Background: Shiga toxin-producing Escherichia coli (STEC) strains cause diarrheal illness and are associated with serious disease and disability, such as hemolytic uremic syndrome. The most common STEC, E. coli O157:H7, has been recognized as a foodborne pathogen since 1982. More recently, non-O157 STEC have been recognized as an important cause of diarrheal illness. Changes in clinical laboratory practices may influence trends in laboratory-based surveillance for STEC.

Methods: In 2003 microbiologists in the clinical laboratories in nine FoodNet sites (CA, CO, CT, GA, MD, MN, OR, NY, TN) were surveyed about their laboratory practices for identification of STEC. The survey addressed practices related to culture- and non-culture-based methods.

Results: Responses were received from 498 (95%) of 523 laboratories surveyed. Preliminary analysis showed that among the 498 (92%) laboratories that reported testing stool specimens for O157/STEC, 321 (70%) tested on-site. Of the 392 (94%) laboratories reporting testing on-site using culture methods, 211 (70%) tested routinely for O157/STEC, 321 (70%) tested on-site. Of the 302 (94%) laboratories reporting testing on-site using culture methods, 211 (70%) tested routinely for O157/STEC, 321 (70%) tested on-site. Of the 302 (94%) laboratories reporting testing on-site using culture methods, 211 (70%) tested routinely for O157/STEC, 321 (70%) tested on-site.

Conclusions: Despite the public health importance of non-O157 STEC, utilization of testing methods for their identification remains low. Serotyping of STEC isolates is vital in detecting and investigating possible outbreaks. Clinical laboratories should be encouraged to test stool specimens for non-O157 STEC and the remaining 30% (91) use non-culture based methods under certain circumstances.

Further studies are needed to determine the impact changing laboratory practices have on surveillance data and trends in STEC.