

## **E. coli Outbreak: Information for Community Providers**

September 7, 2023

### **Key Messages**

- A multi-site outbreak of Shiga toxin producing Escherichia coli (STEC) has been declared in 11 daycares across Calgary Zone as of September 2, 2023. For additional information and updates please see: [www.ahs.ca/ecoli](http://www.ahs.ca/ecoli)
- Symptomatic patients linked to the outbreak need stool testing. Please indicate **EI 2023-918** on any stool samples ordered for this outbreak.
- Management of symptomatic cases is centred around adequate hydration and monitoring for early identification and treatment of hemolytic anemic syndrome (HUS) with referral to ED/UC when clinically indicated.
- HUS, if it occurs, typically evolves 5-10 days after the onset of diarrhea.
- Affected individuals need daily laboratory testing (blood and urine) to monitor for evidence of evolving microangiopathy every 24 hours until they are out of the HUS risk window which occurs when all of the following criteria are met:
  - 1) >5 days since diarrhea onset
  - 2) Diarrhea has resolved
  - 3) Platelet count has increased >5% since preceding test
- If you can't access timely bloodwork for your patient (q24-48 hours for STEC follow-up), please direct your patient to Alberta Children's Hospital Emergency Department.
- Additional clinical guidance: <https://www.albertahealthservices.ca/assets/info/hp/diseases/if-hp-dis-ecoli-stec.pdf>
- Antibiotics should NOT be routinely provided to patients with STEC diarrhea. Nephrotoxic medications (e.g., NSAIDs) and medications that reduce gut motility should be avoided.
- We recommend educating the patient on proper hand hygiene and staying at home if a patient is either symptomatic or an asymptomatic confirmed case.
- Clinical assessment is needed for all potential cases linked to this outbreak. It is important to regularly follow these patients to determine need for further evaluation and investigations in emergency departments or urgent care centres (ED/UCC). Please refer to the guidance link above for further information.

### **Background**

A multi-site outbreak of Shiga toxin producing Escherichia coli (STEC) has been declared by Alberta Health Services in Calgary Zone as of September 2, 2023. The following sites, all located in Calgary and associated with a central kitchen, have been issued a closure order:

- Fueling Brains Braeside
- Fueling Brains West 85th
- Fueling Brains New Brighton
- Fueling Brains Centennial
- Fueling Brains Bridgeland
- Fueling Brains McKnight
- Brainer Academy
- Kidz Space
- Little Oak Early Education (formerly Mangrove)
- Almond Branch School
- Vik Academy in Okotoks

Parents of children attending these sites have been notified of this outbreak and provided health information, including symptoms to monitor. At this time, parents have been advised to call Health Link with any questions, and for children with severe symptoms (e.g., bloody diarrhea), to be assessed by a physician at an urgent care centre or emergency department.

This outbreak is associated with *E. coli* that has the Stx1 and Stx2 genes (STEC), which increase risk of complications such as hemolytic uremic syndrome (HUS).

Symptoms usually start one to 10 days after eating food contaminated with the *E. coli* bacteria. The majority of individuals who get sick from *E. coli* generally improve on their own and without specific treatment within 10 days, but some may develop more severe complications. Children, the elderly and the immunocompromised are at greater risk of complications from this strain of *E. coli*.

### **Assessment and Testing**

Please see this link for additional clinical background and guidance:

<https://www.albertahealthservices.ca/assets/info/hp/diseases/if-hp-dis-ecoli-stec.pdf>

Symptomatic patients linked to this outbreak (including parents and siblings of daycare attendees) need to be clinically assessed, and laboratory investigations including a stool sample need to be done. Please indicate EI 2023-918 on the stool sample so tracking and public health follow-up can occur. Symptomatic individuals or those who have tested positive should be instructed to avoid attendance at daycare or school, and adults who work handling food or caring for others should stay home from work. Individuals who test positive will receive follow-up from AHS Public Health to provide further instructions on the duration of exclusion from these settings. Some individuals may require one or two negative tests to end their exclusion.

### **Treatment**

Management of symptomatic cases are centred around ensuring adequate hydration and referral to ED/UCC to ensure early identification and treatment of HUS.

Antibiotics should not be routinely provided to patients with STEC diarrhea, however they should also not be withheld when clinically indicated for other reasons.

Nephrotoxic medications such as NSAIDs, as well as medications that reduce gut motility, should be avoided.

### **Prevention**

Education around the importance of proper hand hygiene, remaining home if the patient is either ill or an asymptomatic confirmed case, and encouraging oral fluid replacement are ways of preventing both transmission and progression to potential complications.

If you have any further questions, please contact: [PHC@AHS.ca](mailto:PHC@AHS.ca).