

Date of Report: March 26, 2024

Executive Summary

- Total Cases: 201
- Shigella Species Type:
 - 179 (89.1%) *S. sonnei*
 - 7 (3.5%) *S. flexneri*
 - 15 (7.5%) species not yet available
- Severity of Disease:
 - 91 (45.3%) of the cases have been hospitalized due to shigella
 - 1 (0.5%) death has been attributed to shigella

Introduction

An outbreak of Shigellosis has been impacting the Spokane community since October 29, 2023. The first case of shigellosis was diagnosed in a person experiencing homelessness. Spokane Regional Health District (SRHD) initiated an investigation and response from this initial case, providing education and guidance to the community. Additional cases were reported, which led SRHD to declare an outbreak among people experiencing homelessness on November 20, 2023. Early patterns indicated a broad distribution of cases across shelters and among campers, pointing to a community-wide transmission without a single identifiable source. Since then, the outbreak has escalated, affecting the broader Spokane community.

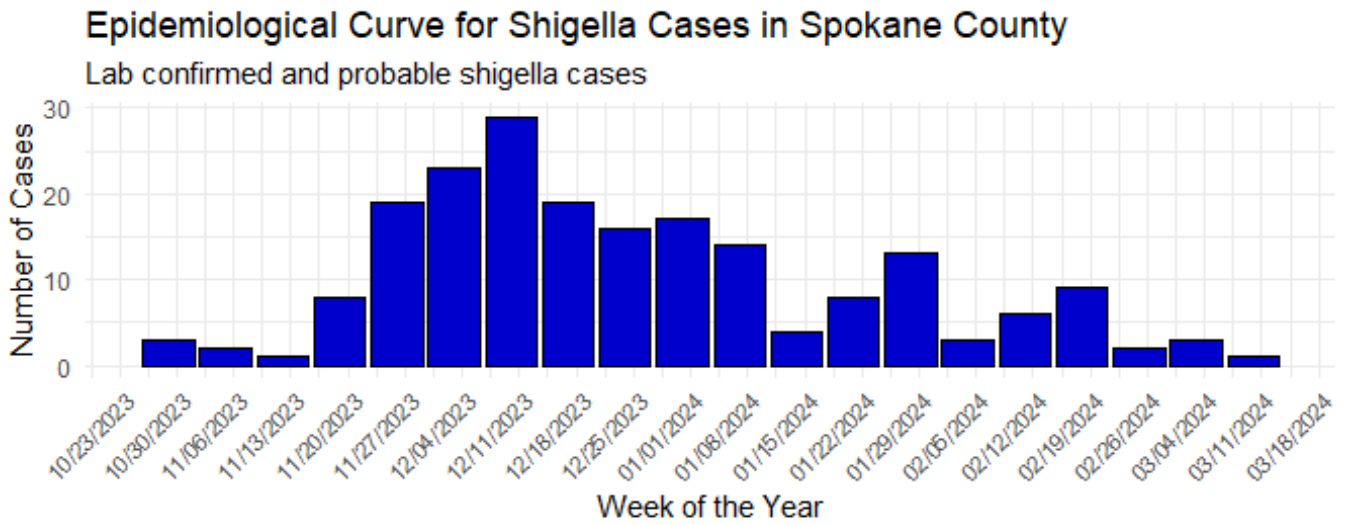
Since October 2023, 201 cases have been identified in Spokane County. As a reference, annual case counts of shigellosis in Spokane county for the last 5 years have ranged from 3 to 23 cases.

Shigellosis, a bacterial infection caused by Shigella, is a significant public health concern. In the United States, it leads to approximately 450,000 cases annually with an estimated direct medical cost of \$93 million. Shigella is highly contagious, spreading through the fecal-oral route, often via contaminated hands, surfaces, food, water, or during sexual contact. Control is challenging because of the low infectious dose necessary for transmission.

The four species of Shigella are *S. flexneri*, *S. boydii*, *S. dysenteriae*, and *S. sonnei*. *S. sonnei* is the most prevalent in the U.S., and is the primary species associated with Spokane's current outbreak. Symptoms include diarrhea (often bloody), fever, stomach pain, and the urge to pass stool even when the bowels are empty, typically starting 1-2 days post-exposure and lasting one week. Cases may be infectious for several weeks after diarrhea ends.

Shigella affects all age groups and spreads easily in places like day care and educational settings, among travelers to regions with poor sanitation, in men who have sex with men, among people experiencing homelessness, and in people with weakened immune systems.

A growing concern with Shigella is antimicrobial resistance, rendering first-line antibiotics ineffective and necessitating antimicrobial resistance testing. The risk of resistance emphasizes the importance of prudent antibiotic use and highlights the challenges in managing and treating Shigella infections.



n = 201 Shigella Cases; Data aggregated by week

Demographic Tables

The following tables provide an in-depth look at the demographic data of the cases in the current Shigellosis outbreak in Spokane County. Adults are primarily affected by the current outbreak. Considering that census data estimates that 88% of Spokane County residents are white and 50% of residents are female, people of color and males maybe disproportionately impacted by this outbreak.

Age Groups of Shigella Cases

Age Category	Count	Percentage
0-19	15	7.5%
20-39	64	31.8%
40-49	47	23.4%
50-59	40	19.9%
60+	35	17.4%

Gender of Shigella Cases

Gender	Count	Percentage
Female	79	39.3%
Male	122	60.7%

Race of Shigella Cases

Race	Count	Percentage
American Indian Or Alaska Native	13	6.5%
Black Or African American	11	5.5%
Other Race	12	6%
Unknown	17	8.5%
White	152	75.6%

One person can select multiple races, the total count in this table can be greater than the total count of cases.

Ethnicity of Shigella Cases

Ethnicity	Count	Percentage
Hispanic or Latinx	5	2.5%
Non-Hispanic or Latinx	147	73.1%
Unknown	49	24.4%

Hospitalizations

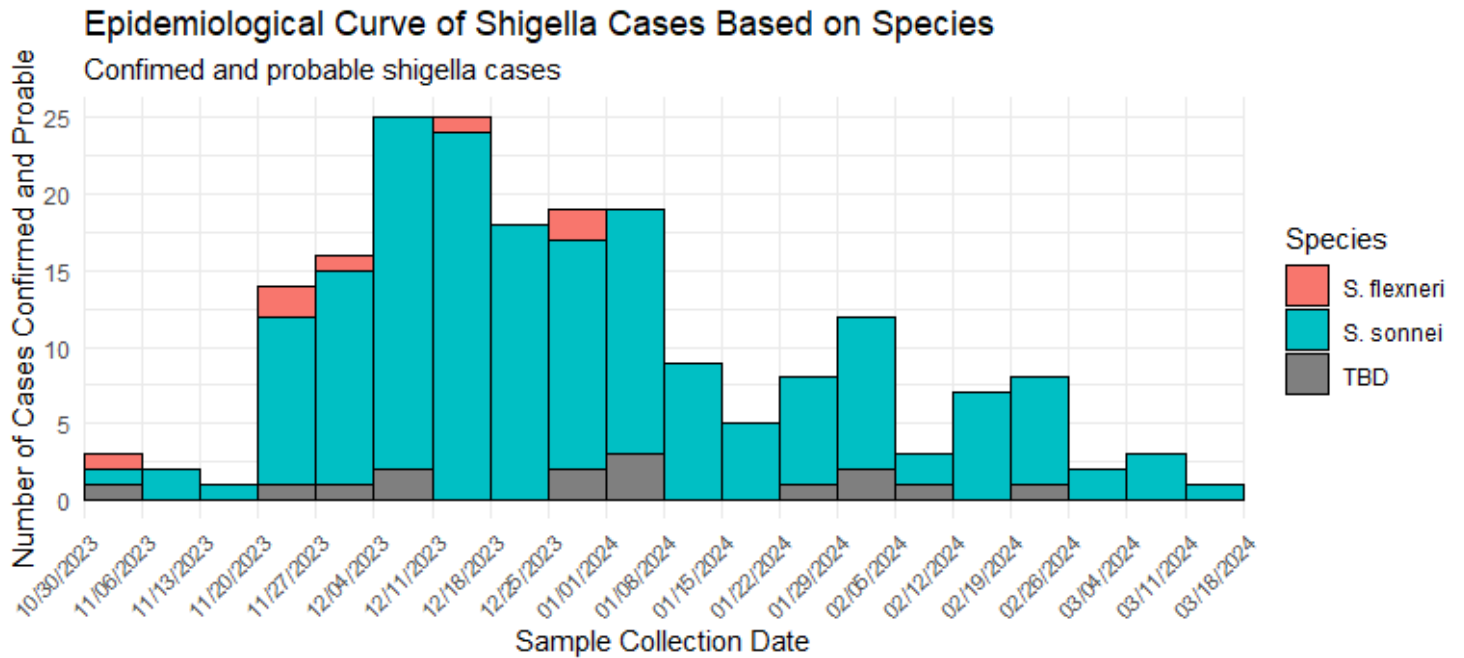
This chart provides a glimpse into the severity of the disease. Currently 91 (45.3%) of the cases have been hospitalized for more than one night due to the severity of the disease or co-occurring illness.

Hospitalization of Shigella Cases

Hospitalized	Count	Percentage
No	106	52.7%
Unknown	1	0.5%
Yes	91	45.3%
Not Specified	3	1.5%

Shigella Species

Our population is experiencing infections from two different Shigella species: *S. sonnei* and *S. flexneri*. The most prevalent within Spokane County is *S. sonnei*. The graph below provides a detailed visualization of the proportion of the two species within our community. It is important to note that several cases are still pending lab speciation.



n = 201 Shigella Cases; Sample Collection Dates range from Mon 30 Oct 2023 to Tue 12 Mar 2024
1 cases missing date of sample collection and not shown