

December 10, 2024

## Recommendations for Testing and Reporting STEC and HUS

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### Summary

The Indiana Department of Health (IDOH) is working with the Centers for Disease Control and Prevention (CDC) and local health departments to investigate an increase in Shiga toxin-producing *E. coli* (STEC). Multiple states have had cases that are linked by whole genome sequencing; however, the sources of these illnesses have not been identified. Indiana has cases related to this cluster to date.

### Recommendations

- Healthcare providers should consider STEC in differential diagnoses for patients with compatible symptoms and collect stool specimens for testing for STEC or *E. coli* O157:H7, especially in cases of bloody diarrhea.
- Report **all STEC** cases to local health departments or via [NBS](#), the IDOH communicable disease reporting system.
- **Post-diarrheal HUS** should be **immediately** reported per the Indiana [communicable disease rule](#), 410 IAC 1-2.3-47. Providers should report cases upon suspicion to the local health jurisdiction of the patient or the IDOH enteric team at 317-233-7125.
- Laboratories are required to submit all isolates of STEC/*E. coli* O157 to the IDOH Laboratory. Call the IDOH Laboratory at 317-921-5531 for assistance with submitting isolates.

### Clinical Presentation

- Symptoms of STEC infection can include:
  - Severe abdominal cramps
  - Diarrhea (often bloody)
  - Vomiting
- Incubation period: Typically 3-4 days (range: 2-10 days).
- About 5-10% of STEC cases may develop hemolytic uremic syndrome (HUS), with a higher risk (15%) in children, especially those younger than 5 years old.
- Signs and symptoms of HUS can include:
  - Fatigue, paleness, decreased urination frequency, abdominal pain, and vomiting
  - Anemia, thrombocytopenia, and kidney injury
  - HUS, especially in adults, may mimic thrombotic thrombocytopenic purpura (TTP), in which blood clots form in small blood vessels throughout the body. TTP can lead to strokes, brain damage and death.

### Diagnosis/Treatment

- Testing for STEC is crucial to prevent delays in care and to reduce the risk of HUS.
- Rectal swabbing may be an alternative for faster results in emergent care settings. If this is done a follow-up culture specimen is recommended for additional sequencing.

- If STEC is detected, obtain a complete blood count, serum electrolytes, blood urea nitrogen, and creatinine to screen for HUS.
- Supportive care is the primary treatment for STEC infections.
  - Rehydration with intravenous fluids, as clinically indicated, is important and early use may decrease the risk of renal failure and/or HUS.
- Antibiotic treatment is not recommended for STEC infections, as it may increase the risk of developing HUS
- Consider consultation with a nephrologist if HUS is suspected.
- Consult the CDC [information for clinicians](#).

### **Prevention**

Awareness of symptoms and prompt testing can help prevent complications associated with STEC infections.

- Continue to encourage good hygiene practices with your patients to reduce the risk of E. coli infections.
- Stay informed about local health alerts and outbreaks.
- IDOH and CDC will continue to monitor the situation and will provide information about the potential source once elucidated.

