King County

Shiga toxin-producing E. coli O157:H7 (STEC) outbreak associated with 7 Evergreens restaurants

- **Cases:** 16
- **Hospitalizations:** 3
- **Deaths:** 0
- **Status:** Investigation is completed
- **Locations:**

  Evergreens restaurants:
  - Pioneer Square (106 1st Ave S, Seattle)
  - University District (4609 Village Ter NE, Seattle)
  - Downtown (823 3rd Ave, Seattle)
  - Chinatown-International District (504 5th Ave S, Seattle)
  - Sammamish Highlands (600 228th Ave NE, Sammamish)
  - Seattle-Tacoma International Airport (17801 International Blvd, Seattle)
  - 2nd and Pike St. (1430 2nd Ave, Seattle)

- **Meal dates:** November 5-11, 2019

- **Current food safety rating:**
  - Pioneer Square: EXCELLENT
  - University District: EXCELLENT
  - Downtown Seattle (3rd and Marion): EXCELLENT
  - Chinatown-International District: EXCELLENT
  - Sammamish Highlands: EXCELLENT
  - Seattle-Tacoma International Airport: EXCELLENT
  - 2nd and Pike St: EXCELLENT

Highlights

Updated January 16, 2020

Summary

Public Health investigated an outbreak of Shiga toxin-producing *E. coli* O157:H7 (STEC) associated with seven Evergreens restaurants in King County, WA. This outbreak appears to be over. The most recent illness in this outbreak reported to Public Health started on November 17, 2019. Epidemiologic evidence and traceback completed by the U.S. Food and Drug Administration (FDA) suggest leafy greens as a possible source.

This outbreak occurred in the context of a national *E. coli* outbreak associated with romaine lettuce from the Salinas, California growing region, which was announced by the CDC on November 22, 2019. On January 15, 2020, the CDC announced this outbreak also now appears to be over. Genetic testing completed on 11 of the 16 cases in this local cluster did not match the genetic fingerprint of the strain associated with this national outbreak.

Illnesses

Since November 20, 2019, we have learned of 16 people in WA (14 in King County and 2 in Snohomish County) who developed symptoms consistent with an *E. coli* illness after consuming food from seven different Evergreens restaurants in King County. Illness onsets occurred during November 8–17, 2019. Meal dates were during November 5–11, 2019.

Three people were hospitalized. Everyone who reported illness has recovered.

Public Health actions

During November 21 to December 16, 2019, Environmental Health investigators visited all 7 of the Evergreens locations where the ill people reported eating. During their field inspections, investigators identified a potential risk factor of cold holding at only one location (International District). They did not observe environmental or behavioral risk factors associated with the spread of *E. coli* at any of the other 6 locations, such as poor handwashing practices or improper time and temperature control of foods. Out of an abundance of caution, Environmental Health investigators also visited the remaining 9 King County locations by December 23, 2019 to ensure their compliance with food safety practices.

At each Evergreens location, Public Health investigators reviewed with staff proper sanitizing practices to help prevent the spread of *E. coli.* In accordance with CDC's recommendations, Evergreens restaurants discarded all romaine lettuce products from their stores, including romaine on the line and in coolers. Finally, management reviewed their sick policy with all employees.

Public Health investigators revisited the 7 Evergreens restaurant locations where ill cases reported eating to confirm that these actions were taken.

Public Health identified two employees who experienced symptoms consistent with an *E. coli* infection after eating at Evergreens, but who were not tested. There is no evidence indicating these people were the source of the outbreak. During their visits, investigators reviewed the requirement that restaurant employees are not allowed to work while having vomiting or diarrhea.

Public Health collected samples of various produce from two Evergreens locations where the ill people ate. *E. coli* testing of these food products at the Washington State Public Health Laboratory were negative.

Public Health worked with the Washington State Department of Agriculture and the FDA on tracing back the distributors and sources for ingredients the people who became ill consumed in their meals. Traceback is used to identify other points of contamination up the supply chain.

Laboratory testing

Eleven of 16 people reporting illness tested positive for *E. coli* O157:H7. All 11 isolates shared a closely related *E. coli* genetic fingerprint, suggesting that they have a common source of infection.

The remaining five people who got sick were not tested for STEC, but their symptoms are suggestive of an *E. coli* infection.

About STEC

E. coli bacteria normally live in the intestines of humans and animals. Many strains of *E. coli* bacteria exist, and most of them are harmless or beneficial to human health. STEC are strains of *E. coli* that produce Shiga toxin (such as *E. coli* O157:H7) and can cause serious illness in people.

Infection with STEC can occur through consumption of undercooked ground beef and other beef products; unpasteurized (raw) milk, cheese, and juice; contaminated raw fruits, vegetables, sprouts and herbs; water contaminated with animal feces, or by direct contact with farm animals or their environment. Ready-to-eat foods can also be contaminated with STEC through contact with raw beef or raw beef juices in the kitchen.

Symptoms of STEC include diarrhea (which often becomes bloody) and stomach cramps, with mild or no fever. Illness typically lasts several days and people can spread infection to others even after symptoms resolve.

- STEC infections usually resolve in 5-7 days, but recovered individuals may still spread the bacteria. Up to one third of children may continue to excrete STEC for as long as 3 weeks.

- Ill persons with suspected STEC infection should not work in food handling, patient care, or childcare settings, and ill children with suspected STEC infection should not attend daycare until they have seen a healthcare provider and been tested for STEC infection, even if their illness is mild. Persons with STEC infection who work in or attend these sensitive settings must be cleared by Public Health before returning.

Prevention

General advice for reducing risk of contracting STEC:

- Avoid eating high-risk foods, especially undercooked ground beef and other beef products, unpasteurized (raw) milk or juice or cheese, and raw sprouts.
- Use a food thermometer to make sure that ground beef has reached a safe internal temperature of 160° F.
- Wash hands before preparing food, after diapering infants, and after contact with cows, sheep, or goats, their food or treats, or their living environment.
- Thoroughly wash fresh produce before eating.

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