AR Solutions *In Action*

CDC's Investments to Combat Antibiotic Resistance Threats

FISCAL YEAR 2019

MINNESOTA

$7,175,083

Funding for AR Activities
Fiscal Year 2019

HIGHLIGHTS

- One local CDC fellow
- Regional Lab for the AR Lab Network (Central)
- One of 10 sites for the Emerging Infections Program

FUNDING TO STATE HEALTH DEPARTMENTS

$2,087,079

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.

With 2018 funding, the Minnesota Public Health Lab (MN-PHL) has built lab testing capacity to rapidly detect the emerging and worrisome deadly yeast, *Candida auris*. Helping infection control specialists understand which patients have *C. auris* is a crucial first step in stopping its spread. Although *C. auris* has not been found in any Minnesota facility, the public health lab has provided surge capacity testing to other states and counties (IL, CA).

$2,924,390

RAPID DETECTION & RESPONSE: State, territory, and local public health partners fight antibiotic resistance in healthcare, the community, and food. Programs use the AR Lab Network to rapidly detect threats and implement prevention, response, and antibiotic stewardship to stop the spread of resistant germs.

With 2018 funding, Minnesota laboratorians and epidemiologists collaborated to rapidly detect hospital transmission of carbapenemase-producing carbapenem-resistant ***Acinetobacter*** and successfully contain spread. After the public health laboratory used new testing to identify two cases from the same hospital, epidemiologists implemented enhanced infection prevention measures within 48 hours and no additional cases were identified.

$508,870

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 2020, Minnesota will continue monitoring these isolates for resistance genes. When outbreaks are detected, local CDC-supported epidemiologists investigate the cases to stop spread. CDC also funds Minnesota's Food Safety Center for Excellence, which provides assistance and training to other health departments to build capacity to track and investigate foodborne disease.

$135,283

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.

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

CDC provides critical support in the U.S. and abroad to protect people from antibiotic resistance.

www.cdc.gov/ARinvestments

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

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MINNESOTA AR Investments (cont.)

$12,000

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. Only one treatment option remains for gonorrhea and resistance continues to grow.

Minnesota 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.

$1,507,461

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 infectious diseases. For example, the EIP in Minnesota performs population-based surveillance for candidemia, ***C. difficile***, invasive ***S. aureus***, and resistant Gram-negative bacteria, and conducts HAI and antibiotic use prevalence surveys. The EIP is developing ways to track sepsis and infections due to non-tuberculous mycobacteria, and is collaborating with the CDC Prevention Epicenters. Learn more: www.cdc.gov/hai/eip

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