Epidemiologic Investigation

Patient interviews and other investigative work indicated that all four of the ill persons with PFGE-matching C. coli strains reported consuming raw (unpasteurized) milk within a few days of their illness onset. These initial interviews also led to additional case finding, primarily by way of ill persons reporting others they knew who were also ill with similar symptoms. While some of the persons who were initially identified during this investigation were reluctant to say where their raw milk came from, four individuals reported that it came from Farm A, a cow-share farm on the Kenai Peninsula. A confirmed case was defined as a laboratory-confirmed, PFGE-matched C. coli infection diagnosed from January 1, 2013 onward. A clinical case was defined as an acute GI illness with self-reported diarrhea lasting ≥2 days in a person with exposure to Farm A raw milk within 10 days of illness onset. A secondary case was defined as an acute GI illness lasting ≥2 days in a person with close contact to a confirmed or clinical case within 10 days of illness onset.

On February 14, 15,2 OSV immediately notified Farm A of the outbreak and requested a list of all active shareholders. Despite notification of the outbreak, Farm A continued to distribute raw milk to shareholders living in the Kenai Peninsula and in Anchorage.

During the week of February 18, two additional confirmed cases were reported—one of which was in a school-aged child who was hospitalized for 4 days with fever, abdominal pain, rash, and acute reactive arthritis involving the wrists, ankles, knees, and hips. On February 22, an updated health advisory describing new developments in the outbreak was issued.3 On February 22, Farm A provided SOE with an incomplete shareholder list, which lacked contact information for the majority of shareholders. Calls were made to notify persons on the list about the outbreak and to identify additional cases.

In total, 31 cases were identified during the investigation (Figure). Ill persons ranged in age from 7 months to 72 years. In total, 31 cases were identified during the investigation (Figure). Ill persons ranged in age from 7 months to 72 years. During the week of February 18, two additional confirmed cases were reported—one of which was in a school-aged child who was hospitalized for 4 days with fever, abdominal pain, rash, and acute reactive arthritis involving the wrists, ankles, knees, and hips. On February 22, an updated health advisory describing new developments in the outbreak was issued.3 On February 22, Farm A provided SOE with an incomplete shareholder list, which lacked contact information for the majority of shareholders. Calls were made to notify persons on the list about the outbreak and to identify additional cases.

In total, 31 cases were identified during the investigation (Figure). Ill persons ranged in age from 7 months to 72 years. These cases underscore the fact that Campylobacter bacteria are difficult to isolate from the environment, they are shed intermittently in cow manure, and the farm visit occurred weeks after the outbreak peaked. Incidentally, L. monocytogenes—bacteria that can cause life-threatening meningitis—was isolated from Farm A milk; no listeriosis cases were reported during the outbreak.

Finally, four (13%) ill persons developed reactive arthritis, a painful form of inflammatory arthritis that sometimes occurs in reaction to a bacterial infection and can persist for up to 12 months. These cases underscore the fact that Campylobacter infection can lead to prolonged adverse health consequences.

Recommendations


2. Providers should obtain stool cultures in patients with acute GI illness and history of raw dairy consumption.

3. Providers should promptly report cases of Campylobacter infection to SOE by calling (907) 269-8000.

4. Cow/goat-share operators should maintain current and legible shareholder distribution records and share these records promptly with health officials if an outbreak is suspected to be linked to their farm. For more info, see: [http://www.deq.state.ak.us/health/documents/Dairy/RawMilkSharesFactSheet.pdf](http://www.deq.state.ak.us/health/documents/Dairy/RawMilkSharesFactSheet.pdf)

References


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