

Alaska Public Health Advisory

Outbreak of *E. coli* O157 Infections at a Correctional Facility in Nome

April 19, 2018

Summary

The Alaska state departments of Health and Social Services, Environmental Conservation, and Corrections are working together to investigate and control an outbreak of *Escherichia coli* O157 infections that occurred at the Anvil Mountain Correctional Center (AMCC) in Nome. The *E. coli* O157 isolates appear to be connected to a nationwide outbreak affecting at least 16 states and linked to consumption of romaine lettuce grown in Yuma, Arizona. Preliminary information suggests that the romaine consumed by patients at AMCC was grown in Yuma. Most romaine lettuce grown during the winter in the United States comes from Yuma farms; however, in spring, lettuce growing transitions to farms in Salinas, California. To date in 2018, no other confirmed cases of *E. coli* O157 have been reported with exposure in Alaska.

Case information

- Illness onset dates for the eight Alaska patients were from April 5–15.
- None have been hospitalized or died.
- The pulsed-field gel electrophoresis (PFGE) patterns of *E. coli* isolates from the five patients for which typing has occurred to date has matched that of the national outbreak strain. PFGE analysis of the additional three isolates is pending.
- Data from whole genome sequencing (WGS) of all isolates will be forthcoming to more precisely confirm the molecular relatedness to the national outbreak.
- Exposure information for the first five patients indicated that the average number of salad meals consumed by cases was significantly higher than that of controls.

E. coli infection information

- The incubation period for Shiga toxin-producing *E. coli* (STEC) such as *E. coli* O157 can be 2–10 days (average of 3–4 days).
- Common symptoms include diarrhea (often bloody), severe stomach cramps and vomiting.
- Most people recover within 1 week.
- Some illnesses last longer and can be more severe, resulting in a type of kidney failure called hemolytic uremic syndrome (HUS), which can lead to death.
 - HUS can occur in people of any age but is most common in young children under 5 years, older adults, and people with weakened immune systems.
 - Symptoms of HUS can include fever, abdominal pain, pale skin tone, fatigue and irritability, small, unexplained bruises or bleeding from the nose and mouth, and decreased urination.
 - People who experience these symptoms should seek emergency medical care immediately.

- *E. coli* infection can be confirmed by testing a stool sample.
- *E. coli* can be transmitted through contaminated water or food, or through contact with infected people or animals.

Recommendations

1. Restaurants, retailers and consumers should ask suppliers about the source of their romaine lettuce, and discard lettuce if it was grown in Yuma, Arizona. Areas where romaine lettuce has been stored should be washed and sanitized.
2. Health care providers seeing patients with bloody diarrhea and other symptoms consistent with STEC infections can submit stool specimens to the state laboratory for testing. Specimen collection and submission information is available on-line: <http://dhss.alaska.gov/dph/Labs/Pages/publications/default.aspx>
3. STEC infections are reportable to the Alaska Section of Epidemiology (SOE) by both health care providers and laboratories. Call 907-269-8000 to report, or visit SOE's website for more details: <http://dhss.alaska.gov/dph/Epi/Pages/pubs/conditions/default.aspx>
4. Careful hygiene is critical to help prevent the spread of *E. coli* bacteria. People with diarrhea must take special care to wash their hands thoroughly and avoid food preparation, personal or health care of others.

Investigations are ongoing. State officials are working to determine where else romaine lettuce grown in Yuma may have been served or sold in Alaska. State officials are also working collaboratively with national partners at the U.S. Centers for Disease Control and Prevention (CDC) and the Food and Drug Administration (FDA).

Resources

CDC. Multistate Outbreak of *E. coli* O157:H7 Infections Linked to Chopped Romaine Lettuce. Available at: <https://www.cdc.gov/ecoli/2018/o157h7-04-18/index.html>

Alaska Section of Epidemiology, Foodborne and Waterborne Disease Information. Available at: <http://dhss.alaska.gov/dph/Epi/id/Pages/dod/foodwater/default.aspx>

Alaska Department of Environmental Conservation, Food Safety and Sanitation Program. Available at: <http://dec.alaska.gov/eh/fss.aspx>