AR Solutions *In Action*

CDC's Investments to Combat Antibiotic Resistance Threats

FISCAL YEAR 2018

CALIFORNIA

$5,693,875

Funding for AR Activities
Fiscal Year 2018

HIGHLIGHTS

One of 10 sites for the Emerging Infections Program

FUNDING TO STATE HEALTH DEPARTMENTS

$861,521
(Includes funding to LA County)

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

With 2017 funding, California successfully contained a confirmed case of *C. auris* (an emerging, drug-resistant fungus) by rapidly coordinating efforts with three local public health departments, the state public health laboratory, and healthcare facility personnel.

$1,093,278
(Includes funding to LA County)

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, California's work with local public health officials to improve infection control practices within 40 healthcare facilities led to a 13% reduction in their rates of *C. difficile*, which can cause deadly diarrhea. The work serves as a model for other prevention initiatives.

$1,145,520
(Includes funding to LA County)

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

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

$121,155

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

With funding for fungal disease surveillance, California 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.

$972,899

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.

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

$580,579

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.

During July 2017–June 2018, the California Strengthening the United States Response to Resistant Gonorrhea (SURRG) project increased testing to about 8% of the 5,700+ gonorrhea cases reported in San Francisco. California identified 56 samples that did not respond optimally to recommended antibiotics, and grantees adhered to follow-up protocols to ensure the patients and their sex partners received the right treatment and to help stop spread of the germ. California also 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 across the state. To help inform national treatment guidelines for gonorrhea, California's Gonococcal Isolate Surveillance Project (GISP) also tests how well antibiotics work on laboratory samples from sentinel STD clinics, which are often the first to detect the threat. Select STD clinics in California also collect additional gonococcal isolates, including isolates from women and from extragenital sites, to further enhance surveillance for antibiotic-resistant gonorrhea.

FUNDING TO UNIVERSITIES & HEALTHCARE PARTNERS

$446,150

CALIFORNIA DEPARTMENT OF PUBLIC HEALTH: Discovering & Implementing What Works

This project will provide needed information about the proportion of *Shigella* infections with decreased susceptibility to first-line antibiotics such as ciprofloxacin and azithromycin. This project aims to assess the severity of illness and outcomes of those patients infected with *Shigella* with decreased susceptibility to these important antibiotics. The results of this project can help inform treatment and prevention recommendations.

$359,158

STANFORD UNIVERSITY: Innovative Prevention & Tracking

Researchers are working to streamline an existing sequencing method and develop new methods to track healthcare-associated infections as they spread in the healthcare setting.

$113,615

UNIVERSITY OF CALIFORNIA IRVINE: Discovering & Implementing What Works

This study will evaluate what percent of methicillin-resistant *Staphylococcus aureus* (MRSA) carriers being discharged from hospitals have a community-associated strain. Patients sometimes carry the germ without showing signs of it (colonization) and suffer infections from the strain later. This study will also assess what percent of patients carrying the community MRSA variant develop infection within a year of discharge. Finally, this project will assess whether a repeated decolonization treatment can reduce post-discharge infections due to this strain.