



**To:** CAHAN San Diego Participants

**Date:** August 26, 2024

**From:** Public Health Services

**Health Advisory:** Increase in Extensively Drug-Resistant *Shigella* Specimens

### Key Messages

- Extensively drug-resistant (XDR) *Shigella* infections are increasing in California, particularly among men having sex with men (MSM), persons experiencing homelessness (PEH), and international travelers.
- Diagnostic testing for *Shigella* should include stool culture with antimicrobial susceptibility testing.
- Healthcare providers and clinical laboratories should report cases of known or suspected XDR *Shigella* to the County Epidemiology Unit by calling 619-692-8499 (Monday-Friday 8 AM-5 PM) or 858-565-5255 (after hours and holidays).

### Situation

The California Department of Public Health (CDPH) issued a [Health Advisory](#) to notify healthcare providers about an increase in extensively drug-resistant (XDR) *Shigella* specimens.

### Background

*Shigella* species are an important cause of domestically acquired and travel-associated diarrheal illness in the United States. The bacteria are transmitted by the fecal-oral route, including transmission within households and between close contacts, transmission through sexual contact, and outbreaks associated with contaminated food and water.

Shigellosis predominantly affects children. Recently, outbreaks of extensively drug resistant (XDR) strains of *Shigella* have been reported worldwide, including the United States, among adult populations including men who have sex with men (MSM), persons experiencing homelessness (PEH), international travelers, and people with HIV (PWH).

In California, from January to May 2024, 12% (118/978) of California *Shigella* isolates were reported as XDR based on whole genome sequencing, compared to 6.8% in 2023 (78% increase). Most (86%) patients were adult males (n=102). Among adult males with XDR *Shigella* infections and available information, 75% (48/64) self-identified as MSM. Among all patients with available information, 9% (8/94) were persons experiencing homelessness and 10% (9/88) reported international travel.

**Signs and Symptoms:** Shigellosis typically manifests with watery or bloody diarrhea, abdominal cramping, tenesmus, and fever. Nausea and vomiting are typically absent.

**Diagnosis:** Take a sexual history if shigellosis is suspected and consider co-occurring sexually transmitted infections. For shigellosis testing, stool culture is preferred as it provides an isolate for antibiotic susceptibility testing. If *Shigella* is diagnosed with a molecular test (e.g., PCR panels), reflex culture with susceptibility testing should be performed.

**Treatment:** In most cases, treatment for shigellosis is supportive care including fluid replacement. Most patients recover from shigellosis without antibiotics. Antibiotics may however be indicated for individuals who have severe

disease (e.g., bacteremia or need for hospitalization), who are immunocompromised, or who work or live in settings (e.g., food handlers, childcare settings, nursing homes, etc.) with the potential to spread disease.

For those who do require antibiotic therapy, antibiotic choice should be guided by antimicrobial susceptibility testing. Recommended empiric antibiotics include azithromycin, ciprofloxacin, or ceftriaxone. Ampicillin or TMP-SMX are recommended as alternative treatments for susceptible strains.

#### XDR *Shigella* Management

CDC defines XDR *Shigella* bacteria as strains that are resistant to all commonly recommended empiric and alternative antibiotics — azithromycin, ciprofloxacin, ceftriaxone, trimethoprim-sulfamethoxazole (TMP-SMX), and ampicillin.

To date, there are no CDC or CDPH recommendations for treating XDR shigellosis in the United States.

Healthcare providers treating XDR shigellosis should consult with a specialist knowledgeable in treating antibiotic-resistant bacteria to determine the best treatment options.

#### **Actions Requested**

1. **Obtain** a social history- including sexual history, housing status, and international travel- in patients suspected to have *Shigella* infection.
2. **Order** stool cultures with antimicrobial susceptibility testing in patients suspected to have *Shigella* infection.
3. **Avoid** routinely prescribing antibiotic therapy for *Shigella* infection. Instead, reserve antibiotic therapy when it is clinically indicated or as recommended by Public Health in an outbreak setting. When antibiotic therapy is indicated, tailor antibiotic choice to antimicrobial susceptibility testing.
4. **Report** cases of suspected XDR *Shigella* to the County Epidemiology Unit by calling 619-692 8499 (Monday-Friday 8 AM-5 PM) or 858-565-5255 (after hours and holidays).

#### **Resources**

##### **Federal**

[Health Alert Network \(HAN\) - 00486 | Increase in Extensively Drug-Resistant Shigellosis in the United States \(cdc.gov\)](#)  
[Drug-Resistant Shigella \(cdc.gov\)](#)

[Clinical Overview of Shigellosis | Shigella - Shigellosis | CDC](#)

##### **State**

[Rise in Extensively Drug-Resistant Shigella Strains \(ca.gov\)](#)

[Shigellosis Among Men Who Have Sex With Men \(ca.gov\)](#)

[Shigellosis \(ca.gov\)](#)

##### **Local**

[Shigella-information-sheet\\_final.pdf \(sandiegocounty.gov\)](#)

Thank you for your participation.

#### **CAHAN San Diego**

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