

ANTIMICROBIAL RESISTANCE



Dawn Sievert, PhD, MS, Senior Science Advisor for the Antimicrobial Resistance Coordination and Strategy Unit

Going global:

CDC launches novel antimicrobial resistance tracking network in 50 countries

By the start of 2022, we reached an incredible milestone—launching the **Global Antimicrobial Resistance Laboratory and Response Network (Global AR Lab & Response Network)**. This network takes a **One Health** approach and recognizes that resistant organisms can spread across continents through people, animals, and their shared environments. It aims to improve the detection of **antimicrobial-resistant threats** and prevent their spread globally. The network spans nearly 50 countries and works with more than 20 organizations worldwide to build laboratory capacity to detect antimicrobial-resistant organisms, prevent infections in healthcare and the community through proven practices, and apply innovative ways to respond to antimicrobial resistance threats.

Additionally, we work with partners to identify risk factors driving the emergence and spread of antimicrobial resistance, while providing support for on-the-ground response to antimicrobial resistance threats emerging across healthcare, sexually transmitted, fungal, enteric, and invasive bacterial and respiratory pathogens.

The Global AR Lab & Response Network builds on the success of CDC’s domestic Antimicrobial Resistance Laboratory Network (AR Lab Network) by filling critical detection and response gaps around the world. The collaborative, expansive network will also inform global prevention strategies and grow our understanding of how antimicrobial resistance may impact or be impacted by important



The successful U.S.-based AR Lab Network provided a critical foundation for the global network, including cultivating strong partnerships that ensure close coordination between CDC, health departments, laboratories, and other public health partners in the United States.”



National Center for Emerging and Zoonotic Infectious Diseases



CDC launches new global networks & research to save lives from antimicrobial resistance (AR) and other infectious disease threats



\$22 million
invested from CDC

50 countries (shown in gold)

2 new networks:

CDC's Global Action
in Healthcare Network
(GAIHN)

CDC's Global
Antimicrobial
Resistance Lab &
Response Network

10 global AR innovation
research projects

27 partners collaborating
to save lives



Learn more: bit.ly/globalHAI-ARnetworks

Revised Jan. 2022 (v1.6)

WHAT'S NEXT

CDC will expand ongoing work through the Global AR Lab & Response Network. However, sustained efforts are essential to ensure comprehensive implementation of a One Health response across this global program.

issues like climate change and social and health inequities. This ongoing and evolving work helps ensure antimicrobial resistance threats are stopped when and where they emerge, and it helps slow the spread of threats identified in CDC's *Antibiotic Resistance Threats in the United States, 2019 (2019 AR Threats Report)*.

As demonstrated in our new analysis, *COVID-19: U.S. Impact on Antimicrobial Resistance, Special Report 2022*, the COVID-19 pandemic created alarming setbacks in the fight against antimicrobial resistance. In the United States alone, the threat of resistant infections is not only still present but has worsened—with resistant hospital-onset infections and deaths both increasing at least 15% during 2020, the first year of the pandemic. Pandemic-related challenges weakened infection prevention and control practices in U.S. healthcare facilities, such as hand hygiene, cleaning equipment, separating patients, and using personal protective equipment. Although these findings are devastating, these setbacks can and must be temporary. The Global AR Lab & Response Network, plus our global innovation research, reflect CDC's commitment to transforming the way the world responds to antimicrobial resistance across One Health.

Through CDC's *Antimicrobial Resistance Solutions Initiative*, we continue to prioritize proven prevention activities and build on foundational investments globally. The pandemic has reminded us that prevention-focused efforts, such as the ones made by CDC to combat antimicrobial resistance, provide the foundational capacity to address new and unknown threats quickly, whether it's today or in the future.

In the first year of the COVID-19 pandemic:

↑15%

Resistant infections & deaths increased 15% in hospitals in 2020

~80%

80% of patients hospitalized with COVID-19 received an antibiotic March-Oct. 2020, most were probably not needed



Delayed or unavailable data led to resistant infections spreading undetected & untreated

WHAT'S THE POINT?

The Global AR Lab & Response Network helps fill critical gaps identified in CDC's 2019 AR Threats Report while meeting pivotal goals set in the *National Action Plan for Combating Antibiotic-Resistant Bacteria, 2020–2025*.

