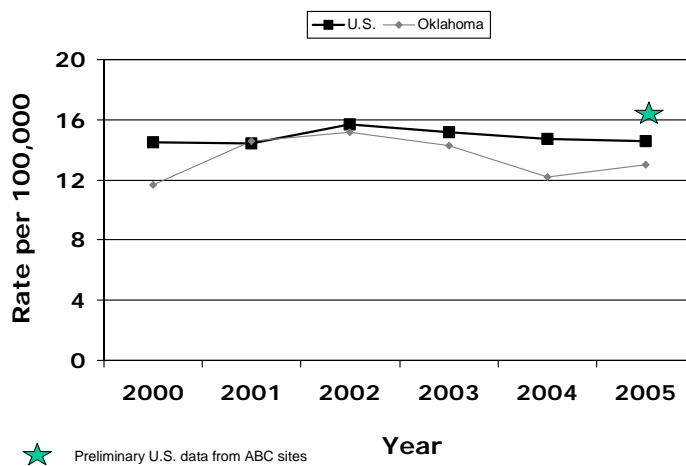
Racial information was obtained on 67.2%, and ethnic information for 58.7%, of reported cases. Asians, and Hispanics of any race, had higher rates of salmonellosis than other groups; at 17.1 and 17.3 per 100,000, respectively, compared to 9.2 for whites, 9.2 for blacks, and 10.3 for Native Americans. Because of incomplete ascertainment of these data, rates by race and ethnicity are useful for comparison to each other only.

Clinical isolates of *Salmonella* are required to be submitted to the OSDH PHL for serotyping. Fifty-four different serotypes were identified in 2005, compared with 45 in 2004 and 60 in 2003. In 2003 *Salmonella* newport and *Salmonella* typhimurium were the most common serotypes, with 79 isolates of each. Overall, these two serotypes accounted for 40.8% of all isolates serotyped at the OSDH PHL. The second most common serotype was *S. enteritidis*, of which there were 41 (10.6% of all isolates in 2005 as compared to 5.3% of the total in 2004).

A public health investigation is conducted on each reported case by the county health department CDN. The CDN gathers information in risk factors for disease, attempts to find related cases, and educates the client on disease prevention measures. The majority of cases were sporadic, with no major outbreaks detected.

High-risk settings for the transmission of salmonellosis include food preparation, child daycare settings, and nursing homes. In 2005, food handler status was gathered from 149 of the 448 reported cases. Four of these cases were food handlers. Daycare setting affiliation, including attendance, employment, and family members of an attendee, were collected from 117 of 448 cases. Twenty cases were known to attend daycare, while two cases worked in a daycare setting, and two were family members of children who attended daycare.

**Salmonellosis Incidence Rate by Year, Oklahoma and U.S., 2005**



**Rate of Reported Salmonellosis Cases by Age Group and Gender, Oklahoma, 2005**

