

April 11, 2023

Health Advisory for District of Columbia Health Care Providers

Increase in Extensively Drug-Resistant (XDR) Shigellosis in the United States

SUMMARY

The Centers for Disease Control and Prevention (CDC) issued a Health Advisory on February 24, 2023 about an increase in extensively drug-resistant (XDR) *Shigella* infections (shigellosis) that has been reported through national surveillance systems. In 2022, about 5% of *Shigella* infections reported to CDC were caused by XDR strains, compared with 0% in 2015¹. Clinicians treating patients infected with XDR strains have limited antimicrobial treatment options. Healthcare professionals should be vigilant about detecting and reporting cases of *Shigella* infection (including XDR *Shigella*) to DC Health and educating patients and communities at increased risk about prevention and transmission.

BACKGROUND

Shigellosis is an acute enteric infection that is an important cause of bacterial diarrhea in the United States. Humans are the only known host and reservoir for *Shigella*. People infected with *Shigella* develop an inflammatory diarrhea which is often bloody. Other symptoms can include fever, abdominal cramping, and tenesmus. Disease is typically self-limiting to about 7 days². Complications of *Shigella* infection can include: bacteremia, hemolytic-uremic syndrome (HUS), and electrolyte disturbances². Routes of transmission for *Shigella* include: the fecal-oral route, person-to-person contact including sexual contact, and through contaminated food and water. Outbreaks tend to occur among people in close-contact settings. *Shigella* are easily transmitted because of their low infectious dose (as few as 10-100 bacteria can cause illness) and can pass resistance genes to other enteric bacteria. Extensively drug-resistant (XDR) *Shigella* strains are those resistant to all five commonly recommended antibiotics (azithromycin, ciprofloxacin, trimethoprim/sulfamethoxazole and ampicillin). Most people with shigellosis only need supportive care (fluids, rest, symptomatic treatment), but antibiotics are indicated in some circumstances (see *Recommendations for Clinicians* section).

Historically, young children (age 1-4) have been the demographic most frequently diagnosed with *Shigella* infection in the United States. However, the CDC has recently observed an increase in *Shigella* in the following groups of adults:

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

RECOMMENDATIONS FOR CLINICIANS

- Consider the diagnosis of shigellosis in patients with acute diarrhea, especially in patients at higher risk for *Shigella* infection, including: young children, MSM, people experiencing homelessness, international travelers, immunocompromised persons, and people living with HIV.
 - Be certain to ask patients about relevant exposures and social history, including sexual history, international travel and housing status.
- Order stool culture and request antimicrobial susceptibility testing.
- If a culture-independent diagnostic test (CIDT) is performed instead of culture, request on sample submission that the clinical laboratory perform reflex culture if the test is positive for *Shigella*.
- Antibiotics can decrease symptom duration (by approximately 2 days) and shorten the duration of shedding (and thus reduce the likelihood of onward transmission).
- Antibiotics are not routinely indicated unless patients have the following risk factors:
 - Part of an outbreak
 - Institutional settings
 - Food handlers
 - Immunosuppression, including people living with HIV
 - Bacteremia or extraintestinal disease
- Most patients with mild shigellosis can be treated with supportive care (e.g., fluid repletion, rest, treatment of symptoms).
- There are no CDC recommendations for the antibiotic treatment of patients with XDR shigellosis. Intravenous carbapenems and colistin may be effective for hospitalized patients with severe infections or complications³. Consult an infectious disease specialist to assist in management of patients with XDR shigellosis.
- Healthcare professionals should consult DC Health for guidance on when patients may return to childcare, school, or work.
- For more information regarding prevention and clinical management of shigellosis, please see the CDC website [cdc.gov/shigella/index.html](https://www.cdc.gov/shigella/index.html).

REPORTING REQUIREMENTS

All confirmed and probable cases of shigellosis are reportable to DC Health within 24 hours. Please report cases to DC Health by submitting a **Notifiable Disease and Condition Case Report Form** online using the DC Reporting and Surveillance Center (DCRC), which can be found on our Infectious Diseases website: dchealth.dc.gov/node/143092.

REFERENCES

1. [NARMS Now \(cdc.gov\)](https://www.cdc.gov/narms)

2. Mughal, N., "Gastrointestinal Infections", Comprehensive Review of Infectious Diseases, edited by Spec A., Escota G. et al, Elsevier, 2020, p 273.
3. [Outbreak of sexually transmitted, extensively drug-resistant *Shigella sonnei* in the UK, 2021–22: a descriptive epidemiological study - The Lancet Infectious Diseases](#)

Please visit the DC Health - Health Notices website (dchealth.dc.gov/page/health-notice) regularly for the most current information.

Please contact the Health Division of Epidemiology-Disease Surveillance and Investigation at:
Phone: 202-442-9371/442-8141 (8:15 am-4:45 pm) | 844-493-2652 (after-hours calls) | Fax: 202-442-8060 | Email: doh.epi@dc.gov