AR Solutions *In Action*

CDC's Investments to Combat Antibiotic Resistance Threats

FISCAL YEAR
2018

TEXAS

$4,304,212

Funding for AR Activities
Fiscal Year 2018

HIGHLIGHTS

- 2 local CDC fellows
- Regional Lab for the AR Lab Network (Mountain)

FUNDING TO STATE HEALTH DEPARTMENTS

$1,648,217

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.

Texas is home to one of the AR Lab Network Regional Labs, and is one of four labs that provides antimicrobial susceptibility testing and whole genome sequencing for *Neisseria gonorrhoeae*. Since August 2017, Texas tested nearly 3,000 *N. gonorrhoeae* isolates, resulting in 115 data alerts for increased resistance to Azithromycin and 13 data alerts for increased resistance to Cefixime. The Texas regional lab also identified four "nightmare bacteria" carrying novel resistance genes in Lubbock, Texas, sparking a search for similar cases. Testing in Texas ultimately uncovered 31 additional positive isolates, which launched the first AR Lab Network multi-site Epi-Aid to contain the spread of the rare gene. As of October 2018, no additional isolates have tested positive for the threat.

$841,156
(Includes funding to Houston)

RAPID DETECTION AND RESPONSE to novel or high-concern drug-resistant germs is critical to contain the spread of these infections.

With 2017 funding, Texas HAI epidemiologists coordinated with the AR Laboratory Network and CDC to contain the state's first case of *mcr*-1 resistance. This coordinated effort prevented transmission and no additional resistance has been detected.

260,903
(Includes funding to Houston)

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 2017 funding, Texas improved infection control capacity by educating over 100 providers from assisted living facilities, day activity health services centers, and nursing facilities on implementing antibiotic stewardship programs.

$645,606
(Includes funding to Houston)

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

Texas uses whole genome sequencing to track and monitor local outbreaks of *Listeria*, *Salmonella*, *Campylobacter*, and *E. coli* and uploads sequence data into PulseNet for nationwide monitoring of outbreaks and trends. In Fiscal Year 2019, Texas will begin simultaneously monitoring these isolates for resistance genes. When outbreaks are detected, local CDC-supported epidemiologists investigate the cases to stop spread.

This data represents CDC's largest funding categories for AR. It shows extramural funding that supports AR activities from multiple funding lines.

AR: antibiotic resistance **HAI:** healthcare-associated infection

FUNDING TO UNIVERSITIES & HEALTHCARE PARTNERS

$566,878

SIGNATURE SCIENCE: Innovative Prevention & Tracking
This project will evaluate and develop tools which can detect and follow the spread of specific bacteria and microbial communities between people and across surfaces in healthcare settings.

$341,452

TEXAS TECH UNIVERSITY: Innovative Prevention & Tracking
Researchers will collect samples from food, food animals, and the environment in the Dominican Republic and test for *mcr* genes, which can confer resistance against colistin, a critically important antibiotic. Researchers will examine the factors that contribute to the spread of these genes in the Dominican Republic to inform public health recommendations.