CAHAN San Diego
California HEALTH ALERT NETWORK

To: CAHAN San Diego Participants
Date: September 20, 2016

Cluster of *Shigella flexneri* Infections among Men in Southern California

This health advisory informs local healthcare providers about a recent cluster of *Shigella flexneri* infections among men, predominantly men who have sex with men (MSM), in Southern California counties. Information on shigellosis in San Diego and recommendations for providers and hospitals are provided.

Situation

The California Department of Public Health (CDPH) has identified a cluster of 22 *S. flexneri* cases in Southern California with illness onset between May and September 2016 that involved an uncommon strain (i.e., serotype 7, also known as 1c or provisional 88-893). Eleven cases required hospitalization, and two patients have died. All patients are men, and ages ranged between 24 and 67 years old (median 38 years old). At least 13 cases are MSM and some are homeless or transiently housed. Fourteen patients are immunocompromised. Common symptoms include fever, diarrhea, and abdominal pain; seven of 18 patients for whom data were available indicated that the diarrhea was bloody. Very few of the cases had any recent domestic or international travel. Of the 14 cases with antimicrobial susceptibility data, all showed resistance to ampicillin and trimethoprim/sulfamethoxazole, and all were susceptible to ciprofloxacin.

Shigella species are not routinely serotyped in San Diego County and no local residents are in the identified *S. flexneri* serotype 7 cluster. However, an investigation of an out-of-state resident MSM with *S. flexneri* serotype 7 indicates that he contracted his infection while visiting San Diego. So far in 2016, 113 *Shigella* species cases have been reported in San Diego County residents, which is higher than the 89 cases reported at this time in 2015. Case reports tend to increase later in the calendar year. The proportions of *S. flexneri* and *S. sonnei* cases self-identified as MSM are also higher in 2016 compared to 2015. The table below summarizes *Shigella* cases reported in San Diego County residents in calendar year 2015 and 2016 year-to-date.

Table 1. *Shigella* case reports by species, sex, MSM status, San Diego County, 2015, 2016 (year to date)

Shigella species	2015			2016 (year to date)		
	Total	Male	MSM (% of total)	Total	Male	MSM (% of total)
S. boydii	1	1	0 (0%)	0	0	0 (0%)
S. dysenteriae	0	0	0 (0%)	1	1	0 (0%)
S. flexneri	57	49	11 (19%)	29	25	10 (34%)
S. sonnei	109	42	7 (6%)	68	47	16 (23%)
Unknown	17	7	3 (18%)	15	12	2 (13%)
Total	184	99	21 (11%)	113	85	28 (25%)

Background

Shigellosis is a common bacterial infection of the lower gastrointestinal tract that 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 Centers for Disease Control and Prevention (CDC) about ciprofloxacin- and azithromycin-nonsusceptible shigellosis mostly occurring 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 if the diarrhea is bloody.

- 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 the duration of illness 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

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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