## AR Solutions in Action

CDC's Investments to Combat Antibiotic Resistance Threats Nationwide

HIGHLIGHTS

# NORTH CAROLINA \$2,960,231

Funding for AR Activities Fiscal Year 2017

### **FUNDING TO STATE HEALTH DEPARTMENTS**



**RAPID DETECTION & RESPONSE to emerging drug-resistant germs is critical to contain the spread of these infections.** With 2016 funding, North Carolina supported responses to 11 HAI/AR outbreaks in healthcare settings and provided outbreak response training to more than 80 local public health and healthcare partners.

1 local CDC fellow

\$635,354



HAI/AR PREVENTION works best when public health and healthcare facilities partner together to implement targeted, coordinated strategies to stop infections and improve antibiotic use.

North Carolina received funding for this activity for the first time in 2017 to better prevent infections and protect patients.



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

North Carolina implemented whole genome sequencing of *Listeria*, *Salmonella*, *Campylobacter* and *E. coli* isolates submitted to its lab and began uploading sequence data into PulseNet for nationwide monitoring of outbreaks and trends. In Fiscal Year 2018, North Carolina will begin simultaneously 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.

With 2016 funding, North Carolina increased their local response capacity and initiating rapid antibiotic susceptibility testing—which determines how well a gonorrhea strain will respond to specific antibiotics. North Carolina conducted rapid antibiotic susceptibility testing on 21 gonorrhea specimens in July. Test results are used to inform local outbreak response action, national treatment guidelines and antibiotic resistance trends.

Page 1 of 2 This data represents CDC's largest funding categories for AR. It shows domestic, extramural funding that supports AR activities from multiple funding lines. AR: antibiotic resistance HAI: healthcare-associated infection

CDC provides critical support to every state to protect Americans from antibiotic resistance.



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

www.cdc.gov/ARinvestments

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# FISCAL YEAR **2017**

NORTH CAROLINA AR Investments (continued)

#### **FUNDING TO UNIVERSITIES & HEALTHCARE PARTNERS**



#### DUKE UNIVERSITY-UNIVERSITY OF NORTH CAROLINA: CDC Prevention Epicenter

A unique research program in which CDC collaborates with medical academic investigators to conduct innovative infection control and prevention research in healthcare settings. For example, one of the Duke-UNC projects will assess whether non-critically ill patients with suspected sepsis can safely stop antibiotics after 72 hours if certain parameters are met, such as negative cultures and no fever. Learn more: www.cdc.gov/hai/epicenters.



#### **RESEARCH TRIANGLE INSTITUTE: Discovering & Implementing What Works**

The Modeling Infectious Diseases in Healthcare Network (MInD-Healthcare) is a virtual laboratory where researchers can investigate factors that drive spread of HAIs and simulate prevention strategies to estimate their benefits in a timely and cost-effective manner. For example, investigators will model patient movement through areas of high risk for "nightmare bacteria" CRE and *Clostridium difficile* transmission, including hospitals and long-term care facilities. Learn more: www.cdc.gov/hai/research/MIND-Healthcare

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