# AR Solutions in Action

**CDC's Investments to Combat Antibiotic Resistance Threats** 

FISCAL YEAR 2018

UTAH \$2,594,589

Funding for AR Activities Fiscal Year 2018



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



RAPID DETECTION AND RESPONSE to novel or high-concern drug-resistant germs is critical to contain the spread of these infections.

\$401,062

With 2017 funding, Utah successfully contained a case of pan-resistant *Klebsiella pneumonia*. Follow up testing indicated this patient also carried "nightmare bacteria" with dangerous, rare genes. The patient had crossed through multiple facilities, but transmission was prevented through enhanced investigation, surveillance, training and laboratory capacity.



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.

With 2017 funding, Utah *C. difficile* infections decreased after partnering with skilled nursing and acute care facilities to launch a collaborative addressing this infection. Other efforts included diagnostic stewardship training and development of an interactive National Healthcare Safety Network (NHSN) dashboard.



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

\$279,986

Utah 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 2019, Utah will begin simultaneously monitoring these isolates for resistance genes. When outbreaks are detected, local CDC-supported epidemiologists investigate the cases to stop spread.

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



#### **UNIVERSITY OF UTAH: CDC Prevention Epicenter**

CDC collaborates with medical academic investigators to conduct innovative research to protect patients from antibiotic-resistant germs in healthcare settings. Topics include improving testing for *C. difficile* (which can cause deadly diarrhea), evaluating methods for tracking healthcare-associated infections, assessing potential routes for pathogen transmission in long-term care facilities, and evaluating a device to prevent post-surgery infections.\_

Learn more: www.cdc.gov/hai/epicenters



#### **UNIVERSITY OF UTAH: Discovering & Implementing What Works**

The Modeling Infectious Diseases in Healthcare Network (MInD-Healthcare) is a virtual laboratory where researchers investigate factors that drive the spread of HAIs and simulate prevention strategies to estimate their benefits. Investigators will use math models incorporating patient flow and economic health data to create tools that will support outbreak control interventions and prevent transmission of resistant germs. Learn more: <a href="https://www.cdc.gov/hai/research/MIND-Healthcare">www.cdc.gov/hai/research/MIND-Healthcare</a>



#### **UNIVERSITY OF UTAH: Innovative Prevention & Tracking**

University of Utah pediatric and infectious disease experts are working with CDC to analyze antibiotic prescribing data to identify opportunities for improvement or intervention.

Page 1 of 1 This data represents CDC's largest funding categories for AR. It shows extramural funding that supports AR activities from multiple funding lines.

AR: antibiotic resistance HAI: healthcare-associated infection

