
NEW MEXICO HEALTH ALERT NETWORK (HAN) ALERT**Shigellosis in Daycares and Schools in Lea, Eddy, and Chaves Counties**

March 17, 2017

Shigellosis Cases

There is currently an outbreak of *Shigella sonnei* infection in Lea, Eddy, and Chaves counties. New Mexico Department of Health (NMDOH) is also alerting healthcare providers in surrounding counties where people may seek healthcare. During this outbreak, which started in May 2016, there have been 226 laboratory confirmed or epidemiologically linked cases, mostly children associated with child care centers, schools, and their family members.

Presentation

Shigellosis is a gram-negative bacillus in the family *Enterobacteriaceae* that causes an acute bacterial illness characterized by loose stools accompanied by fever, nausea, and sometimes toxemia, vomiting, cramps, and tenesmus. Stools often contain blood and mucus. The incubation period varies from 1 to 7 days, but is typically 1-3 days. Possible complications from *Shigella* infections include post-infectious arthritis, blood stream infections (although rare), seizures, and hemolytic-uremic syndrome (HUS). HUS occurs when bacteria enter the digestive system and produce a toxin that destroys red blood cells. Patients with HUS often have bloody diarrhea. HUS is only associated with Shiga-toxin producing *Shigella*, which is most commonly *Shigella dysenteriae*.

Diagnosis

Isolation of *Shigella* organisms from feces or rectal swab specimens containing feces is diagnostic and sensitivity is improved by testing stool as soon as possible after it is passed. Multiplex polymerase chain reaction (PCR) platforms for detection of multiple bacterial, viral, and parasitic pathogens including *Shigella* are commercially available, but no rapid diagnostic tests have been licensed.

Special Populations

Infections can occur among persons of all ages. Children 5 years and younger in child care settings and their caregivers, people living in crowded conditions, and men who have sex with men are at increased risk of infection.

Infection Control

The primary mode of transmission is fecal-oral, but transmission can also occur via contact with fomites, ingestion of contaminated food or water, or sexual contact. Houseflies may also be vectors. An infective dose as low as 10-100 organisms can result in infection. Spread from an infected person is direct by physical contact or indirect by contaminated food, water, or fomites. Transmission via drinking or recreational water may also occur as the result of direct fecal contamination. The period

EPIDEMIOLOGY AND RESPONSE

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of communicability continues during the acute infection and until the infectious agent is no longer present in feces, which can be up to 4 weeks after illness.

Antibiotic Resistance

Resistance to traditional first-line drugs such as ampicillin and trimethoprim-sulfamethoxazole is common. Ciprofloxacin and azithromycin are now used to treat infections; however, strains of *Shigella* resistant to these antibiotics are becoming more common in the United States. Infections caused by antibiotic-resistant *Shigella* strains can last longer than infections caused by antibiotic-susceptible bacteria.

The resistance pattern for this outbreak appears to follow the current trend in the United States. Susceptibility profiles have exhibited consistent resistance to trimethoprim-sulfamethoxazole. When testing for *Shigella*, request antibiotic sensitivities and treat based on the susceptibility profile.

Reporting

Suspect *Shigella* cases should be reported to the New Mexico Department of Health at 505-827-0006. Do not wait until laboratory results are available before reporting suspect cases.

Recommendations

1. Stool specimens from children and household contacts with diarrhea presenting to a healthcare facility should be collected and tested. When a case of shigellosis occurs among a child care center attendee or staff member, stool specimens from other symptomatic attendees and staff members should be collected and tested. Stool specimens from household contacts who have diarrhea should be collected and tested as well.
2. Anyone who has tested positive for *Shigella* in their stool should be given antibiotics to prevent the spread of this disease during this outbreak.
3. Infected persons should be excluded from daycare until the diarrhea has resolved and there are two consecutive negative lab samples taken at least 24 hours apart, at least 48 hours after completing antibiotics.
4. Per child care licensing regulations, a daycare is required to notify parents and/or guardians in writing of a case of *Shigella* at their daycare center (Subsection C of 8.16.2.21 NMAC).
5. Report suspect *Shigella* cases to the New Mexico Department of Health at 505-827-0006. Do not wait until laboratory results are available before reporting suspect cases.

Additional information on *Shigella* is available at: <http://www.cdc.gov/shigella/index.html>