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PUBLIC HEALTH DEPARTMENT**

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HEALTH ADVISORY
Increase in Extensively Drug-Resistant Shigellosis
MARCH 8, 2023

SITUATION:

Public health authorities are monitoring an increase in extensively drug-resistant (XDR) *Shigella* infections (shigellosis), as reported via ongoing surveillance.

OVERVIEW:

Shigellosis is an acute enteric infection that is a major cause of domestically acquired and travel-associated bacterial diarrhea in the United States. *Shigella* bacteria are transmitted by the fecal-oral route, directly through person-to-person contact (including sexual contact), and indirectly through contaminated food, water, and other routes.

Historically, shigellosis has predominantly affected young children (ages 1–4 years) in the United States. More recently, public health officials have observed an increase in XDR shigellosis among adult populations, especially:

- Gay, bisexual, and other men who have sex with men (GBMSM)
- People experiencing homelessness
- International travelers
- People living with HIV

BACKGROUND:

XDR *Shigella* bacteria are identified as strains that are resistant to all commonly recommended empiric and alternative antibiotics— azithromycin, ciprofloxacin, ceftriaxone, trimethoprim-sulfamethoxazole (TMP-SMX), and ampicillin. *Shigella* bacteria are easily transmissible because of the low infectious dose and XDR *Shigella* strains can spread antimicrobial resistance genes to other enteric bacteria. Infections are generally self-limiting, resolve without antimicrobial treatment, and often only require supportive care such as oral rehydration; however, antimicrobial treatment may be indicated to prevent complications or shorten the duration of illness. Currently, there are no data from clinical studies to inform recommendations for the optimal antimicrobial treatment for XDR *Shigella* infections.

In 2022, ~5% of *Shigella* isolates tested by whole genome sequencing (WGS) were identified as XDR strains from CDC's PulseNet Surveillance System, compared with 0% in 2015. Among sequenced isolates reported to CDC, one case of XDR *Shigella* was detected in Alameda County in 2020, out of 77 confirmed or probable cases (1%); subsequently in 2021, another two XDR isolates were identified out of 93 confirmed or probable cases (2%). No XDR *Shigella* isolates have been detected from 145 confirmed or probable cases in 2022 in Alameda County. All three XDR *Shigella* case-patients identified in Alameda County to date are adult males and one identified as GBMSM. All three cases were identified via culture-independent testing and susceptibility testing was only done upon request by the provider.

To prevent further spread of XDR shigellosis, healthcare professionals are urged to be vigilant in identifying cases of XDR *Shigella* infection to their local health department and educating patients about measures to prevent infection and transmission.

ACTIONS REQUESTED OF HEALTHCARE PROVIDERS:

- **Conduct a sexual health risk assessment** (see [CDC: A Guide to Taking a Sexual History](#)) and test for other sexually transmitted infections including HIV, syphilis, gonorrhea, and chlamydia at each exposed sites (see [CDC: Sexually Transmitted Infections Treatment Guidelines](#)) as applicable based on risk assessment.
- **Test for *Shigellosis*** in patients presenting with prolonged diarrhea (more than 3 days) with cramping, possible blood in the stool, and/or fever. **Request culture and susceptibility** testing and follow up on susceptibility report to ensure antimicrobial therapy remains effective for the duration of treatment.
- **Instruct patients** with active diarrhea to stay home from school or work (especially from healthcare, food service, or childcare jobs) while sick or until the health department says it's safe to return.
- **Provide patients with education** on [preventing the spread of Shigellosis](#).
- **Report Confirmed cases** of Shigellosis to the Acute communicable Diseases Section of Alameda County Public Health Department by submitting a [CMR](#) by fax to (510)273-3744 within one working day of identification. Please assess and list the patient's occupation on the CMR.
- Please complete a [provider survey](#) on Shigellosis identification to inform awareness of current capabilities.

ACTION REQUESTED OF CLINICAL LABS

- **Provide culture and susceptibility testing** for Shigellosis; If utilizing culture independent testing for rapid diagnosis, attempt to reflex to culture.
- **Report *Shigella* Species/XDR *Shigella*** results via electronic laboratory reporting (ELR) to the California Reportable Disease Information Exchange (CaREDIE) within one working day of identification.
- **Submit extensively drug-resistant (XDR) *Shigella*** isolates to the Alameda County Public Health Laboratory for possible whole genome sequencing.
- Please complete a [provider survey](#) on Shigellosis identification to inform awareness of current capabilities.

RESOURCES:

[Health Alert Network: \(HAN\) - 00486 | Increase in Extensively Drug-Resistant Shigellosis in the United States \(CDC\)](#)

This memo conveys information of the highest importance regarding XDR *Shigella* infection in the United States.

[Information about Shigellosis for Specific Groups \(CDC\)](#)

This information presents *Shigella*-related topics as it pertains to specific subpopulations.

[Shigella Health Promotion Material \(CDC\)](#)

These educational materials can help patients learn more about shigellosis.

[Prevent Shigella Infection \(CDC\)](#)

These prevention messages should be used to counsel patients about protecting themselves and others from shigellosis.