AR Solutions In Action

CDC's Investments to Combat Antimicrobial Resistance Threats



NORTH CAROLINA \$6,460,676

CDC Prevention Epicenter

FUNDING TO HEALTH DEPARTMENTS



Rapid Detection & Response: State, territory, and local public health partners fight AR in health care, the community, and food.

Fiscal Year 2023

Funding for AR Activities

\$901,882

CDC-funded HAI/AR Programs form a network of health departments that detect, prevent, respond to, and contain HAI/AR threats and promote appropriate use of antibiotics and antifungals. CDC's AR Lab Network provides nationwide lab capacity to rapidly detect AR and inform local prevention and response activities to stop the spread of antimicrobial-resistant germs and protect people.



Food Safety projects protect communities by rapidly identifying antimicrobial-resistant foodborne bacteria to stop and solve outbreaks and improve prevention.

North Carolina uses whole genome sequencing to track local outbreaks of Listeria, Salmonella, Campylobacter, Shigella, and Escherichia coli, identifies AR genes, and shares surveillance data with PulseNet. When outbreaks are detected, local CDC-supported epidemiologists respond to stop their spread.



Drug-resistant Gonorrhea Detect & Respond Program 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 recommended treatment option remains for gonorrhea and resistance to other antibiotics continues to grow. Strengthening the U.S. Response to Resistant Gonorrhea (SURRG) conducts rapid testing and quick responses to antimicrobial-resistant gonorrhea cases in high-burden communities. SURRG awardees established a state-level antimicrobial-resistant gonorrhea Center of Excellence, developed a state-level gonorrhea treatment failure reporting portal and outbreak response plan, and piloted molecular testing to look for markers of gonorrhea resistance.

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 Page 1 of 3 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.

ARinvestments.cdc.gov



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

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FISCAL YEAR

2023

NORTH CAROLINA - AR Investments (cont.)

FUNDING TO UNIVERSITIES & HEALTHCARE PARTNERS



Duke University: CDC Prevention Epicenter

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

\$1,583,624

North Carolina State University: Discovering & Implementing What Works



\$465,000

The Modeling Infectious Diseases in Healthcare Network (MInD-Healthcare) responds to evolving public health needs in healthcare settings by conducting transmission modeling research and assessing high-impact intervention strategies. Experts improve approaches for predicting HAI acquisition routes, optimizing surveillance and control, and applying methods to explore fitness effects of antimicrobial-resistant pathogens.

Learn more: www.cdc.gov/hai/research/MIND-Healthcare.html

University of North Carolina, Charlotte: Building the AR Workforce



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

\$114,286



\$12,687

Duke University: Innovative Prevention & Tracking

A Duke University expert works with CDC investigators to provide clinical, research, and patient safety and quality improvement expertise in the field of inpatient hematology/thrombosis that contributes to efforts to identify, develop, and implement automated methods of data collection and reporting of patient safety events to NHSN.

Research Triangle Institute (RTI International): Innovative Prevention & Tracking



\$2.187.351

CDC's Project Firstline is a collaborative of diverse partners that provides engaging, 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 that help healthcare workers better understand and correctly implement IPC. Learn more: www.cdc.gov/infectioncontrol/projectfirstline



Duke University: Discovering & Implementing What Works

Experts evaluate air and surface sampling methods for environmental fungal contamination to enhance the understanding of fungal contamination patterns, refine sampling methods, and establish accurate baseline contamination rates. This enables more effective public health interventions and improved environmental management strategies to increase preparedness for potential outbreaks.

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NORTH CAROLINA - AR Investments (cont.)

FISCAL YEAR

2023

FHI 360: Global Expertise & Capacity Enhancements

\$75,000

CDC's global work to combat AR helps prevent the importation of AR threats in the United States. Experts work with local labs in Kenya on environmental surveillance of antimicrobial-resistant *Escherichia coli* in drinking water, drinking water sources, and environmental water and assess risk factors for exposure to antimicrobial-resistant pathogens to improve prevention measures. This work is part of CDC's Global AR Lab & Response Network.

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