

## Health Advisory: Typhoid Fever in Ramsey County

Minnesota Department of Health Tue Jun 18 13:00 CDT 2019

### Action Steps

**Local and tribal health departments:** Please forward to hospitals, clinics, emergency departments, urgent care centers, and convenience clinics in **St. Paul-Ramsey** county only.

**Hospitals and clinics:** Please distribute to urgent care and primary care providers, pediatricians, infectious disease specialists, gastroenterologists, emergency medicine providers.

### Health care providers:

- Consider enteric fever (e.g., typhoid fever) among patients presenting with unexplained fevers, especially persistent fevers lasting >3 days or fevers in combination with gastrointestinal symptoms (abdominal pain, constipation, or diarrhea) even in the absence of recent travel to an endemic area of the world.
- Obtain blood cultures if enteric fever is suspected and consider cultures of other specimens.
- Report cases of probable or confirmed enteric fever within 24 hours to MDH at 651-201-5414 or 1-877-676-5414 and call MDH for questions about testing for enteric fever. You can contact Dave Boxrud (651-201-5257, [dave.boxrud@state.mn.us](mailto:dave.boxrud@state.mn.us)) or [Health.PHL-Enterics@state.mn.us](mailto:Health.PHL-Enterics@state.mn.us) for testing questions

### Background

On June 17, the Minnesota Department of Health (MDH) identified an outbreak of enteric fever caused by *Salmonella enterica* serotype Typhi in Ramsey County. Two patients have culture-confirmed infections and a third patient had symptoms compatible with enteric fever. Consumption of foods served at a local event is a suspected source of this outbreak. The patients' ages range from 14 to 18 years and illness onset dates range from May 30 to June 1.

Enteric fever is a bacteremic illness caused by ingestion of *Salmonella* Typhi (typhoid fever) or *Salmonella* serotype Paratyphi (paratyphoid fever) and is transmitted through a fecal-oral route. While most cases reported in the United States occur among travelers to endemic areas of the world, transmission in the United States still occurs, commonly through food prepared by symptomatic or asymptomatic persons shedding the organisms in their stool.

Symptoms of enteric fever can vary widely, but the most common symptoms are fever, chills, and abdominal pain. Other symptoms can include headache, malaise, myalgias, and constipation or diarrhea. A transient, maculopapular rash of rose-colored spots may be present on the trunk. Confusion, delirium, and intestinal perforation may occur in severe cases, typically after 2–3 weeks of illness. The incubation period for typhoid fever is typically 6–30 days.

Compatible symptoms associated with recent travel to an endemic area should trigger suspicion for enteric fever. However, because of this outbreak, clinicians should also consider enteric fever in patients with compatible symptoms not explained by recent travel.

Whenever enteric fever is suspected, multiple sets of aerobic blood cultures should be collected simultaneously and before administration of antimicrobial agents. For adults, two to three 20-mL blood cultures are adequate. Lower volumes may be sufficient for detection in infants and children. Culture of stool, urine, or duodenal contents can also help make the diagnosis. Although not widely used, bone marrow cultures are the most sensitive diagnostic method and can remain positive despite antibiotic therapy. All *Salmonella* Typhi and Paratyphi isolates should undergo antimicrobial drug susceptibility

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testing. Serologic tests, such as the Widal test, are not recommended because of the high rate of false positives.

Patients suspected of having enteric fever should be treated with broad spectrum antibiotics. The antimicrobial therapy should be subsequently narrowed based on susceptibility testing results.

All cases of salmonellosis, including enteric fever, should be reported to MDH.

### **Additional resources:**

- [Reporting Salmonellosis, including typhoid \(\*Salmonella\* spp.\)](#)
- [CDC Typhoid Fever and Paratyphoid Fever](#)

A copy of this HAN is available at <https://www.health.state.mn.us/communities/ep/han/index.html>

The content of this message is intended for public health and health care personnel and response partners who have a need to know the information to perform their duties.