AR Solutions in Action

CDC's Investments to Combat Antibiotic Resistance Threats

2018

HIGHLIGHTS

MINNESOTA \$5,990,210

Funding for AR Activities Fiscal Year 2018



3 CDC fellows

Regional Lab for the AR Lab Network (Central)

One of 10 sites for the Emerging Infections Program

FUNDING TO STATE HEALTH DEPARTMENTS



\$2,095,028

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.

Minnesota is home to one of the AR Lab Network regional labs, which can perform specialty testing for their region when emerging resistance threats occur. In 2017, the regional lab developed a molecular testing method to detect genes responsible for carbapenem-resistance in *Acinetobacter*, which is a serious threat organism. Implementation of the molecular test enabled Minnesota to help epidemiologists better investigate outbreaks of harmful resistant *Acinetobacter* within their region.



\$425 443

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

With 2017 funding, Minnesota detected a "nightmare bacteria" CRE isolate reported by an acute care facility that matched a previous outbreak cluster. Additional testing and staff training resulted in improved awareness of infection prevention measures among providers, and no additional spread was identified.



\$647,266

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, Minnesota improved patient care by partnering with its Infection Control Assessment and Response Program and Minnesota Board of Pharmacy to educate ambulatory surgical centers on injection safety and medication preparation.



\$1,362,608

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

Minnesota 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, Minnesota will begin simultaneously monitoring these isolates for resistance genes. When outbreaks are detected, local CDC-supported epidemiologists investigate the cases to stop spread.



FUNGAL DISEASE projects improve our ability to track antifungal resistance and stop it from spreading.

With funding for fungal disease surveillance, Minnesota increased their ability to identify fungal diseases, monitor for new and emerging resistance, and implement strategies to prevent its spread in high-risk areas. Improving detection for fungal diseases, like *Candida auris*, means patients receive appropriate treatment while reducing unnecessary antibiotic use.

Page 1 of 2 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



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GONORRHEA RAPID DETECTION & RESPONSE works with state and local epidemiology and laboratory partners to test for and quickly respond to resistant gonorrhea to stop its spread in high-risk communities.

With 2018 funding, Minnesota participates in a sentinel surveillance project, the STD Surveillance Network, monitoring adherence to national gonorrhea treatment guidelines for patients diagnosed and reported with gonorrhea from all provider settings. To help inform national treatment guidelines for gonorrhea, Minnesota also participates in the Gonococcal Isolate Surveillance Project (GISP), testing how well antibiotics work on laboratory samples from sentinel STD clinics, which are often the first to detect the threat.



EMERGING INFECTIONS PROGRAM (EIP) sites improve public health by translating population-based surveillance and research activities into informed policy and public health practice.

CDC's EIP network is a national resource for surveillance, prevention, and control of emerging infectious diseases—like antibiotic-resistant bacteria and fungi. Learn more: www.cdc.gov/ncezid/dpei/eip.



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