

Health **FAX**

Enhanced Surveillance: Non 0157 Shiga Toxin Producing *E coli* (STEC) O104

Attention: **All Physicians, Walk-In Clinics, Emergency Departments, Infection
Control Practitioners**

Date: June 7, 2011

The Simcoe Muskoka District Health Unit would like to provide important clinical, epidemiological and laboratory testing information on the ongoing outbreak of *E coli* O104:H4 originating in Germany.

Epidemiology

- 1683 cases of enterhemorrhagic *E coli* (EHEC) and 642 cases of hemolytic uremic syndrome (HUS) in Germany.
- 12 other countries in Europe have also reported 73 cases of EHEC and 31 HUS. **All except one of the above HUS and EHEC cases had travelled to or from Germany during the incubation period for infection.**
- One suspect travel case has been reported in Canada to date.

The SMDHU is asking all healthcare providers to be on alert for cases presenting with symptoms of non 0157 (STEC) 0104 who are recent travelers or contacts of symptomatic travelers from Europe, particularly with a travel history to Germany presenting with bloody or non bloody acute diarrhea or suspected/confirmed hemolytic uremic syndrome (HUS).

Clinical Presentation

Symptoms of non 0157 Shiga Toxin Producing *E coli* (STEC) 0104 include abdominal cramps and diarrhea, which may lead to bloody diarrhea and Hemolytic Uremic Syndrome (HUS). HUS is a severe and sometimes fatal complication and characterised by acute kidney failure and anaemia. Symptoms usually develop within 2 to 10 days typically (3-4 days) following exposure. *E coli* infection is transmitted from person to person via the fecal-oral route. There is no vaccine available for travellers to prevent *E coli* infection.

Laboratory Testing

Routine stool cultures performed at a local hospital or private laboratory will not detect non-0157 STEC, including *E Coli* 0104. If non-1057 STEC infection is suspected, the stool must be sent to the Ontario Agency for Health Protection and Promotion (OAHPP) public health laboratories. Please look at the Lababstract (next 2 pages) below for the documentation and specimen requirements to submit a sample for testing.

Non-0157 STEC infections and HUS are reportable disease. If you suspect a case or have questions regarding proper specimen collection, please contact the Simcoe Muskoka District Health Unit Communicable Disease Team at 705-721-7520 or 1-877-721-7520 Ext. 8809.

June 3, 2011

Non O157 Shiga Toxin Producing *E coli* (STEC) Laboratory Testing Guidelines (includes *E coli* O104)

To Health Care Providers:

Due to the ongoing outbreak of *E coli* O104:H4 in Germany, and cases reported in 9 other countries in Europe and the US, we are providing guidelines for testing should a case of *E coli* O104 be suspected in a returning traveler.

Who to test:

Recent travelers or contacts of symptomatic travelers from Europe presenting with bloody or non bloody acute diarrhea or suspected/confirmed hemolytic uremic syndrome (HUS), should have stools submitted for testing for STEC/ *E coli* O104.

There is no role for testing asymptomatic persons.

What tests are available:

Stool ELISA and PCR to detect shiga toxin available at Ontario Agency for Health Protection and Promotion (OAHPP) public health laboratories - Toronto (turn around 48-72 hours after receipt of specimen at OAHPP PHL-Toronto)

- If shiga toxin positive, confirmation testing for STEC may take up to 6 days. Please consider shiga toxin positive results in a person returning from Europe with the appropriate symptoms as a presumptive positive

Please note:

Routine stool cultures performed at a local hospital or private laboratory will not detect non-O157 STEC, including *E coli* O104. If non-O157 STEC infection is suspected, it must be sent to the OAHPP public health labs for specialized testing.

If infection with non-O157 STEC is suspected, additional laboratory testing including serum creatinine, electrolytes, and complete blood count to assess for dehydration and potential HUS should be performed. Consider also submitting stool for routine bacterial culture and sensitivity and ova and parasites to investigate alternative causes where clinically appropriate. These tests are available through your local laboratory (hospital/community laboratory)

Non O157 Shiga Toxin Producing E coli (STEC) Laboratory Testing Guidelines (Continued)

Tests not available:

There are no serological tests available for STEC, including *E coli* O104.

How to collect and transport test:

Stool samples should be collected in usual stool culture media (Cary-Blair), and kept refrigerated if possible.

Required information on OAHPP PHL requisition:

- Explicitly request for STEC direct testing, and indicate if HUS present /suspected
- Symptoms
- Place and date of travel
- Standard requirement for all laboratory submissions (including two personal health identifiers on requisition and sample, submitter information, and date of collection)
- The OAHPP PHL laboratory requisition is available at <http://www.oahpp.ca/resources/requisitions.html>

Where to send test:

Send to closest OAHPP public health laboratory with completed OAHPP public health laboratory requisition (see above)

Public health reporting:

Non-O157 STEC infection and HUS are reportable diseases in Ontario. Please ensure that your local public health unit is aware of all individuals who are suspected or confirmed of having non-O157 STEC infection or HUS.

Further information:

For urgent requests, or if there are any questions about testing for non-O157 STEC, please contact

- OAHPP Customer Service Centre toll free at **1-877-604-4567** or **416-235-6556**
- After hours, please contact the duty officer # (for urgent issues only): **416-605-3113**