



To: CAHAN San Diego Participants
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 From: Epidemiology Program

Update #2: Shigellosis among Men in Southern California

This health advisory updates local healthcare providers about shigellosis among men in Southern California, predominantly men who have sex with men (MSM). Updated recommendations and resources on shigellosis are provided.

Situation

The Centers for Disease Control and Prevention (CDC) issued a health advisory on April 18, 2017 entitled "[Recommendations for Diagnosing and Managing *Shigella* Strains with Possible Reduced Susceptibility to Ciprofloxacin.](#)" The advisory describes the emergence of *Shigella* strains with an elevated minimum inhibitory concentration (MIC) to ciprofloxacin. The *Shigella* strains documented in this advisory included a case cluster of *S. flexneri* serotype 7 in Southern California in MSM that was previously described in two San Diego CAHAN alerts. Although the *S. flexneri* serotype 7 in these cases was previously reported as susceptible to ciprofloxacin, CDC has identified a quinolone resistance gene in this strain that results in an elevated MIC (0.12 µg/mL) to ciprofloxacin. According to CDC, this can make treatment less effective and may increase the risk of a more severe clinical course, as well as enhance the risk of secondary cases due to prolonged shedding.

Any patient with shigellosis could carry a strain harboring quinolone resistance with a ciprofloxacin MIC in the range of concern (0.12-1.0 µg/mL). MSM are at higher risk than the general population for shigellosis, and they are more likely to get infected with *Shigella* that is resistant to commonly used antibiotics, especially trimethoprim/sulfamethoxazole and azithromycin. Culture with antibiotic susceptibility testing should be included as a routine part of the evaluation of individuals with possible shigellosis.

The table below summarizes all *Shigella* species cases reported in San Diego County residents from 2015 to date in 2017. Reported cases of shigellosis increased by 26% from 2015 to 2016, and the proportions of those who self-identified as MSM have increased from 2015 to 2016 and from 2016 to 2017 year-to-date.

Table 1. *Shigella* case reports by species, sex, and MSM status, San Diego County, 2015-2017 (Year-to-date)

<i>Shigella</i> species	2015			2016			2017 (year-to-date)		
	Total	Male	MSM (%)	Total	Male	MSM (%)	Total	Male	MSM (%)
<i>S. boydii</i>	1	1	0 (0%)	1	0	0 (0%)	1	1	0 (0%)
<i>S. dysenteriae</i>	0	0	0 (0%)	1	1	0 (0%)	1	1	0 (0%)
<i>S. flexneri</i>	57	49	12 (21%)	50	38	11 (22%)	16	16	5 (31%)
<i>S. sonnei</i>	109	42	8 (7%)	156	100	21 (14%)	26	17	6 (23%)
Unknown	17	7	3 (18%)	32	22	3 (10%)	29	18	7 (24%)
Total	184	99	23 (13%)	240	161	35 (15%)	73	53	18 (25%)

Background

About 14,000 cases of shigellosis are reported each year in the United States, but CDC estimates the actual number to be about 20 times greater because mild cases are often not diagnosed or reported. 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. Illness is usually self-limiting in immunocompetent hosts, although complications such as post-infectious arthritis, bloodstream infections, seizures, and hemolytic-uremic syndrome may occur.

Shigella is highly contagious (i.e., only 10 to 100 organisms are needed to result in 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.

Recommendations for Providers and Hospitals

1. **Obtain a sexual history in patients who present with apparent infectious diarrhea and offer HIV testing to sexually active individuals who are not aware of their HIV status.**
2. **Consider shigellosis during the work-up of MSM who present with diarrhea, particularly bloody diarrhea.**
 - 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 San Diego Public Health Laboratory per [California Code of Regulations Title 17, Section 2505](#), subsection (m)(3).
3. **Await AST results before treating shigellosis.**
 - If the ciprofloxacin MICs are in the 0.12–1.0 µg/mL range, avoid prescribing fluoroquinolones.
 - If antimicrobial treatment is warranted based on severe or prolonged illness, hospitalization, underlying risk factors such as immune-compromising conditions including HIV/AIDS or treatment with immunosuppressive drugs, clinicians should use AST results to guide therapy.
 - Obtain follow-up stool cultures and AST in shigellosis patients who have continued or worsening symptoms despite antibiotic therapy.
4. **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 also may reduce risk.
5. **Report suspected shigellosis within one working day to the [Epidemiology Program](#).**
 - 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. AST results should be reported when available.
 - The Epidemiology Program can be contacted by calling 619-692-8499 during normal business hours (Monday-Friday 8 AM-5 PM), or 858-565-5255 after hours, during weekends, and on County-observed holidays. A [confidential morbidity report](#) may also be faxed to 858-715-6458.

Resources

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](#).

Detailed information for clinicians on shigellosis, including shigellosis among MSM, may be found at the [CDC](#) and [CDPH](#) shigellosis websites.

For general guidelines on the management of shigellosis, see the [Infectious Diseases Society of America Practice Guidelines for the Management of Infectious Diarrhea](#).

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](#).

Thank you for your continued participation.

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