Innovating to Slow the Spread:
CDC Combats Antimicrobial Resistance

Each year in the United States, **more than 3 million people** are infected by an antimicrobial-resistant germ or *Clostridioides difficile* (a germ associated with antibiotic use), and **nearly 50,000 people** die. Since 2016, **CDC has invested more than $430 million[1]** in antimicrobial resistance (AR) innovation to drive aggressive action and empower the United States and the world to comprehensively respond to AR. CDC continuously works to address threats from CDC's 2019 AR Threats Report through these projects. **More resources are needed to invest in this critical research addressing gaps across health care, the community, and the environment.**

From 2016-2023, CDC was only able to invest roughly **$33 million** a year in new ways to stop AR threats.

Nearly **75%** of 2016-2023 investments are cross-cutting to fight not only AR threats but other emerging, infectious disease threats in health care, community, and the environment.

Around the world, CDC has invested in more than **200** innovative AR projects in more than **60** countries, 2016-2023.

Investing in Innovation, 2016-2023

CDC works with partners in more than **60** countries to find scalable innovative solutions to address AR globally.

- Nearly **20%** of all appropriated dollars for CDC's Antimicrobial Resistance Solutions Initiative has supported public health innovations

- **700+** funded projects

- **200+** public and private institutions supported

  Country where CDC has funded at least one innovation project since 2016.
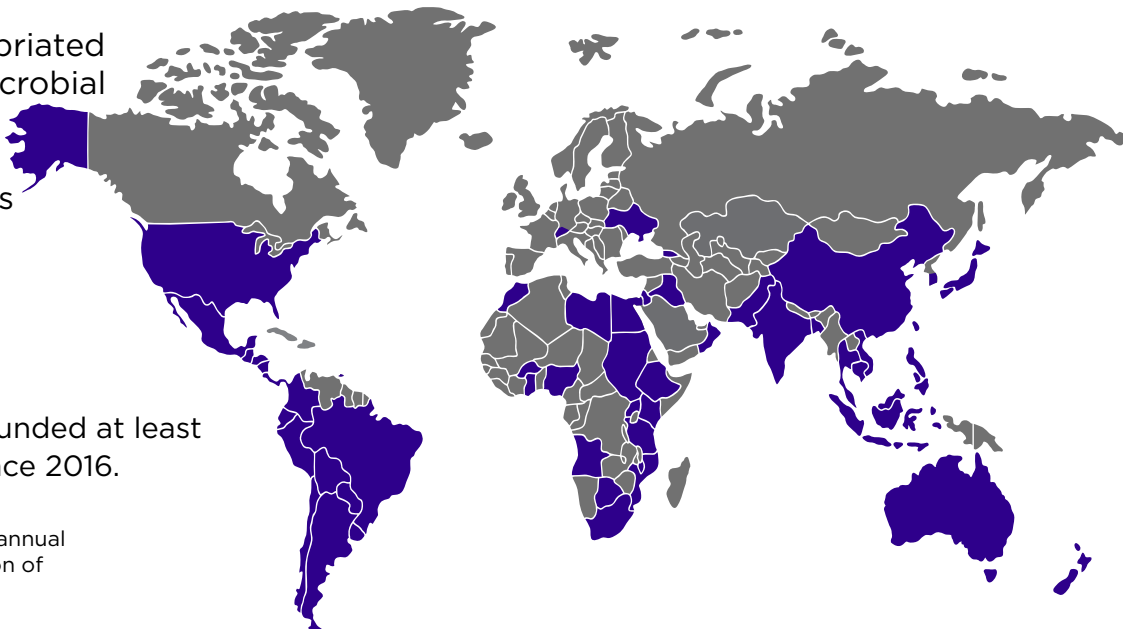
[1]This includes more than $260 million of annual appropriations and more than $170 million of supplemental appropriations.

LEVERAGING CDC'S INNOVATIVE PROGRAMS FOR IMPACT

CDC leverages various programs to invest in innovative solutions to address research gaps related to AR across health care, the community, and the environment.

CDC PREVENTION EPICENTERS
innovative research to protect patients

CDC's Prevention Epicenters Program is a unique research program in which CDC collaborates with academic investigators to conduct innovative IPC research. These Prevention Epicenters encompass over 254 healthcare facilities, 3 million admissions to hospitals, and 17 million patient days in the hospital.

BAAs
BROAD AGENCY ANNOUNCEMENTS

Through **Broad Agency Announcements (BAAs)**, CDC supports innovations and collaborations with investigators to identify and implement new ways to combat antimicrobial-resistant infections and slow their spread. In fiscal years 2016 through 2023, more than $57 million was awarded through the BAAs to fight AR.

SHEPheRD
SAFETY AND HEALTHCARE EPIDEMIOLOGY RESEARCH DEVELOPMENT PROGRAM

Through 2020, the **Safety and Healthcare Epidemiology Research Development (SHEPheRD) Program**, CDC has awarded 35 organizations across the United States the opportunity to develop and conduct research and innovative prevention projects related to safety in healthcare settings. This significant opportunity allows CDC to request research and other collaborative proposals from these organizations over a 5-year cycle to find innovative approaches to preventing healthcare-associated infections (HAIs) and AR across the healthcare spectrum.

MInD
THE MODELING INFECTIOUS DISEASES IN HEALTHCARE NETWORK

The Modeling Infectious Diseases in Healthcare Network (MInD – Healthcare) develops a virtual laboratory where researchers can investigate factors that drive the spread of HAIs and simulate multiple prevention strategies to estimate their benefits in a timely and cost-effective manner.

SBIR
America's Seed Fund

The **Small Business Innovation Research (SBIR)** provides "seed funds" for small business concerns (SBCs) to explore their technological potential and the incentive for SBCs to profit from commercialization of their innovations. CDC's SBIR Program targets innovations in diagnostics, data science (e.g., artificial intelligence, machine learning, etc.), surveillance, occupational safety and health, and public health.

Learn more about CDC's AR Solutions Initiative:
www.cdc.gov/DrugResistance

Scan with your smartphone camera to watch an animated video on Antimicrobial Resistance.

CDC

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

Revised January 2024