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

FISCAL YEAR **2019**



FUNDING TO STATE HEALTH DEPARTMENTS



RAPID DETECTION & RESPONSE: State, territory, and local public health partners fight antibiotic resistance in healthcare, the community, and food. Programs use the AR Lab Network to rapidly detect threats and implement prevention, response, and antibiotic stewardship to stop the spread of resistant germs.

With 2018 funding, Ohio detected more than 440 cases of carbapenemase-producing carbapenem-resistant Enterobacteriaceae (CP-CRE) and carbapenem-resistant *Pseudomonas aeruginosa*, including 56 novel threats. Ohio worked with healthcare facilities and the AR Laboratory Network to screen for potential carriers and implement the CDC containment strategy. Ohio improved isolate submission for testing by educating clinical labs on the need for further detection of these threats.



FOOD SAFETY projects protect communities by rapidly identifying drug-resistant foodborne bacteria to stop and solve outbreaks and improve prevention.

Ohio uses whole genome sequencing to track and monitor local outbreaks of *Listeria, Salmonella, Campylobacter*, and *E. coli* and uploads sequence data into PulseNet for nationwide monitoring of outbreaks and trends. In Fiscal Year 2020, Ohio will continue monitoring these isolates for resistance genes. When outbreaks are detected, local CDC-supported epidemiologists investigate the cases to stop spread.



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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.

Columbus, OH (and surrounding areas) participates in the STD Surveillance Network, monitoring adherence to gonorrhea treatment guidelines. Ohio also participates in the Gonococcal Isolate Surveillance Project (GISP) testing how well antibiotics work on laboratory samples from sentinel STD clinics, which are often the first to detect the threat. Select STD clinics in Ohio also collect additional samples, including from women and from extragenital sites, to further enhance surveillance for antibiotic resistant gonorrhea.

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

This data represents CDC's largest funding categories for AR. It shows extramural funding that supports AR activities from multiple funding lines



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

AR: antibiotic resistance HAI: healthcare-associated infection

www.cdc.gov/ARinvestments

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FISCAL YEAR 2019

OHIO AR Investments (cont.)

FUNDING TO UNIVERSITIES & HEALTHCARE PARTNERS



CLEVELAND VA MEDICAL CENTER: Microbiome Assessment & Intervention

Contaminated environmental surfaces are an important potential source for transmission of healthcare-associated pathogens. Researchers will determine the frequency of environmental contamination in inpatient and outpatient areas beyond hospital patient rooms and investigate the potential for hands to acquire and transfer pathogens from contaminated surfaces and examine shedding of pathogens by patients in outpatient settings.



CLEVELAND VA MEDICAL CENTER: Discovering & Implementing What Works

Contaminated environmental surfaces are an important source of dissemination of *Candida auris* in hospitals and nursing homes. Researchers will determine the efficacy of liquid disinfectants against *C. auris*, evaluate emerging applications for UV light for decontamination *C. auris*, and evaluate efficacy of antibiotic surfaces for continuous decontamination of C. auris.

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