DHEC Health Advisory

Distributed via SC Health Alert Network
May 29, 2015
10352-DHA-05-29-2015-SH

Notice to Health Care Providers:
Shiga Toxin-producing E. coli cases

The South Carolina Department of Health and Environmental Control (DHEC) is requesting heightened surveillance for persons presenting with symptoms consistent with Shiga toxin-producing E. coli (STEC) (i.e., enterohemorrhagic E. coli), including diarrhea that is often bloody, hemolytic uremic syndrome (HUS) in children or thrombocytopenia purpura in adults.

Summary
DHEC is investigating a cluster of E. coli O157 infections and hemolytic uremic syndrome (HUS) cases that have been identified in the Upstate Region. Investigations are ongoing to determine the source (or sources) of infection.

Guidance for Clinicians

Symptoms
DHEC recommends a high index of suspicion for STEC infection for patients presenting with STEC symptoms.

Clinical syndromes associated with a Shiga toxin producing E. coli infection include:

- Gastroenteritis with diarrhea and abdominal cramps (fever and bloody stools may or may not be present), and/or
- Hemolytic uremic syndrome (HUS) with or without gastroenteritis, which typically develops a week after the onset of diarrhea.

Hemolytic uremic syndrome (HUS) is characterized by the triad of acute onset of microangiopathic hemolytic anemia, renal injury, and low platelet count. Most cases of HUS occur after an acute gastrointestinal illness (usually diarrheal).

Management
Management of STEC is typically non-specific supportive therapy, including hydration. The CDC recommends that antibiotics should not be used to treat this infection. There is no evidence that treatment with antibiotics is helpful, and taking antibiotics may increase the risk of HUS. Antidiarrheal agents like Imodium® may also increase that risk.
Testing

- All stools submitted for testing from patients with acute community-acquired diarrhea should be cultured for STEC O157:H7. These stools should be simultaneously assayed for non-O157 STEC with a test that detects the Shiga toxins or the genes encoding these toxins.

- Clinical laboratories should report and send *E. coli* O157:H7 isolates and Shiga toxin-positive samples to the SC DHEC Bureau of Laboratories (BOL) as soon as possible for additional characterization.

- Specimens or enrichment broths in which Shiga toxin or STEC are detected but from which O157:H7 STEC isolates are not recovered should be forwarded as soon as possible to the SC DHEC BOL so that non-O157:H7 STEC can be isolated.

- It is often difficult to isolate STEC in stool by the time a patient presents with HUS. Immunomagnetic separation (IMS) has been shown to increase recovery of STEC from HUS patients. For any patient with HUS without a culture-confirmed STEC infection, stool can be sent to the SC DHEC BOL for IMS or to the CDC (through the BOL). In addition, serum can be sent to CDC (through the BOL) for serologic testing of common STEC serogroups.

The benefits of adhering to the recommended testing strategy include early diagnosis, improved patient outcome, and detection of all STEC serotypes.

Reporting of Cases

Cases of bloody diarrhea or a clinical presentation consistent with STEC should be reported to state or local health departments via the phone numbers listed below. DHEC will arrange for collection of stool samples for testing, as appropriate.

Any laboratory confirmed acute case associated with Shiga toxin producing *E. coli* or *E. coli* identified as serogroup O157:H7 should be reported within 24 hours to DHEC, as per the current DHEC List of Reportable Conditions.

Resources for Additional Information

- CDC *E. coli* General Information ([http://www.cdc.gov/ecoli/general/index.html#what-are-shiga-toxin](http://www.cdc.gov/ecoli/general/index.html#what-are-shiga-toxin))


DHEC contact information for reportable diseases and reporting requirements

Reporting of confirmed and suspected Shiga Toxin-producing *E. coli* cases is consistent with South Carolina Law requiring the reporting of diseases and conditions to your state or local public health department. (State Law # 44-29-10 and Regulation # 61-20) as per the DHEC 2011 List of Reportable Conditions available at: [http://www.scdhec.gov/administration/library/CR-009025.pdf](http://www.scdhec.gov/administration/library/CR-009025.pdf)

Federal HIPAA legislation allows disclosure of protected health information, without consent of the individual, to public health authorities to collect and receive such information for the purpose of preventing or controlling disease. (HIPAA 45 CFR §164.512).
### Regional Public Health Offices – 2015

Mail or call reports to the Epidemiology Office in each Public Health Region.

#### LOW COUNTRY PUBLIC HEALTH REGION
- Berkeley, Charleston, Dorchester
  - 4050 Bridge View Drive, Suite 600
  - N. Charleston, SC 29405
  - Phone: (843) 953-0043
  - Fax: (843) 953-0051
  - Nights / Weekends: (843) 441-1091
- Beaufort, Colleton, Hampton, Jasper
  - 219 S. Lemacks Street
  - Walterboro, SC 29488
  - Phone: (843) 549-1516
  - Fax: (843) 549-6845
  - Nights / Weekends: (843) 441-1091
- Allendale, Bamberg, Calhoun, Orangeburg
  - 932 Holly Street
  - Holly Hill, SC 29059
  - Phone: (803) 300-2270
  - Fax: (843) 549-6845
  - Nights / Weekends: (843) 441-1091

#### MIDLANDS PUBLIC HEALTH REGION
- Kershaw, Lexington, Newberry, Richland
  - 2000 Hampton Street
  - Columbia, SC 29204
  - Phone: (803) 576-2749
  - Fax: (803) 576-2993
  - Nights / Weekends: (888) 801-1046
- Chester, Fairfield, Lancaster, York
  - PO Box 817
  - 1833 Pageland Highway
  - Lancaster, SC 29720
  - Phone: (803) 286-9948
  - Fax: (803) 286-5418
  - Nights / Weekends: (888) 801-1046
- Aiken, Barnwell, Edgefield, Saluda
  - 222 Beaufort Street, NE
  - Aiken, SC 29801
  - Phone: (803) 642-1618
  - Fax: (803) 643-8386
  - Nights / Weekends: (888) 801-1046

#### PEE DEE PUBLIC HEALTH REGION
- Chesterfield, Darlington, Dillon, Florence, Marlboro, Marion
  - 145 E. Cheves Street
  - Florence, SC 29506
  - Phone: (843) 661-4830
  - Fax: (843) 661-4859
  - Nights / Weekends: (843) 915-8845
- Clarendon, Lee, Sumter
  - PO Box 1628
  - 105 North Magnolia Street
  - Sumter, SC 29150
  - Phone: (803) 773-5511
  - Fax: (803) 775-9941
  - Nights/Weekends: (843) 915-8845
- Georgetown, Horry, Williamsburg
  - 1931 Industrial Park Road
  - Conway, SC 29526
  - Phone: (843) 915-8804
  - Fax: (843) 915-6502
  - Nights/Weekends: (843) 915-8845

#### UPSTATE PUBLIC HEALTH REGION
- Anderson, Oconee
  - 220 McGee Road
  - Anderson, SC 29625
  - Phone: (864) 260-5801
  - Fax: (864) 260-5623
  - Nights / Weekends: (866) 298-4442
- Abbeville, Greenwood, Laurens, McCormick
  - 1730 S. Main Street
  - Greenwood, SC 29647
  - Phone: (864) 227-5947
  - Fax: (864) 953-6313
  - Nights / Weekends: (866) 298-4442
- Cherokee, Greenville, Pickens
  - PO Box 2507
  - 200 University Ridge
  - Greenville, SC 29602
  - Phone: (864) 372-3133
  - Fax: (864) 282-4373
  - Nights / Weekends: (866) 298-4442

#### Categories of Health Alert messages:
- **Health Alert**: Conveys the highest level of importance; warrants immediate action or attention.
- **Health Advisory**: Provides important information for a specific incident or situation; may not require immediate action.
- **Health Update**: Provides updated information regarding an incident or situation; unlikely to require immediate action.
- **HAN Info Service**: Provides general public health information; unlikely to require immediate action.