AR Solutions In Action
CDC’s Investments to Combat Antibiotic Resistance Threats

FISCAL YEAR 2021

PENNSYLVANIA
$7,853,140
Funding for AR Activities
Fiscal Year 2021

FUNDING TO STATE HEALTH DEPARTMENTS

RAPID DETECTION & RESPONSE: State, territory, and local public health partners fight AR in healthcare, the community, and food.
Programs use the AR Lab Network to rapidly detect threats and then implement prevention, response, and antibiotic stewardship to stop the spread of resistant germs. Additional resources, appropriated to CDC to fight COVID-19, will also help in the fight against AR by improving infection prevention and control in healthcare facilities.

FOOD SAFETY projects protect communities by rapidly identifying drug-resistant foodborne bacteria to stop and solve outbreaks and improve prevention.
Pennsylvania uses whole genome sequencing to track and monitor local outbreaks of Listeria, Salmonella, Campylobacter, and Escherichia coli and uploads sequence data into PulseNet for nationwide monitoring of outbreaks and trends. In Fiscal Year 2021, Pennsylvania continued monitoring these isolates for resistance genes. When outbreaks are detected, local CDC-supported epidemiologists investigate the cases to stop spread.

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.
Strengthening the U.S. Response to Resistant Gonorrhea (SURRG) works with state and local epidemiology and laboratory partners to perform expansive and rapid testing for and to quickly respond to identified resistant gonorrhea to stop its spread in select communities with high rates of gonorrhea. Only one treatment option remains for gonorrhea and resistance continues to grow. All SURRG sites are considered to be Gonococcal Isolate Surveillance Project (GISP) sites, and as a result, data from this project are also used to help inform national treatment guidelines for gonorrhea.

CDC provides critical support in the U.S. and abroad to protect people from antibiotic resistance.
ARinvestments.cdc.gov
**FUNDING TO UNIVERSITIES & HEALTHCARE PARTNERS**

**UNIVERSITY OF PENNSYLVANIA: CDC Prevention Epicenter**
The Prevention Epicenters Program is a collaborative network between 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 infection control and prevention strategies for preventing HAIs, AR and other adverse events in all healthcare settings. This work is funded by resources appropriated to CDC to support its response to COVID-19. Learn more: [www.cdc.gov/hai/epicenters](http://www.cdc.gov/hai/epicenters)

**UNIVERSITY OF PENNSYLVANIA: Discovering & Implementing What Works**
Investigators are using electronically derived automated reports of appropriate antibiotic use to inform, implement, and assess antibiotic stewardship interventions in frequently encountered infections in inpatient and outpatient settings.

**UNIVERSITY OF PENNSYLVANIA: Discovering & Implementing What Works**
Experts are evaluating current antibiotic stewardship practices, needs, and implementation successes and challenges in healthcare facilities in Latin America, South and Southeast Asia, and Southeast Africa, identifying gaps and context-specific factors associated with implementation to improve antibiotic use.

**UNIVERSITY OF PENNSYLVANIA: Innovative Prevention & Tracking**
Experts are building off their previous CDC-funded work to determine the genetic mechanisms of resistance and relatedness of multidrug-resistant Gram-negative extended-spectrum cephalosporin-resistant Enterobacterales (ESCrE) and carbapenem-resistant Enterobacterales (CRE) in Botswana through whole-genome sequencing, helping to determine prevalence and new testing strategies to decrease ESCrE and CRE in the area.

**UNIVERSITY OF PENNSYLVANIA: Global Expertise & Capacity Enhancements**
CDC’s global work to combat AR prevents the importation of AR threats into the United States. Experts are establishing a network of organizations (Botswana Ministry of Health and Wellness (MOHW), the University of Botswana (UB), the University of Pennsylvania, the Children’s Hospital of Philadelphia (CHOP), and University of British Columbia (UBC) to support the Ministry of Health and Welfare in Botswana in strengthening the detection, response, and containment of AR and HAIs in healthcare facilities.

**UNIVERSITY OF PENNSYLVANIA: Global Expertise & Capacity Enhancements**
CDC’s global work to combat AR prevents the importation of AR threats into the United States. Experts are working with stakeholders in Botswana, South Africa, and Zimbabwe to assess antibiotic stewardship practices, identify IPC needs at the national and hospital levels, and gain a deeper understanding of factors that influence antibiotic stewardship program implementation. Experts are creating an antibiotic stewardship implementation toolkit to build capacity across stakeholders in Botswana.