# AR Solutions in Action

FISCAL YEAR

CDC's Investments to Combat Antimicrobial Resistance Threats

### **Emergency Supplemental Funding Helps Stop the Spread of Emerging** Infectious Disease Threats



#### Fiscal Year 2023

Many of the nation's efforts to respond to public health emergencies, such as preventing the spread of COVID-19, also help in the fight against antimicrobial resistance. This includes investments in IPC, training, surveillance, and public health personnel. The following represent many of those shared CDC public health activities funded by one-time emergency supplemental appropriations, such as the American Rescue Plan (ARP) Act or the Coronavirus Aid, Relief, and Economic Security (CARES) Act.

#### In the United States

#### Supporting state, territorial, and local health departments



\$244,000,000

Through the Epidemiology and Laboratory Capacity for Prevention and Control of Emerging Infectious Diseases (ELC) cooperative agreement, CDC strengthens and equips state, local, and territorial public health departments with the resources needed to better fight infections in U.S. healthcare facilities. These resources help health departments strengthen capacity to prevent, detect, and contain infectious disease threats; build laboratory capacity through the AR Lab Network; support implementation of Project Firstline; increase data and monitoring through NHSN; and improve antibiotic use.

#### Strengthening population-based surveillance



\$6,417,196

CDC's Emerging Infections Program (EIP) improves public health by conducting population-based surveillance and research activities that inform policy and public health practice. CDC's EIP network is a national resource for surveillance, prevention, and control of infectious diseases. The EIP HAI component helps answer critical questions about emerging HAI threats, advanced infection tracking methods, and AR in the United States.

Learn more: www.cdc.gov/hai/eip

#### **Preventing transmission in healthcare settings**



\$10,512,614

The Prevention Epicenters Program is a collaborative network of public health, HAI, and AR experts that responds to research priorities to protect patients. The network conducts research to support the translation of innovative IPC strategies for preventing HAIs, antimicrobial-resistant infections, and other adverse events in all healthcare settings. Learn more: www.cdc.gov/hai/epicenters

#### Modernizing surveillance for HAIs and AR



\$15,000,000

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NHSN improves the nation's health through prevention and surveillance. CDC is currently modernizing its technology to be the nation's trusted surveillance system for health care. This will ensure that data on HAIs, AR, and antibiotic use are available and timely. NHSN will continue to provide the data needed to identify problem areas, measure progress of prevention efforts, and ultimately eliminate HAIs.

The AR Investment Map includes data from CDC's largest funding categories for AR. It represents extramural funding that supports AR activities from multiple funding lines in CDC's annual appropriations. Some work received full or partial funding from one-time supplemental appropriations. See the fiscal year 2023 AR Investment Map Supplemental Funding Fact Sheet for more information

AR: antimicrobial resistance COVID-19: coronavirus disease 2019 HAI: healthcare-associated infection IPC: infection prevention and control

NHSN: National Healthcare Safety Network STD: sexually transmitted disease

STI: sexually transmitted infection

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



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**SUPPLEMENTAL AR Investments (cont.)** 

#### **Building healthcare worker infection control capacity**



CDC's Project Firstline is a collaborative of partners that provides innovative and effective IPC training for U.S. healthcare workers and the public health workforce. It offers resources in a variety of formats to meet the diverse learning needs and preferences of the healthcare workforce. Partners host events, create tools, and publish resources to support frontline healthcare workers better understand and apply IPC correctly. Some partners are supported through the CDC cooperative agreement, Strengthening Healthcare IPC and Improving Patient Safety in the United States, which supports efforts to protect Americans by improving the safety and quality of healthcare. Learn more: www.cdc.gov/infectioncontrol/projectfirstline/index.html

Infectious disease modeling to support prevention and response



A CDC cooperative agreement, Building Mathematical Modeling Workforce Capacity to Support Infectious Disease and Healthcare Research, supports pre-doctoral fellows' research to develop and apply computational tools and mathematical methods for modeling the spread of pathogens in health care. Fellows use existing or simulated datasets and real-time information to conduct analyses and build models relevant to combating HAIs and AR. Learn more: www.cdc.gov/hai/research/hire-modeling-fellowship.html

Implementing research and innovative prevention strategies in healthcare settings



The Safety and Healthcare Epidemiology Prevention Research Development (SHEPheRD) Program supports innovative approaches to prevent HAIs and AR across the healthcare spectrum. Investigators are using modeling to assess the impact of disparities and health equity on infectious diseases; developing next-generation quantitative infectious diseases models and tools; and implementing wastewater surveillance for AR genes across multiple regions in the

Learn more: www.cdc.gov/hai/research/safehealthcare.html

### **Around the World**



\$650,000

Association of Public Health Laboratories: Developing information technology solutions for global AR networks Experts support CDC and global partners to develop information technology solutions for collecting, tracking, and reporting data within the Global Action in Healthcare Network and to CDC. This work is part of CDC's Global AR Lab & Response Network.



\$100,000

ICAP at Columbia University: Improving detection, monitoring, and mitigation of AR in Kenya Experts support the Global Healthcare Detection and Response (DARE) AR Project in Kenya to improve detection, monitoring, and mitigation of AR. They also estimate the AR burden, enhance surveillance, improve antibiotic stewardship, and develop quality improvement capacity for antibiotic use and IPC.



U.S. Civilian Research and Development Foundation (CRDF Global): Strengthening AR surveillance and IPC in Jordan Experts work in Jordan as part of the Global Action in Healthcare Network (GAIHN) to address AR threats in healthcare

\$70,000

through detection, surveillance, prevention, and response. GAIHN is part of CDC's Global AR Lab & Response Network, addressing antimicrobial-resistant healthcare pathogens.

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**SUPPLEMENTAL AR Investments (cont.)** 



\$475,000

**Universidad del Desarrollo**: Improving understanding of the health and economic impacts of AR in Chile Experts implement activities as part of the Antibiotic Resistance in Communities and Hospitals (ARCH) program,

conducting studies to understand the burden and risk factors for colonization with antimicrobial-resistant bacteria in **Chile**. They also assess health and economic impacts of colonization with antimicrobial-resistant bacteria. This work is part of CDC's Global AR Lab & Response Network.

**University of Pennsylvania**: Improving understanding of the health and economic impacts of AR in Botswana Experts work in **Botswana** as part of the Antibiotic Resistance in Communities and Hospitals (ARCH) program, studying

the burden and risk factors for colonization with antimicrobial-resistant bacteria. They also assess health and economic impacts of colonization with resistant bacteria. This work is part of CDC's Global AR Lab & Response Network.

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