

**Outbreak of *Salmonella* Enteritidis Infections Associated with the Acapulco Restaurant --
Harvey County, June 2008**



Background

On Friday, June 13, 2008, the Harvey County Health Department (HCHD) notified the Office of Surveillance and Epidemiology (OSE) at the Kansas Department of Health and Environment (KDHE) that six cases of salmonellosis had been reported by the medical center and a physician's office in Harvey County. This represented a large increase in the number of salmonellosis cases seen in Harvey County in previous years. Staff at HCHD interviewed patients and five of the six cases reported eating at the Acapulco Restaurant in Newton, KS prior to their illness. HCHD in conjunction with KDHE began an outbreak investigation to determine the source of illness and to implement appropriate control and prevention measures.

Key Findings

- Twenty-nine case-patients were identified from five counties in south central Kansas. Twenty-four were laboratory-confirmed as *Salmonella* Enteritidis. Of those, 22 (76%) of the isolates were indistinguishable by pulsed-field gel electrophoresis, and two isolates differed by one band. Five cases had symptoms consistent with salmonellosis, but were not laboratory confirmed.
- All 29 (100%) individuals experienced diarrhea, 27 (93%) had abdominal cramps, 24 (89%) had fever, 12 (41%) experienced bloody diarrhea, 11 (38%) had vomiting, and four (14%) were hospitalized.
- Onset of illness ranged from June 5 to June 18, and ill individuals reported eating at the restaurant from June 2 to June 9.
- The incubation period ranged from 1 day to 9 days with a median of 4.5 days. Date of recovery was reported by only 10 cases and duration of illness ranged from 1 day to 15 days with a median of 8.5 days. Many individuals were still symptomatic when interviewed.
- Twenty-six cases and 30 well companion controls were interviewed for the case-control study.
- Ages of cases ranged from 8 – 75 years (median = 42 years), and ages of controls ranged from 2 – 85 years (median = 40.5 years).
- There were 37 females interviewed for the case-control study (20 cases and 17 controls) and there were 19 males interviewed for the study (6 cases and 13 controls).
- Two food items were significantly associated with illness: guacamole (odds ratio [OR] = 4.28, 95% confidence interval [CI] = 1.08 – 17.03) and pico de gallo (OR = 8.22, 95% CI = 1.28 – 52.94).
- The only common ingredients for both the guacamole and pico de gallo were onions and tomatoes. Of those, only consumption of any tomatoes was significantly associated with illness (OR = 5.86, 95% CI = 1.44 - 23.85).
- An inspection of the restaurant was conducted on June 17. Four critical violations were observed: 1) the chicken and peppers were above the proper cold hold temperature; 2) two products were not labeled properly; 3) one handwashing violation; and 4) a food product not stored in an approved container. All violations were corrected at the time of the inspection.

Preliminary Conclusions

This outbreak of *Salmonella* Enteritidis was associated with the Acapulco restaurant in Harvey County and was identified through routine surveillance. Patrons who became ill had dined at the establishment between June 2 and June 9. No illness has been reported in individuals who dined after June 9. Two separate food items were statistically associated with illness, the pico de gallo and guacamole. The only common ingredient in both those dishes that was significantly associated with illness was tomatoes. Food preparation procedures, cross contamination, or contaminated produce are all potential causes of this foodborne disease outbreak. Environmental investigations are ongoing.

Report author: Sheri Anderson (Kansas Department of Health and Environment)

Investigated by:

Harvey County Health Department

316 Oak Street

Newton, KS 67114

<http://www.harveycounty.com/health/health.html>

Sedgwick County Health Department

1900 East 9th Street

Wichita, KS 67214

<http://www.sedgwickcounty.org/healthdept/index.asp>

Meade County Health Department

309 South Webb

Meade, KS 67864

<http://www.meadecohealth.com/>

Kansas Department of Health and Environment

Bureau of Consumer Health

Food Safety and Consumer Protection

1000 SW Jackson Suite 330

Topeka, KS 66612

http://www.kdheks.gov/fpcs/food_protection.html

Kansas Department of Health & Environment

Office of Surveillance and Epidemiology

1000 SW Jackson St., Suite 210

Topeka, Kansas 66612

www.kdheks.gov/epi