

Overview of the 2019 DFWED approach for state and local surveillance, detection, response, reporting, and prevention for foodborne, waterborne, enteric, and environmentally transmitted diseases program

Purpose: To support and enhance capacity for detection, investigation, control, and reporting of foodborne, waterborne, enteric, and environmentally transmitted disease cases and outbreaks.

DFWED is evolving to foster a broader, more programmatic approach foodborne, waterborne, enteric, and environmentally transmitted diseases detection and response activities. These state/local programs will be integrated, with activities in three tiers. Tier 1 strategies and activities are intended for participation from all jurisdictions and cover general surveillance, detection, and response; prevention and intervention; and communications and partnerships. Tier 1 activities apply to nationally notifiable diseases as well as conditions related to food, water, zoonotic, other enteric, and environmental transmission.

Tier 2 strategies and activities include expanded capacity for specific components of surveillance, investigation, and response. Tier 2 activities are designed to build upon tier 1 activities, but not every jurisdiction is expected to do all Tier 2 activities. These activities are essential to understand and respond to changes in testing practices; identifying sources of sporadic enteric disease; developing or improving new methods for outbreak detection and response; and improving overall capacity for outbreak detection and response. Tier 3 includes activities for the Integrated Food Safety Centers of Excellence (CoE). All Tier 1 activities must be addressed by all state and local partners. The approach for each tier is briefly described below.

Tier 1 includes (but activities are not limited to) the following programs, includes both epidemiologic and laboratory components:

- CaliciNet
- National Antimicrobial Resistance Monitoring System (NARMS)
- National Case Surveillance
- National Outbreak Reporting System (NORS)
- OutbreakNet (not enhanced)
- PulseNet (not Area Lab activities)

Strategies and Activities:

Enhance Epidemiologic Workforce Capacity

Enhance Laboratory Workforce Capacity

Enhance Epidemiologic Investigation and Outbreak Response

Improve Epidemiologic for Surveillance and Reporting

Strengthen Laboratory Testing for Response

Enhance Laboratory Testing for Surveillance and Reporting

Enhance Coordination between Lab-Epi-HIS

Improve Laboratory Coordination and Outreach to Improve Efficiency

Advance Electronic Information Exchange Implementation

Implement Health Promotion Strategies

Coordinate and Engage with Partners

Information Dissemination

Overview of the 2019 DFWED approach for state and local surveillance, detection, response, reporting, and prevention for foodborne, waterborne, enteric, and environmentally transmitted diseases program

Tier 2 includes the following enhanced programs:

- **CryptoNet and CryptoNet Regional Labs:** CryptoNet is an enhanced surveillance program that tracks cryptosporidiosis by regular analysis of merged traditional epidemiology data and subtyping data. Cryptosporidiosis subtyping surveillance is conducted using CryptoNet protocols and will use PulseNet infrastructure to support advancement. Regional labs provide support to participants in their region with troubleshooting, surge capacity for subtyping, and training of laboratory and analysis methods.
- **Cyclospora genotyping:** Amplicon-based multilocus sequence typing approach to provide genotyping information for *Cyclospora cayetanensis*.
- **FoodCORE:** Provides support to improve laboratory, epidemiologic, and environmental health capacity. FoodCORE Centers work together to develop new and better methods to detect, investigate, respond to, and control multistate outbreaks of foodborne diseases.
- **FoodNet:** FoodNet conducts active surveillance in 10 sites aimed at reducing morbidity and mortality due to diseases commonly transmitted by food and understanding sources of these infections. FoodNet goals are to provide the knowledge base to inform national level surveillance and antimicrobial resistance as well as evaluate effectiveness of regulations and interventions aimed at reducing the burden of select foodborne illnesses.
- **NoroSTAT:** A network of sentinel states tasked with improving the timeliness and completeness of reported norovirus outbreaks due to all modes of transmission.
- **National Respiratory and Enteric Virus Surveillance System (NREVSS) Enhanced:** NREVSS Enhanced Conducts clinical laboratory-based norovirus surveillance to track endemic norovirus disease and circulating strains.
- **One Health Harmful Algal Bloom System (OHHABS):** A voluntary reporting system available to state and territorial public health departments and their designated environmental health or animal health partners. OHHABS collects data on HAB events and individual human and animal cases of HAB-associated illnesses. The goal of OHHABS is to collect information to support the understanding and prevention of HAB events and HAB-associated illnesses.
- **OutbreakNet Enhanced:** Provides epidemiologic support to state and local health departments to improve their capacity to detect, investigate, control, and respond to enteric disease outbreaks.
- **PulseNet Area Labs:** Provide support to network participants in their regions with trouble shooting, surge capacity for subtyping, training of laboratory and analysis methods, and coordination of regional calls and meetings.
- **Environmental Microbiology:** Conduct environmental sampling and testing of environmental samples for waterborne disease investigations.

Tier 3 includes the following program:

- **Integrated Food Safety Centers of Excellence (CoEs):** CoEs are headquartered at state health departments that have demonstrated excellence in surveillance and investigation of foodborne illness and outbreaks; each CoE must partner with at least one academic institution. The CoEs develop tools, deliver trainings, and provide consultations to public health professionals in other states who conduct surveillance and investigation of foodborne illness and outbreaks.

ELC Outcomes:

- More efficient and accurate public health reporting
- More effective public health workforce better prepared to respond to infectious disease threats
- More rapid detection of cases and outbreaks
- Improved surveillance: improved completeness of data, improved timeliness of reporting, increased distribution and use of data to public health partners
- More timely, complete and effective investigation efforts: response to outbreaks, investigation of outbreaks, implementation of control measures
- Improved use of data to: Inform public health response and control, improve public health practice, inform program and policy development
- Improved coordination between laboratory and epidemiology