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Cases of *Shigella* in Ventura County homeless populations

This health advisory updates local health providers about recent cases of *Shigella* in Ventura County and provides some recommendations regarding the management and reporting of *Shigella* infections.

From August 2018 to the present time, 7 cases of shigellosis have been identified in Ventura County. Of these 5 were confirmed to be persons experiencing homelessness (PEH), and 4 were confirmed to be *Shigella flexneri*. *S. flexneri* is more likely to cause bloody diarrhea, but less likely to cause severe dehydration.

Key Points

- Most shigellosis cases are self-limited and do not require antibiotic treatment.
- When treatment is needed for shigellosis, it should be guided by culture with antibiotic susceptibility testing (AST).
- Men who have sex with men (MSM), persons experiencing homelessness (PEH), and immunocompromised individuals are at increased risk for shigellosis, especially for illness caused by multidrug-resistant *Shigella*. These individuals are more likely to require antibiotic treatment due to increased severity of disease.
- PEH with shigellosis should not be released from medical care without shelter and access to an unshared restroom.
- All shigellosis, including any suspected drug-resistant or antibiotic failure cases, should be reported within one working day to the Ventura County Communicable Disease Office.
- Shigellosis is highly contagious, and transmission occurs via direct person-to-person spread or contaminated food and water.

Recommendations for Providers

- Consider shigellosis during the work-up of patients who present with diarrhea or bloody diarrhea, especially PEH, MSM and people who are immune compromised.
 - Obtain a stool culture with antimicrobial susceptibility testing (AST) and request ciprofloxacin AST that includes dilutions of 0.12 µg/mL or lower.
 - If a polymerase chain reaction (PCR) test is ordered, order the culture and AST also. PCR does not replace culture, because an isolate is needed for AST and serotyping. If a PCR test is positive for *Shigella*, laboratories must attempt to obtain a bacterial culture isolate for submission to the Ventura County Public Health Laboratory (VCPHL) per California Code of Regulations Title 17, Section 2505, subsection (m)(3). VCPHL does not perform AST.
 - Isolates should be delivered to VCPHL during working hours (Monday through Friday) 0700-1700 Any questions please call 805 981-5131.
- Await AST results when possible before treating shigellosis.
 - Antimicrobial treatment may be warranted based on severe or prolonged illness, hospitalization, and underlying risk factors such as immune-compromising conditions including HIV/AIDS or treatment with immunosuppressive drugs. Clinicians should use AST results to guide therapy and consider consultation with an infectious disease specialist.
 - If the ciprofloxacin MICs are in the 0.12–1.0 µg/mL range, avoid prescribing fluoroquinolones.

Communicable Disease Office

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- Obtain follow-up stool cultures and AST in shigellosis patients who have continued or worsening symptoms despite antibiotic therapy.
- Advise MSM to avoid sex for at least two weeks after recovery from illness.
 - When having sex again, MSM should refrain from oral-anal contact or use barriers, such as condoms or dental dams. Washing genitals, anus, sex toys, and hands before and after sexual activity may reduce risk.
- Report shigellosis within one working day to the Communicable Disease Office
 - Healthcare providers should report clinically suspect cases and not wait for culture results.
 - Laboratories should report within one working day any positive stool or blood cultures, or PCR tests for *Shigella* species. Forward culture isolates to VCPHL. AST results should be reported when available.
 - PEH with shigellosis should not be released from medical care without shelter and access to an unshared restroom.
 - A confidential morbidity report must also be sent to the CDO.

Symptoms

Shigellosis typically causes watery or bloody diarrhea, abdominal pain, tenesmus, fever, and malaise. Bloody diarrhea is more common with *S. flexneri* than other species of *Shigella*. Stools tend to be of small volume, and severe dehydration is rare. Shigellosis is highly contagious (as few as 10 to 100 organisms can cause infection), and transmission occurs via contaminated food and water or direct person-to-person spread. *Shigella* species are present in the stool of infected persons while they have diarrhea and for up to a few weeks after diarrhea has resolved. Shigellosis is usually self-limited in immunocompetent hosts, although complications may occur, such as post-infectious arthritis, bloodstream infections, seizures, and hemolytic-uremic syndrome.

Resources

Detailed information for clinicians on shigellosis, including shigellosis among MSM, may be found at the CDC and CDPH shigellosis websites. <https://www.cdc.gov/shigella/audience-medical-professionals.html>
<https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Shigellosis.aspx>

The Los Angeles County Public Health Department has developed information handouts and palm cards with shigellosis prevention messages in English and Spanish tailored to MSM, available here.
<http://publichealth.lacounty.gov/acd/Diseases/Shigellosis.htm>

For general guidelines on the management of shigellosis, see the Infectious Diseases Society of America Practice Guidelines for the Management of Infectious Diarrhea.
http://www.uphs.upenn.edu/bugdrug/antibiotic_manual/idsa%20infectious%20diarrhea%20dx%20and%20management%20guidelines%202017.pdf

For information about the management of shigellosis in HIV-infected persons, see the Guidelines for the Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents.
<https://aidsinfo.nih.gov/guidelines/html/4/adult-and-adolescent-oi-prevention-and-treatment-guidelines/328/bacterial-enteric>

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