Salmonella Newport Infections Associated with a Wedding

June

Sherburne County

On July 11, 2012, the Minnesota Department of Health (MDH) Public Health Laboratory (PHL) identified a cluster of three *Salmonella* Newport isolates received through routine disease surveillance that were indistinguishable by two-enzyme pulsed-field gel electrophoresis (PFGE), with MDH pattern designation NEW390 (Centers for Disease Control and Prevention [CDC] pattern designation JJPX01.0884). Specimen collection dates for the cases were June 30, July 2, and July 3. All three cases were interviewed on July 11, and all reported attending a June 23 wedding held at a private home in Corcoran, Minnesota. Foods for the wedding were reportedly prepared in a private home. The Hennepin County Human Services and Public Health Department was notified, and an investigation was initiated.

S. Newport cases are reported by hospitals and clinics and routinely interviewed by MDH staff using a standard questionnaire that includes questions about attendance at large events as part of routine disease surveillance. Interviews of *Salmonella* cases with isolates that are indistinguishable by PFGE are compared to identify potential common exposures. The bride and family of the couple provided information about foods served at the wedding, but the bride refused to provide contact information for wedding guests. Contact information for a limited number of guests was obtained from cases, controls, and family members of the bride and groom. MDH interviewed guests to obtain information on food/beverage consumption and illness history. Cases were defined as individuals who had *S.* Newport with the outbreak PFGE pattern isolated from a clinical specimen, and/or who attended the June 23 wedding and subsequently developed diarrhea (≥3 loose stools in 24 hours) that either lasted ≥3 days or was accompanied by fever. Stool kits from consenting cases were tested for *Salmonella* at the MDH PHL.

Approximately 250 attended the wedding reception. Fourteen guests were interviewed, and seven cases were identified. One attendee reported diarrhea that did not meet the case definition and was excluded from further analyses. The median incubation for cases from the wedding meal was 66 hours (range, 24 to 148.5 hours), and the median duration of illness was 12 days (range, 4 to 17 days). All seven cases reported diarrhea, six (86%) reported cramps, five (71%) reported fever, three (43%) reported bloody stools, and one (14%) reported vomiting. The median age of cases was 31 years (range, 28 to 58 years), and six (86%) were female. Four cases visited a healthcare provider and were identified through routine disease surveillance, but none were hospitalized. Two additional cases submitted stool samples to the MDH PHL; one tested positive for *S.* Newport NEW390. The negative stool was collected 23 days after symptom onset.

Wedding reception foods were served buffet-style at a private home. A family member (who was not ill) prepared a red spaghetti sauce with pepperoni and Italian sausage in her home. The cake was purchased at a grocery store. All other foods were prepared by a friend of the bride. The bride refused to provide contact information for the food preparer or the name of the restaurant where he worked as the head chef. Food items prepared by the chef included spaghetti noodles, alfredo noodles, chicken alfredo sauce, breadsticks, and Caesar salad. The bride reported that cream for the chicken alfredo sauce was purchased at a grocery store in St. Michael, and the remaining ingredients were from a foodservice distributor. Candy favors (individually wrapped taffy and wrapped hard candy sticks) were provided on guest tables. None of the cases attended other wedding-related events with food, including a groom's dinner held the night prior and a sandwich lunch at the church.

The small number of cases and controls limited the power of the statistical analysis. In a univariate analysis, consuming chicken alfredo (7 of 7 cases vs. 3 of 6 controls; $p = 0.07$) approached significance.

Three *S.* Newport NEW390 cases were identified with specimen collection dates from July 10 through August 20, who did not attend the wedding. On July 20, a national posting from CDC identified two matching cases in another state. No specific commonalities were identified.

This was a foodborne outbreak of *S.* Newport infections associated with a privately catered wedding. The suspected outbreak vehicle was chicken alfredo prepared by a friend of the bride. However, this was not confirmed. Matching *S.* Newport cases not related to the wedding were identified, suggesting that the outbreak vehicle was a distributed food product. The investigation was hindered by lack of cooperation from the wedding hosts.