

**Investigation Number 2014-3137
Summary**

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Summary of outbreak 2014-3137

Background

The Lane County Health Department (LCHD) contacted the Oregon Health Authority's Public Health Division Acute and Communicable Disease Prevention Section (ACDP) Wednesday, January 27, 2014, to report five cases of *Campylobacter* infection in Lane County. An investigation was undertaken to ascertain the extent of the outbreak, to determine its source, and to stop further transmission.

Methods

LCHD staff interviewed all five persons known to be infected with *Campylobacter* using the risk exposure questions found in Orpheus. Also, the ACDP epidemiologists then worked with Oregon Department of Agriculture-Food Safety Division to identify sources of food items of potential concern.

In the epidemiologic investigation, a confirmed case was defined as an Oregon resident with a culture positive *Campylobacter coli* infection confirmed by the Oregon State Public Health Laboratory (OSPHL) in January 2014.

Results

LCHD interviewed all five cases with reported *Campylobacter* infection, three of the five reported consuming raw oysters. Two of the three initial cases had purchased the oysters on January 15 from a market in Eugene, while the third case had purchased the oysters from a market in Coos County. The two other cases were unable to be reached or exposure information obtained and were excluded. ACDP informed ODA and Coos County Health and Human Services (CCHHS) of the outbreak investigation. ODA conducted a product traceback and verified with the food markets in Lane and Coos County that the oysters had come from a single source, the Coos Bay Oyster Company (CBOC). ODA notified Coos County Health and Human Services of this fact on January 27.

On February 3, CCHHS notified ACDP of one Coos County resident with confirmed *Campylobacter* infection. The case had consumed raw oysters at a restaurant in Curry County. The restaurant reported obtaining the oysters from Chuck's Seafood, which is part of CBOC, and provides retail food products. One case who had purchased and consumed oysters had leftover frozen oysters. Leftover samples from a patient's home (i.e., 1/2 gallon jug of raw oysters) were collected by LCHD and sent for microbial testing. Oyster samples from the

patient's home were tested at IEH Laboratory and Consulting Group in Lake Forest Park, Washington. The oysters were culture-positive for *C. coli*.

A total of four confirmed cases were identified as a part of the outbreak—three from Lane and one from Coos County. ACDP also identified a presumptive Clackamas County case who reported eating oyster shooters at a market in Lane County. No stool specimen was submitted from this patient. Ages of cases ranged from 30s to 70s, all confirmed cases were male with one presumptive case was female. Onsets of illness ranged from January 19, 2014, to January 30, 2014. Three of the four cases were hospitalized. All patients recovered.

Due to the reported illnesses and the common source of the oysters, a Health Alert Network (HAN) message was sent to Oregon local health departments asking for assistance in interviewing campylobacteriosis cases reported in January 2014. No other cases were identified.

An environmental investigation at CBOC was initiated by ODA. Information regarding a recall of CBOC's Raw/Ready-to-eat Shucked Oysters was released to news media by ODA on January 30, 2014. (This release erroneously mentioned *Campylobacter jejuni* (*C. jejuni*) rather than *C. coli* as the cause of the outbreak.) The environmental investigation did not identify a specific source of the contamination. Water samples from the bay where the oysters were harvested were collected 10-15 days after the purchase of the fresh oysters. The water samples tested from Coos Bay and areas adjacent to the implicated harvest beds indicated little fecal coliform contamination; however, it is unlikely to find a positive water sample for *C. coli* unless significant contamination has occurred.

Since campylobacteriosis associated with consumption of shucked oysters is unusual, ACDP recommended testing the staff at the oyster company responsible for shucking. CCHHS provided CBOC staff with kits for collecting stool specimens that were later sent to the OSPHL for *Campylobacter* culture. Stool samples from the eight staff members from CBOC tested negative for *Campylobacter*.

Discussion

LCHD detected an outbreak of campylobacteriosis in Oregon associated with consumption of uncooked oysters; a total of four confirmed cases in two counties were identified. Upon further investigation, a common distributor and source of the product was identified. PFGE testing was not available at this time.

Pathogenic bacteria, when present in marine seafood and in fresh cultured products, are usually found at fairly low levels or are undetectable, but they are concentrated in the tissues of filter-feeding oysters and other mollusks. For this reason, relatively low numbers of pathogenic bacteria in oyster beds can pose a significant public health threat. Shellfish may be eaten safely if they are first adequately cooked. ACDP recommends against consumption of uncooked or undercooked shellfish.