

Final Update (July 24, 2015): Greenwood County STEC Investigation

The S.C. Department of Health and Environmental Control (DHEC) has provided the following update to a STEC investigation in Greenwood County:

- The case count remains at **fourteen (14) cases** of Shiga toxin-producing *E. coli* (STEC) in Greenwood County. The cases involve individuals at The Learning Vine childcare facility and their family members.
- As of today, **330 test results are negative** for STEC, with the total including individuals tested multiple times. The laboratory testing performed to screen for STEC has an accuracy rate of 99.7%.

There are no reports of ongoing transmission related to this investigation, nor have there been reports of new illnesses in students or staff of the childcare center since June 1, 2015.

Updated timeline based on evolving investigative efforts:

DHEC is concluding an investigation of a STEC outbreak associated with The Learning Vine childcare center in Greenwood County.

On May 18, DHEC was notified of a confirmed case of Shiga toxin-producing *E. coli* (STEC) in an individual associated with a childcare center. DHEC conducted an interview with the individual on May 19 and learned that the individual first became symptomatic on May 3 with symptoms ending on May 11. Although the individual indicated that some others in the childcare facility had been sick at about the same time, there was no indication given of any current illnesses at the facility. As part of routine practice, DHEC searched its database for other possible laboratory matches and found no other recent cases of *E. coli* in Greenwood County.

On May 29, DHEC was notified of a case of hemolytic uremic syndrome (HUS) in Greenwood County. Interviews of the individual's close contacts and a review of surveillance data revealed that the HUS case had first developed symptoms on or about May 10 and that the HUS case and the STEC case were both associated with the same childcare facility. In response, DHEC immediately opened an investigation of a cluster (more than 1 case) of *E. coli* infections for the purpose of identifying, notifying, interviewing and testing other individuals who might be at risk, and collaborated with the S.C. Department of Social Services (DSS) to investigate the facility. DHEC communicated with Centers for Disease Control (CDC) and the Food and Drug Administration (FDA) regarding the outbreak and also contacted other state health departments to discuss *E. Coli* clusters in similar settings.

As of June 7, DHEC had received laboratory confirmation of seven (7) cases of Shiga toxin-producing *E. coli* (STEC); all of the cases involved individuals at the childcare facility and their family members. Lab cultures confirmed that four (4) of these cases had infections with the same bacteria strain. On June 7, DHEC and the childcare center entered into a public health consent agreement to close the facility to limit the possibility of further spread of the infection.

The Learning Vine re-opened on June 15 after the facility demonstrated it had met the terms of the consent agreement. The Learning Vine had followed all recommendations issued by DHEC, and DHEC received confirmation from the S.C. Department of Social Services (DSS) that the facility had corrected the deficiencies cited in DSS's Inspection Report. Before returning to the facility, all students and staff

had to show proof of at least one negative stool sample, with some individuals being required to have two negative stool samples based on their history or contact with cases. Additionally, all of the employees at the childcare center were required to view a hand-hygiene training video before being allowed to return to work.

DHEC investigative efforts since May 29 have uncovered additional individuals who experienced symptoms of diarrheal illness as early as April who were also investigated for the possibility of being STEC cases. Subsequent testing confirmed a total of 14 cases of Shiga toxin-producing *E. coli* in individuals associated with The Learning Vine and their family members. As of July 24, 330 test results have been negative for STEC. There have been no new onsets of illness in students or staff of the childcare center since June 1.

Although the source of the contamination may never be identified, the staggered onsets of illness suggest person-to-person transmission rather than exposure to a single source such as food.

Collaborating with the CDC:

DHEC routinely consults with CDC about case reports and its investigation of disease outbreaks. DHEC continued that practice throughout the Greenwood STEC investigation.

As the investigation comes to a close, and in addition to CDC's routine monitoring activities of DHEC's disease control programs, DHEC has requested CDC's assistance in reviewing the investigation in its entirety. The purpose of the request is to assist DHEC in its own standard after-event review and to identify all strengths and weaknesses of its surveillance programs as part of DHEC's continual emphasis on quality improvement. Specifically, DHEC has requested that CDC provide a written, after-action report addressing any remedial measures (if applicable) with the goal of enhancing DHEC's response preparedness for events of these types that may occur in the future. Additionally, DHEC has requested that CDC conduct a comprehensive review of all of the agency's infectious disease programs to help identify any areas in which DHEC can improve its public health functions and outcomes.

Results of feedback provided by CDC to DHEC will be made public.

For a copy of DHEC's letter to CDC requesting review assistance, [click here](#).

For Director Catherine Heigel's statement on the partnership with CDC and DHEC's commitment to continuous quality improvement, [click here](#).

**Note to reporters and editors: Information resulting from this investigation will be provided as it is confirmed, and in accordance with state and federal law. Due to federal privacy restrictions, DHEC is unable to provide additional information concerning any individual, including details about physical condition, age, sex, and residence.*