AR Solutions in Action

CDC's Investments to Combat Antibiotic Resistance Threats Nationwide

FISCAL YEAR

\$6,668,196 **Funding for AR Activities**

TENNESSEE

2 local CDC fellows

HIGHLIGHTS Regional Lab for the AR Lab Network (Southeast)

One of 10 sites for the Emerging Infections Program

FUNDING TO STATE HEALTH DEPARTMENTS

ARLABnetwork \$2,918,489

Fiscal Year 2017

AR LABORATORY NETWORK REGIONAL LABS boost state and local testing capacity and technology to detect, support response to, and prevent AR threats across the nation—and inform new innovations to detect AR.

Tennessee is home to one of the AR Regional Labs, which can perform specialty testing for their regions when new and emerging resistance threats occur. Using CDC's containment protocol, a Tennessee facility sent the Tennessee regional lab an isolate of "nightmare bacteria" CRE. This was determined to be the first case of a rare and concerning type of CRE. Within 48 hours, the regional lab performed colonization screening testing on 12 swabs and local epidemiologists and infection control staff used the lab data to stop its spread. Since, the facility has not identified additional cases.



RAPID DETECTION & RESPONSE to emerging drug-resistant germs is critical to contain the spread of these infections. With 2016 funding, Tennessee developed a database to track HAI/AR investigations, resulting in data-driven improvements to communications with healthcare facilities and laboratories, and greater situational awareness of new investigations across the state.



HAI/AR PREVENTION works best when public health and healthcare facilities partner together to implement targeted, coordinated strategies to stop infections and improve antibiotic use.

With 2016 funding, Tennessee used social network analyses—a scientific method for identifying how healthcare facilities are interconnected and share patients—to identify regions to target prevention efforts and prevent the spread of infections between facilities.



FOOD SAFETY projects protect communities by rapidly identifying drug-resistant foodborne bacteria to stop and solve outbreaks and improve prevention.

Tennessee implemented whole genome sequencing of Listeria, Salmonella, Campylobacter and E. coli isolates submitted to its lab and began uploading sequence data into PulseNet for nationwide monitoring of outbreaks and trends. In Fiscal Year 2018, Tennessee will begin simultaneously monitoring these isolates for resistance genes. When outbreaks are detected, local CDC-supported epidemiologists investigate the cases to stop spread.



EMERGING INFECTIONS PROGRAM (EIP)) sites conduct in-depth studies to improve surveillance, prevention, and control of emerging infectious diseases like antibiotic-resistant infections.

The EIP network collects and analyzes patient, healthcare facility, and lab data to track resistant infections across communities and healthcare facilities, identifying prevention strategies to improve program impact. To learn more, search "emerging infections" at www.tn.gov.

Page 1 of 1 This data represents CDC's largest funding categories for AR. It shows domestic, extramural funding that supports AR activities from multiple funding lines. AR: antibiotic resistance HAI: healthcare-associated infection

CDC provides critical support to every state to protect Americans from antibiotic resistance.



U.S. Department of Heath and Human Services Centers for Disease Control and Prevention

www.cdc.gov/ARinvestments