

## ***Salmonella* Agona Infections Associated with Papayas Imported from Mexico**

February-March

Multiple counties/Multiple states

From February through April, 2011, the Minnesota Department of Health (MDH) Public Health Laboratory identified three *Salmonella* Agona isolates with MDH pulsed-field gel electrophoresis (PFGE) pattern designation SA110. The first case, identified in February, refused an interview. Two additional cases occurred in March and April. On April 8, PulseNet, the national molecular subtyping network for foodborne bacterial disease surveillance, announced that there were matches to two closely related PFGE patterns in nine states. On April 13, the CDC initiated a multi-state investigation. At that time, there were 18 cases in 10 states.

In Minnesota, a case was defined as a Minnesota resident with laboratory-confirmed infection with *S. Agona* PFGE subtype SA110.

Cases were interviewed by phone regarding illness history and potential exposures. A questionnaire developed by CDC was used in addition to the Minnesota routine surveillance form.

Information collected from case interviews was shared with CDC, other states, and the United States Food and Drug Administration (FDA).

CDC coordinated a multi-state investigation of cases. FDA conducted the traceback investigation and initiated recalls.

Three cases with a *S. Agona* SA110 infection were identified in Minnesota. The cases had illness onset on February 11, March 15, and March 29. None of the cases were hospitalized, and all recovered. A detailed symptom history was collected for two of the cases. Both cases reported diarrhea, fever and cramps; one reported bloody stools; none reported vomiting. Travel history was obtained on all three cases, and two reported travel to Mexico in the week prior to their illness; one traveled to Cancun, and the other traveled to Cabo San Lucas.

Nationally, 106 cases with the four outbreak strains of *S. Agona* were reported from 25 states: Arkansas, Arizona, California, Colorado, Georgia, Illinois, Indiana, Kentucky, Louisiana, Massachusetts, Minnesota, Missouri, Nebraska, Nevada, New Jersey, New Mexico, New York, Ohio, Oklahoma, Pennsylvania, Tennessee, Texas, Virginia, Washington, and Wisconsin. Illness onset dates ranged from January 17 to August 25, 2011. The median age of cases was 2 years (range, <1 year to 91 years). Thirty-nine percent of cases were younger than 5 years of age. Fifty-six percent were female. Eleven persons reported travel to Mexico in the week before they became ill. Ten cases were hospitalized. No deaths were reported [1].

Among 56 cases with available information, 57% reported consuming papayas in the week before illness onset. This was significantly different compared with results from a survey of healthy persons in which 11% of persons of Hispanic/Latino ethnicity and 3% of non-Hispanic/Latino ethnicity reported consuming papaya in the 7 days before they were interviewed. Places and dates of papaya purchase information was collected from cases and used to conduct traceback investigations. A single supplier of papayas from Mc Allen, Texas was identified as the source of papayas purchased by cases. The FDA

conducted testing of papayas at the distributor in Texas, and isolated *S. Agona* of the outbreak PFGE pattern from two papayas [1].

As a result of the investigation, the supplier recalled papayas on July 23, 2011.

FDA continued testing of papayas imported from Mexico, and from May 12, 2011, to August 18, 2011, FDA found a 15.6% *Salmonella* contamination rate. The positive samples were from 28 different firms and include nearly all the major papaya producing regions in Mexico.

This was a multi-state outbreak of *S. Agona* infections associated with consumption of papaya imported from Mexico. The outbreak led to a papaya recall. Three cases associated with this outbreak were identified in Minnesota.

## **Reference**

1. Centers for Disease Control and Prevention. Multistate Outbreak of Human *Salmonella* Agona Infections Linked to Whole, Fresh Imported Papayas <http://www.cdc.gov/salmonella/agona-papayas/082911/index.html>