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Summarizing FoodNet Laboratory Survey responses in Tennessee from 2017-2021



Introduction: This experience in the Foodborne and Enteric Diseases (FED) program at the Tennessee Department of Health focused on laboratory practices for foodborne pathogens in the state of Tennessee. FoodNet Laboratory Survey responses from 2017-2021 in Tennessee laboratories were summarized. The FoodNet Laboratory Survey is developed and administered by all 10 CDC FoodNet sites. FoodNet conducts surveillance on 8 foodborne infections diagnosed by laboratory testing of samples from patients.

Methods: Survey responses were aggregated in Excel and responses from 2021 were summarized independently to understand what methods, brands, and practices are currently being utilized in Tennessee laboratories. Survey responses from 2017 through 2021 were combined to determine how laboratory practices have changed over time as new technologies emerge.

Results: The survey responses showed an increase in culture-independent diagnostic testing (CIDT) such as antigen and PCR testing, especially since 2019. Culture is still common practice, but the percentage of labs performing culture has decreased over the past three years. The results were presented to FED staff at the weekly staff meeting and to EIP surveillance officers during their bi-annual meeting. The two summaries created will be used for both internal use and as a report sent with the 2022 Laboratory Survey to show laboratories results from the year prior.

Conclusions: The increase of CIDT use and concurrent decrease of culture has potentially far-reaching consequences for foodborne pathogen surveillance. If laboratories are not performing culture to isolate specimens, whole genome sequencing and serotyping cannot occur to link cases genetically. Drug susceptibility profiling also cannot occur. Without these methods, important public health surveillance occurring at state health departments is hindered. This practicum project will inform communications and guidance between Tennessee laboratories and the state health department.