

November 22, 2021

To the people of Petersburg:

We have been hard at work since mid-September to find the cause of the campylobacteriosis illnesses that affected many residents of your community. In total, we identified 64 ill people, 21 of whom were confirmed by a lab test, with illnesses occurring in two waves beginning between August 30th and October 8th, 2021.

Common exposures associated with campylobacteriosis include poultry, beef, pork, water, animal contact, and food consumed at public gatherings. Among all food exposures analyzed, none were found to be associated with becoming ill. Consumption of fresh produce was extensively evaluated, including consumption of produce from home gardens and local grocery stores, but no association with illness was found.

Initially, risk of water consumption also appeared unremarkable. However, after concerted efforts to boost response rates, which were initially low, final analysis of questionnaire results related to water consumption showed a strong association between illnesses and exposure to municipal tap water. The odds of getting sick were 15 times higher for people who drank Petersburg water, compared to those who did not. These findings suggested that the drinking water was the most likely source of the outbreak and because of this, additional testing and extensive investigation of the municipal water system was begun. It is thanks to the continued participation of your community that we eventually had enough questionnaire responses to show the strong link between the water and campylobacteriosis.

In collaboration with the Nebraska Department of Environment and Energy (NDEE), water samples were collected in early November and sent to the Centers for Disease Control and Prevention (CDC) for special testing. The test showed that genetic material (DNA) from *Campylobacter* bacteria was present in a water sample collected from a site in the distribution system. This testing added more evidence to support the link between drinking Petersburg municipal water and becoming ill with campylobacteriosis. NDEE and CDC are still working on testing the Petersburg water to learn more about where the *Campylobacter* might have come from. We know that this bacteria comes from feces, but what type (bird, cow, or human) caused this outbreak is still unclear. The source for contamination of the public water system has not yet been identified. Chlorination appears to have killed bacteria that might have been present in the water as CDC's testing did not show the presence of live bacteria. Internal inspection of the water tower is recommended, as is continuing chlorination until internal inspection has been completed and follow-up water distribution system samples are negative for bacteria.

Again, we would like to thank the Petersburg community for their continued support as we investigated this outbreak. Our team is grateful to have worked with many extremely dedicated members of your community.

Sincerely,

The Outbreak Investigation Team
Division of Public Health, Nebraska Department of Health and Human Services
East Central District Health Department