

**Outbreak of *Salmonella* Newport Infections Associated with the  
Barto's Idle Hour Restaurant - Crawford County, August 2009**

**PRELIMINARY REPORT**



## **Background**

On September 3, 2009, the Kansas Department of Health and Environment Bureau of Surveillance and Epidemiology (KDHE-BSE) was notified of a possible outbreak of gastrointestinal illness among individuals who ate a meal from Barto's Idle Hour Restaurant (201 S Santa Fe, Frontenac, KS 66763) on August 28. The initial complaint indicated that six out of seven people became ill after eating food from Barto's Idle Hour. In response to this complaint, an outbreak investigation was initiated by staff from KDHE-BSE, the Crawford County Health Department (CCHD), and the Kansas Department of Agriculture (KDA).

On September 9<sup>th</sup>, a physician notified KDHE of a laboratory-confirmed *Salmonella* case. During the case interview, the CCHD learned that this individual had eaten food from Barto's Idle Hour Restaurant. Review of routine surveillance data for Crawford County identified four additional salmonellosis cases whose specimen collection dates ranged from August 30 through September 7. Serotype information was reported as *S. Newport* for one of the cases. Further follow-up with these cases revealed that all had eaten food from this restaurant.

## **Key Findings**

- Staff at CCHD and KDHE-BSE interviewed ill persons identified during this outbreak, including the following: (1) ill persons reported from the initial complaint, (2) all salmonellosis cases who were Crawford County residents and were reported to KDHE at the end of August into September, and (3) ill patrons who dined with the laboratory-confirmed cases. The Sedgwick County Health Department (SCHD) also interviewed a *Salmonella* Newport case, and this individual reported travel to Crawford County and eating food at Barto's Idle Hour.
- Of the 36 ill individuals interviewed, 33 met the case definition. A case was defined as an individual who became ill after eating food from Barto's Idle Hour on August 25 – August 29 and had one of the following clinical criteria: (1) a laboratory-confirmed *Salmonella* result, (2) vomiting and/or diarrhea, OR (3) nausea, stomach cramps, and a fever in the absence of vomiting and diarrhea. Thirteen cases were laboratory-confirmed as *Salmonella* Newport, and all of the isolates shared the same pulsed-field gel electrophoresis (PFGE) pattern.
- Of the 33 cases, 31 (94%) reported diarrhea, 27 (82%) reported abdominal cramps, 24 (73%) reported body aches, 22 (67%) reported nausea, 21 (64%) reported having a fever, and 8 (24%) reported vomiting. Twenty (61%) cases sought medical care from a physician, 11 (33%) were seen in the emergency department, and 7 (21%) were hospitalized.
- Onsets of illness ranged from August 27 to September 4, and ill individuals reported eating at the restaurant between August 25 and August 29.
- The incubation period ranged from 1 to 7 days with a median of 2 days. Date of recovery was reported by 13 cases, and duration of illness ranged from 1 to 17 days with a median of 5 days.

- A case-control study was initiated to determine an implicated food item. Controls were identified from credit card receipts for persons who had consumed food or beverages at the restaurant on August 26-29. Patron information from August 25 was not obtained because patrons who ate on August 25 and reported illness were not identified until after the request for the patron list had been made.
- Staff at CCHD, KDHE-BSE, and SCDH interviewed 16 individuals, and staff within the Health Risk Studies Program at KDHE interviewed 52 individuals. None of the individuals interviewed reported illness, and all were classified as controls.
- Sixty-six of the 68 controls were randomly selected and enrolled into the study; the case-control ratio was 1:2.
- Ages of cases ranged from 14 – 80 years (median = 56 years), and ages of controls ranged from 2 – 86 years (median = 56 years).
- There were 53 females (23 cases and 30 controls) and 46 males (10 cases and 36 controls).
- Three food items were associated with illness: sandwiches (odds ratio [OR] = 17.5; 95% confidence interval [CI] = 2.05 – 149.3), tossed salad (OR = 5.8; 95% CI = 1.06 – 31.72), and German potato salad (OR = 2.3; 95% CI = 0.91 – 5.86). However, only sandwiches and tossed salad were statistically significant.
- A common ingredient shared between the sandwiches and potato salad was raw onion. Consuming any raw onion (on the sandwiches or in the potato salad) was significantly associated with illness (OR = 22.15; 95% CI = 2.85 – 172.08). A common ingredient between the sandwiches and the tossed salad was lettuce. Consuming any lettuce (on the sandwiches or the tossed salad) was also significantly associated with illness (OR = 7.88; 95% CI = 1.96 – 31.57).
- An inspection of the restaurant by KDA was conducted on September 10. Two critical violations were observed: 1) improper cold holding temperatures of potentially hazardous foods and 2) missing a backflow prevention device to prevent back siphonage on the three compartment sink. A second inspection of the facility was conducted on September 16 following an additional foodborne illness complaint. Three critical violations were observed: 1) bare hand contact with ready to eat foods; 2) improper use of paper towel to handle ready-to-eat foods; and 3) missing backflow prevention device to prevent back siphonage on the dish machine, three compartment sink and the ice maker.
- Employee surveys were distributed to all employees to collect information regarding work history, food history, and illness information. None reported any gastrointestinal symptoms.

### **Preliminary Conclusions**

This outbreak of *Salmonella* Newport was associated with Barto's Idle Hour restaurant in Crawford County and was identified through a foodborne illness complaint and routine surveillance. Patrons who became ill had dined at the establishment between August 25 and August 29. Sandwiches and tossed salad were associated with illness and these findings were statistically significant. When common ingredients were analyzed, raw onion and lettuce were found to be significantly associated with illness. The raw onion

was served with the sandwiches and was an ingredient in the potato salad. The lettuce was served with the sandwiches and was included in the tossed salad. Food preparation procedures, cross contamination, or contaminated produce are all potential causes of this foodborne disease outbreak. Environmental investigations are ongoing.

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*As the state’s environmental protection and public health agency, KDHE promotes responsible choices to protect the health and environment for all Kansans. Through education, direct services, and the assessment of data and trends, coupled with policy development and enforcement, KDHE will improve health and quality of life. We prevent injuries, illness, and foster a safe and sustainable environment for the people of Kansas.*