



FY 16 AR Solutions Initiative

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CDC's Antibiotic Resistance Solutions Initiative

\$264M: A Comprehensive Response

The FY 2016 Budget requests more than \$264 million to support:



- ✓ Comprehensive Tracking
- ✓ Rapid Detection
- ✓ Faster Outbreak Response



- ✓ Insights for Research Innovation
- ✓ Better Patient Care
- ✓ Improved Prescribing

Supports implementation of CDC's Activities under
the National Strategy and National Action Plan

PCAST Rec. #2: Effective Surveillance & Response for Antibiotic Resistance

- Strengthen state and local public health infrastructure for surveillance and response
 - Enhanced state and local programs for detection of AR, outbreak response, and aggressive prevention activities across healthcare and community settings, including enhanced stewardship programs
 - Address community AR threats
- Establish national capability for pathogen surveillance based on genome analysis
 - National laboratory network for pathogen surveillance
 - Reference collection of genome sequences
 - Surveillance in diverse settings through CDC's EIP and NARMS

Stop spread; Protect People

Act in every state



- Establish State AR Prevention Programs



- Identify new ways to limit spread of antibiotic resistant infections related to food-producing animals (i.e. Salmonella) using the National Antimicrobial Resistance Monitoring System (NARMS)



- Better monitor treatment of multidrug-resistant gonorrhea (GC) and support rapid response to reduce spread of multidrug-resistant gonorrhea (GC) and better treatment of GC



- Support development of next generation rapid susceptibility tests for drug-resistant pathogens



Track Superbugs; Measure Impact

Accelerate outbreak detection and innovation



- **New Detect Network of AR Regional Labs** to improve response to outbreaks of urgent, serious, or concerning threats; know faster which antibiotics work; and use cutting edge methods to track and get ahead of spread



- **New AR Isolate Bank** to provide a complete collection of current resistant threats; help keep pace with mutations; and provide information for FDA-approval of products and for companies/researchers' new tests and antibiotics



- **Measure impact of antibiotics on human microbiome** to learn if a healthy microbiome protects people and to learn if antibiotics given to infants and elderly lead to health problems or higher risk of drug-resistant infection



- **Double number of CDC's Emerging Infections Program (EIP) sites** to expand tracking to urgent and serious threats; track evolving AR threats better; and improve understanding of who is at risk



- **Enhance global partnerships** for prevention and detection to combat AR internationally

PCAST Rec. #6: Improving Stewardship of Existing Antibiotics in Health Care

- Stewardship in hospitals and long-term care facilities
- Antibiotic use in outpatient settings
- Measuring antibiotic use and resistance through CDC's National Healthcare Safety Network (NHSN)
- Obtaining data on antibiotic use in ambulatory settings
- Technical assistance to implement antibiotic stewardship in healthcare settings, including federal government facilities
- Research on improving stewardship programs
- Patient education

CDC's FY 16 Proposed Budget Increase National Healthcare Safety Network (NHSN)

+\$14M: Critical NHSN Improvements to Support the State AR Prevention Programs

- Implement the Antibiotic Use and Resistance (AUR) modules to rapidly detect AR threats
 - Extend participation through electronic reporting in the AU module
 - Support implementation of AR module through electronic reporting
 - Refine AUR measures for National Quality Forum review

Track and Improve Prescribing

Improve antibiotic use and reduce antibiotic resistance



- Provide data about antibiotic use to better understand prescribing



- Set national standards of antibiotic use to improve use and reduce resistance



- Ensure all hospitals have effective stewardship programs



- Understand and act upon state-by-state differences in antibiotic prescribing rates



- Evaluate and test intervention strategies to improve antibiotic prescribing
- Create state programs to improve antibiotic prescribing in hospitals and the community

CDC's FY 16 AR Solutions Initiative

<http://www.cdc.gov/drugresistance/solutions-initiative/>

Antibiotic Resistance Solutions Initiative \$264M: A Comprehensive Response

The problem

Antibiotic resistance, when bacteria don't respond to the drugs designed to kill them, threatens to return us to the time when simple infections were often fatal. To address this threat, CDC and public health partners must fully implement the National Strategy for Combating Antibiotic-Resistant Bacteria.

Estimated minimum number of illnesses and deaths caused by antibiotic resistance:

At least **2,049,442** illnesses
23,000 deaths

The action

The national strategy identifies five core actions:

- ▶ Slow the Development of Resistant Bacteria and Prevent the Spread of Resistant Infections
- ▶ Strengthen National One-Health Surveillance Efforts to Combat Resistance
- ▶ Advance Development and Use of Rapid and Innovative Diagnostic Tests for Identification and Characterization of Resistant Bacteria
- ▶ Accelerate Basic and Applied Research and Development for New Antibiotics, Other Therapeutics, and Vaccines
- ▶ Improve International Collaboration and Capacities for Antibiotic Resistance Prevention, Surveillance, Control, and Antibiotic Research and Development

Antibiotic Resistance Threats Impact



Antibiotic Resistance Solutions Initiative CDC's Del

Antibiotic Resistance Solutions Initiative

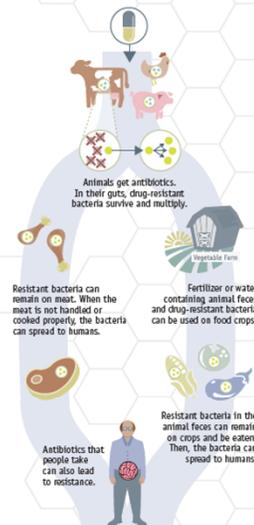
Resistance to important antibiotics for human health is increasing. In the U.S., over 400,000 people are sickened with

Some resistant infections can come from the food we eat.

FY16 → Comprehensive Lab Coverage for testing 17 Antibiotic Resistant Pathogens

The regional labs will have cutting-edge technology that can provide more information on where detected resistance came from and how it is related to other types of resistance across the country.

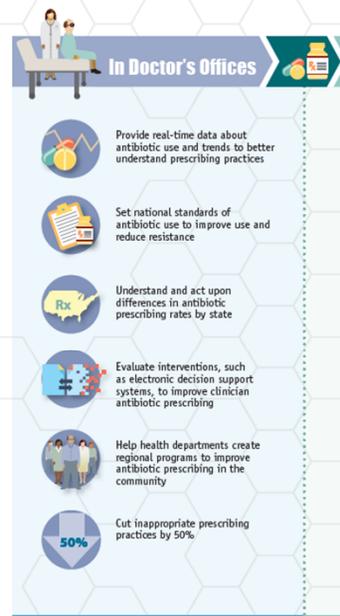
Through the regional lab network, CDC and public health will be able to accumulate real-time, actionable information about dangerous antibiotic resistant threats.



Using antibiotics—in people or in animals—resistance. Antibiotics should only be used

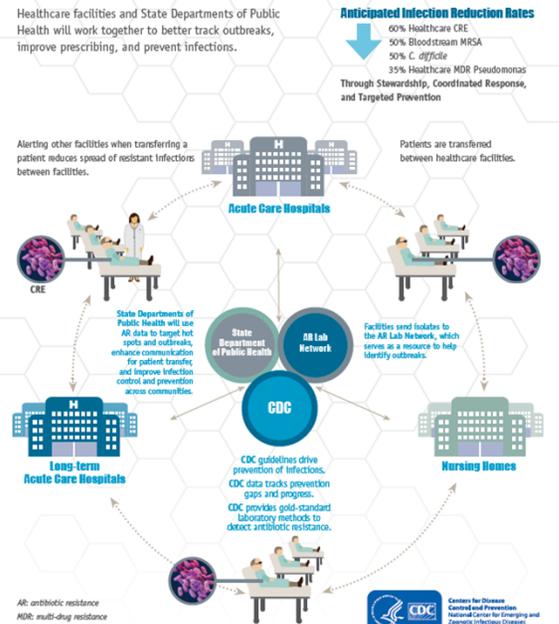
Antibiotic Resistance Solutions Initiative

Improve Antibiotic Prescri



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State AR Prevention Programs ("Protect Programs")



AR: antibiotic resistance
MOR: multi-drug resistance

