CAHAN San Diego
California HEALTH ALERT NETWORK

To: CAHAN San Diego Participants
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UPDATE: SHIGELLOSIS AMONG MEN IN SOUTHERN CALIFORNIA

This health advisory updates local healthcare providers about *Shigella flexneri* infections among men in Southern California, predominantly men who have sex with men (MSM). Reports of all types of shigellosis have increased in San Diego County and recommendations and resources on shigellosis for providers and hospitals are provided.

Situation

The California Department of Public Health (CDPH) identified a cluster of 34 *S. flexneri* serotype 7 cases in Southern California with illness onset between April and October 2016. Thirteen cases required hospitalization, and one patient died. All patients are men, with 97% self-identified as MSM. Of those with known HIV status, 80% were positive. Very few of the cases had any recent domestic or international travel. Six isolates in this cluster were tested by the National Antimicrobial Resistance Monitoring System for Enteric Bacteria: all were resistant to trimethoprim/sulfamethoxazole and azithromycin; five were resistant to amoxicillin; and all were susceptible to ciprofloxacin.

Two San Diego residents were in this *S. flexneri* serotype 7 cluster, and an investigation of an out-of-state resident with *S. flexneri* serotype 7 indicates that the individual contracted the infection while visiting San Diego. All three of these individuals self-identified as MSM and two were HIV-positive. The table below summarizes all *Shigella* species cases reported in San Diego County residents in calendar years 2015 and 2016. Reported cases of shigellosis increased by 26% from 2015 to 2016 and the proportion of those who self-identified as MSM also increased.

Table 1. *Shigella* case reports by species, sex, MSM status, San Diego County, 2015, 2016

Shigella species	2015			2016		
	Total	Male	MSM (% of total)	Total	Male	MSM (% of total)
S. boydii	1	1	0 (0%)	1	0	0 (0%)
S. dysenteriae	0	0	0 (0%)	1	1	0 (0%)
S. flexneri	57	49	12 (21%)	50	37	11 (22%)
S. sonnei	109	42	8 (7%)	149	93	21 (14%)
Unknown	17	7	3 (18%)	31	21	3 (10%)
Total	184	99	23 (13%)	232	152	35 (15%)

Background

About 14,000 cases of shigellosis are reported each year in the United States, but the Centers for Disease Control and Prevention (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-limited in immunocompetent hosts, although complications such as post-infectious arthritis, bloodstream infections, seizures, and hemolytic-uremic syndrome may occur.

Antibiotic treatment decreases the duration of symptoms and also may decrease the duration of shedding and onward transmission. Due to widespread resistance to traditional first-line medications, such as ampicillin and trimethoprim-sulfamethoxazole, healthcare providers commonly use ciprofloxacin and azithromycin to treat *Shigella* infections. *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.

MSM are more likely to develop shigellosis than the general adult population, and outbreaks of shigellosis have been reported in California, as well as other states and foreign countries. MSM also are more likely to get infected with *Shigella* that is resistant to commonly used antibiotics. This was highlighted in a June 2015 health advisory from the

CDC about ciprofloxacin- and azithromycin-nonsusceptible shigellosis mostly occurring in MSM. Recent outbreak reports from New York City and Taiwan reinforce the finding of an increased risk of resistant shigellosis in MSM.

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 drug susceptibility testing (DST).
   - Consider obtaining a polymerase chain reaction (PCR) test, if available, for *Shigella*, in addition to culture, since results may be available more quickly and facilitate therapy.
   - PCR does not replace culture, as an isolate is needed for DST 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. **Treat *Shigella* infection among MSM to shorten illness duration and to reduce shedding and risk of transmission.**
   - Empiric therapy may be warranted among MSM with bloody diarrhea and more severe illness, or those who are immunocompromised, pending culture and susceptibility results.
   - Isolates from this cluster and most *Shigella* species are susceptible to ciprofloxacin.
   - The recommended dose of ciprofloxacin is 500 mg orally twice daily or 750 mg orally once daily for three days. Longer duration of therapy (i.e., 7 to 10 days) is recommended for HIV-infected individuals with shigellosis.

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. DST 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 recently 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 and for 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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