



Prevention Status Reports



**PSR**

Office for State, Tribal, Local and Territorial Support

## Prevention Status Report for Georgia

# Healthcare-Associated Infections

Accessed on June 9, 2016

## About the Prevention Status Reports

The Prevention Status Reports (PSRs) highlight—for all 50 states and the District of Columbia—the status of public health policies and practices designed to address the following important public health problems and concerns:



## PSR Framework






Each report follows a simple framework:

- Describe the public health *problem* using public health data
- Identify potential *solutions* to the problem drawn from research and expert recommendations
- Report the *status* of those solutions for each state and the District of Columbia

## Criteria for Selection of Policies and Practices

The policies and practices reported in the PSRs were selected because they—

- Can be monitored using state-level data that are readily available for most states and the District of Columbia
- Meet one or more of the following criteria:

-  Supported by systematic review(s) of scientific evidence of effectiveness (e.g., *The Guide to Community Preventive Services*)
-  Explicitly cited in a national strategy or national action plan (e.g., *Healthy People 2020*)
-  Recommended by a recognized expert body, panel, organization, study, or report with an evidence-based focus (e.g., Institute of Medicine)

## Ratings

The PSRs use a simple, three-level rating scale—green, yellow, or red—to show the extent to which the state has implemented the policy or practice in accordance with supporting evidence and/or expert recommendations. The ratings reflect the *status of policies and practices* and do not reflect the *status of efforts* of state health departments, other state agencies, or any other organization to establish or strengthen those policies or practices.

## Suggested Citations

### For a state report:

Centers for Disease Control and Prevention. *Prevention Status Reports: [State name]*. Atlanta, GA: US Department of Health and Human Services; 2016. Accessed [month date, year].

### For the National Summary:

Centers for Disease Control and Prevention. *Prevention Status Reports: National Summary*. Atlanta, GA: US Department of Health and Human Services; 2016. Accessed [month date, year].

## Public Health Problem



Healthcare-associated infections (HAIs) are linked with increased illnesses, deaths, and healthcare costs (1, 2). Each year, about 1 in 25 US hospital patients is diagnosed with at least one infection related to hospital care. In 2011, there were approximately 722,000 HAIs in US acute care hospitals, and approximately 75,000 hospital patients with HAIs died during their hospitalizations (2).

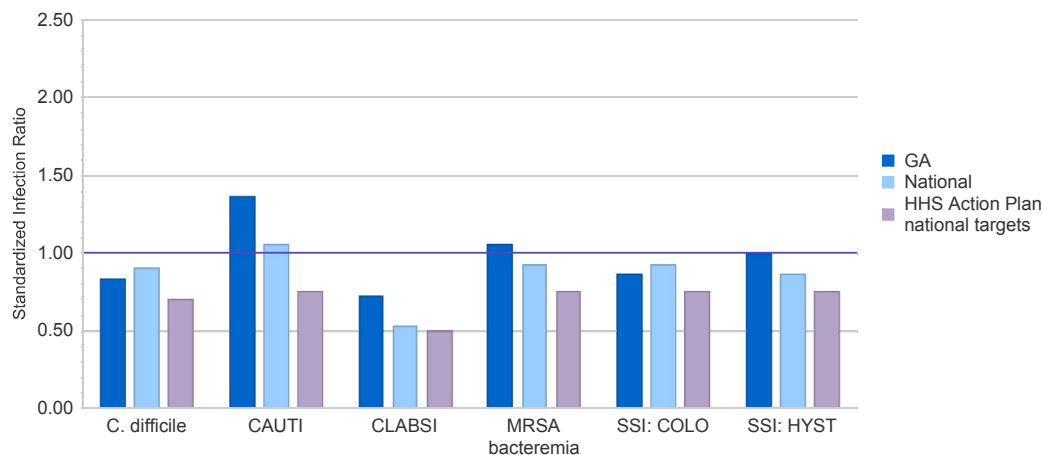
Many HAIs are caused by antibiotic-resistant (AR) pathogens and *Clostridium difficile* (*C. difficile*), often as a consequence of inappropriate antibiotic use. Each year in the United States, at least 2 million people are infected by an AR pathogen and at least 23,000 will die as a direct result of these infections (3).

More than half of all hospital patients receive an antibiotic, and 30%–50% of all antibiotics are prescribed inappropriately or are unnecessary (4). Poor prescribing practices put patients at risk for adverse reactions and also contribute to antibiotic resistance, making these drugs less likely to work in the future.



Despite progress in reducing some HAIs—such as central line-associated bloodstream infections (CLABSIs)—more progress needs to be made in preventing other infections, including *C. difficile* infection and catheter-associated urinary tract infections (CAUTIs). These infections can be prevented by using infection control and prevention procedures in healthcare settings and improving antibiotic prescribing.

2013 Standardized Infection Ratios (SIRs) Compared to National SIRs, HHS Action Plan Targets, and National Baseline



Source: 2015 National and State Healthcare-Associated Infections Progress Report, based on 2013 data (5); National Action Plan to Prevent Health Care-Associated Infections: Roadmap to Elimination (6)

Standardized infection ratio compares infections that occurred to infections predicted.

MRSA: methicillin-resistant *Staphylococcus aureus*

SSI: surgical site infections

COLO: colon surgery

HYST: abdominal hysterectomy

National baseline (purple line): For more information, visit the FAQs (<http://www.cdc.gov/psr/faq.html>)

## Solutions and Ratings

This report highlights two practices to reduce HAIs and AR:

- Implementing state activities to build capacity for HAI prevention
- Implementing stewardship programs to improve antibiotic use in acute care hospitals

Improving health care through HAI and AR prevention, detection, and response are priorities for CDC, the US Department of Health and Human Services (HHS), and the White House. The White House's National Strategy for Combating Antibiotic-Resistant Bacteria (CARB) and National Action Plan stress the judicious use of antibiotics to prevent transmission of AR infections (7,8). The HHS HAI action plan sets national goals for reducing HAIs and provides a framework for state HAI prevention plans (6). In CDC's 2014 National Healthcare Safety Network (NHSN) Annual Hospital Survey, 39.2% of US hospitals reported having antibiotic stewardship programs (9) that included seven core elements CDC deems critical for such programs (4).

Other strategies supported by evidence include optimizing infection control practices within healthcare facilities, using a coordinated regional approach to preventing infections, and implementing CDC's Targeted Assessment for Prevention (TAP) strategy (10,11).

## Status of Policy and Practice Solutions

### State activities to build capacity for HAI prevention

*State health department implementation of activities to improve the state's ability to prevent and control HAIs across four prevention areas: 1) building and maintaining partnerships (e.g., collaborating with quality improvement organizations or hospital associations), 2) supporting HAI-related outbreak response by building infrastructure to identify and respond to reports of outbreaks in healthcare settings, 3) conducting or supporting HAI training, and 4) validating HAI data (i.e., analyzing data for quality and completeness and/or reviewing medical records to check data accuracy).*

**As of July 31, 2015, Georgia's HAI activities addressed three of the four prevention areas: HAI partnerships, outbreak response, and training (11).**

Rating	Number of HAI prevention areas addressed
Green	All four
<b>Yellow</b>	<b>Three</b>
Red	Two or fewer

HHS's HAI action plan sets national goals and targets for reducing and preventing HAIs (6). CDC helps states achieve these targets by providing technical expertise and assistance in addressing the following prevention areas: HAI partnerships, outbreak response, training, and data validation. State programs that address these four areas are critical for reducing HAIs (6). Increasing states' capacity to prevent HAIs can reduce illnesses, save money, and improve healthcare quality for patients (6).

### How This Rating Was Determined

The rating reflects the number of HAI prevention areas the state has addressed. Ratings are based on data from a CDC 2015 survey of state HAI coordinators, which asked states whether their HAI prevention activities had addressed the following prevention areas: HAI partnerships, outbreak response, training, and data validation (12). Data validation responses were confirmed using the findings of the 2015 *National and State Healthcare-Associated Infections Progress Report* (13).

### Stewardship programs to improve antibiotic use in acute care hospitals

*Programs in acute care hospitals that incorporate seven core elements CDC deems critical to successful hospital antibiotic stewardship: 1) leadership commitment, 2) accountability, 3) drug expertise, 4) actions to improve antibiotic use, 5) tracking antibiotic use and outcomes, 6) reporting antibiotic use and outcomes to staff, and 7) education (4).*

**As of December 2014, 41.1% of acute care hospitals in Georgia reported having antibiotic stewardship programs that incorporated all 7 core elements deemed critical by CDC (9).**

Rating	Percentage of acute care hospitals with antibiotic stewardship programs
Green	≥75.0%
Yellow	50.0%–74.9%
<b>Red</b>	<b>≤49.9%</b>

The White House's National Strategy and Action Plan for fighting antibiotic resistance encourage the use of antibiotic stewardship programs to ensure and improve the judicious use of antibiotics (7,8). AR infections prolong hospitalizations and increase costs, disabilities, and deaths. Inappropriate antibiotic use is a major cause of these infections. Stewardship programs in acute care hospitals are critical to improving antibiotic use and prescribing practices, ensuring optimal treatment of patients, and prolonging the time antibiotics are effective (4). Stewardship programs can reduce AR infections, *C. difficile* infections, and antibiotic adverse events; decrease drug and healthcare costs; and improve healthcare quality for patients.

#### How This Rating Was Determined

The rating reflects the percentage of the state's acute care hospitals participating in the Patient Safety Component of NHSN that reported having antibiotic stewardship programs that incorporated CDC's seven core elements (4). Ratings are based on data from the 2014 NHSN Annual Hospital Survey Patient Safety Component (9).

## References

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# Making Health Care Safer

## Protect patients from antibiotic resistance

People receiving medical care can get serious infections called healthcare-associated infections (HAIs), which may lead to sepsis or death. Hospitals report common HAIs to CDC, including infections caused by *C. difficile*, infections following surgery, and infections following placement of a tube in the bladder or a large vein (catheter). These infections can be caused by bacteria that are resistant to antibiotics, making them difficult to treat. In certain kinds of hospitals, one in four of these infections (not including *C. difficile*) are caused by antibiotic-resistant bacteria identified by CDC as urgent or serious threats to health.\* Although progress has been made, more work is needed. Three critical efforts to prevent an HAI are **1)** prevent infections related to surgery or placement of a catheter, **2)** prevent spread of bacteria between patients, and **3)** improve antibiotic use. It's important that healthcare providers take these actions with every patient every time to prevent HAIs and stop the spread of antibiotic resistance.

### Healthcare providers need to:

- Follow recommendations for preventing *C. difficile* and infections that can occur after surgery or are related to single-use catheters placed in the body. Follow recommended actions with every patient every time. Isolate patients when appropriate, and know antibiotic resistance patterns in your facility/area.
- Prescribe antibiotics correctly. Get cultures, start antibiotics promptly, and reassess 24-48 hours later. Know when to stop antibiotic treatment.

\*Long-term acute care hospitals, which provide complex medical care, such as ventilator or wound care, for long periods of time.

Want to learn more? [www.cdc.gov/vitalsigns/protect-patients](http://www.cdc.gov/vitalsigns/protect-patients)



**Centers for Disease  
Control and Prevention**  
National Center for Emerging and  
Zoonotic Infectious Diseases

# 6

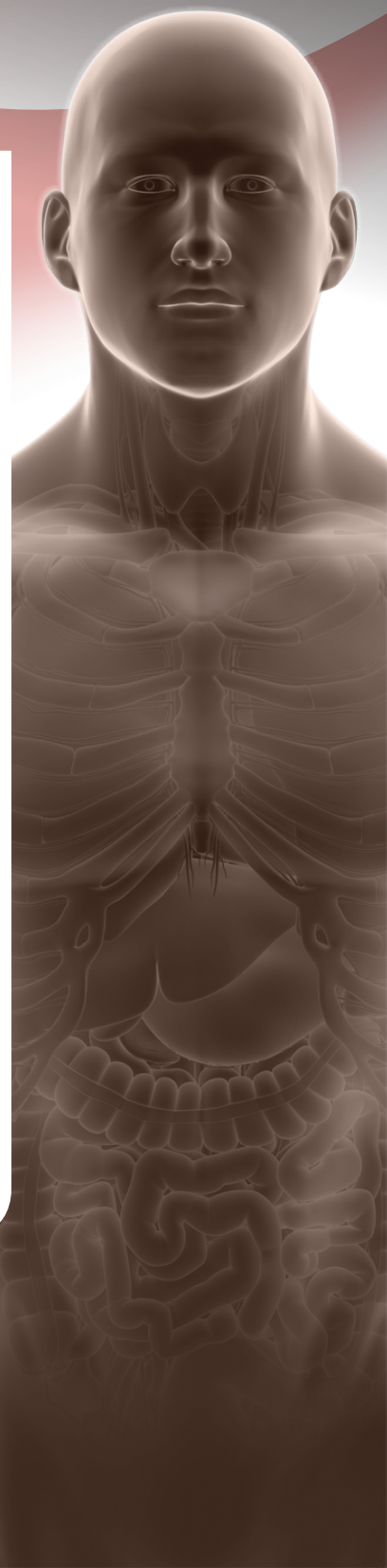
Six urgent or serious antibiotic-resistant threats, plus *C. difficile*, can cause HAIs.

# 50%

50% of one common deadly HAI is currently being prevented.

# 1 in 4

1 in 4 catheter- and surgery-related HAIs are caused by six resistant bacteria in certain kinds of hospitals.



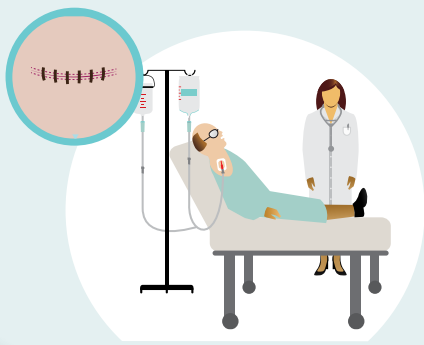
# Problem:

## Antibiotic-resistant HAIs are a threat to all patients.

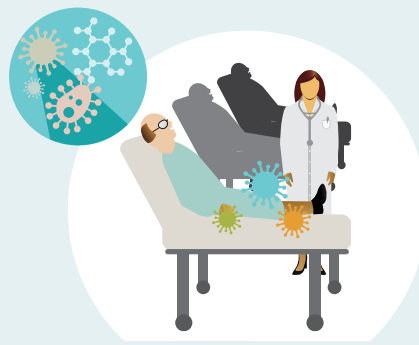


- HAIs are commonly caused by antibiotic-resistant bacteria, which may lead to sepsis or death. One in seven catheter- and surgery-related HAIs in acute care hospitals, and one in four catheter- and surgery-related HAIs in long-term acute care hospitals, is caused by any of six resistant bacteria (not including *C. difficile*).
- These six bacteria are among the most deadly antibiotic-resistant bacteria, identified as urgent or serious threats by CDC: CRE (carbapenem-resistant Enterobacteriaceae), MRSA (methicillin-resistant *Staphylococcus aureus*), ESBL-producing Enterobacteriaceae (extended-spectrum  $\beta$ -lactamases), VRE (vancomycin-resistant enterococci), multi-drug resistant pseudomonas, and multi-drug resistant *Acinetobacter*.
- Progress has been made in preventing HAIs, including a 50% decrease in central line-associated blood stream infections from 2008 to 2014, but more work is needed.
- *C. difficile* is the most common type of bacteria responsible for infections in hospitals. Most *C. difficile* is not resistant to the antibiotics used to treat it, but antibiotic use puts patients at high risk for deadly diarrhea.

## Protect patients from antibiotic-resistant infections.



Surgeries and single-use catheters help treat patients, but they can be pathways for bacteria to enter the body.



Bacteria can be spread when appropriate infection control actions are not taken.



Antibiotics save lives, but poor prescribing practices puts patients at risk.

Combine infection control actions with every patient to prevent infections in health care.



Prevent infections from catheters and after surgery.



Prevent bacteria from spreading.



Improve antibiotic use.

# Protect every patient every time.



## Actions to prevent antibiotic-resistant infections in healthcare.



### Prevent infections from catheters and after surgery.

- ✓ Use catheters only when needed.
- ✓ Follow recommendations for safer surgery and catheter insertion and care.
- ✓ Remove catheters from patient as soon as they are no longer needed.

### Prevent bacteria from spreading.

- ✓ Improve hand hygiene.
- ✓ Use gloves, gowns, and dedicated equipment for patients who have resistant bacteria.
- ✓ Know about antibiotic-resistant HAI outbreaks in your hospital and region (e.g. promote coordinated action for prevention).

### Improve antibiotic use.

- ✓ Get cultures and start antibiotics promptly, especially in the case of sepsis.
- ✓ Use cultures to reassess the need for antibiotics and stop antibiotic treatment as soon as they are no longer needed.
- ✓ When antibiotics are necessary, use the appropriate antibiotic in the proper dosage, frequency, and duration.

## NATIONAL

## ACUTE CARE HOSPITALS

**Healthcare-associated infections (HAI)** are infections patients can get while receiving medical treatment in a healthcare facility. Working toward the elimination of HAIs is a CDC priority. For more information on HAI prevention progress, visit: [www.cdc.gov/hai/progress-report/index.html](http://www.cdc.gov/hai/progress-report/index.html).



### CLABSIs

CENTRAL LINE-ASSOCIATED BLOODSTREAM INFECTIONS

- **1 in 6** CLABSIs were caused by urgent or serious antibiotic-resistant threats.

### SSIs

SURGICAL SITE INFECTIONS

- **1 in 7** SSIs were caused by urgent or serious antibiotic-resistant threats.

### CAUTIs

CATHETER-ASSOCIATED URINARY TRACT INFECTIONS

- **1 in 10** CAUTIs were caused by urgent or serious antibiotic-resistant threats.

### *C. difficile* Infections

- **9 in 10** patients diagnosed with *C.difficile* are related to healthcare.

# What Can Be Done?



## The Federal government is

- **Preventing infections and their spread:** Conducting surveillance for HAIs and antibiotic resistance, using data to target prevention, and promoting implementation of recommendations. Identifying emerging resistant threats. Promptly responding to and controlling outbreaks.
- **Improving antibiotic use:** Promoting appropriate use and providing guidance/assessing implementation of stewardship programs across health care settings.
- **Promoting use of data:** Preventing HAIs and improving antibiotic use to better protect patients. Collaborating with partners to implement prevention and stewardship strategies, including in federal facilities.  
[www.cdc.gov/hai/surveillance/ar-patient-safety-atlas.html](http://www.cdc.gov/hai/surveillance/ar-patient-safety-atlas.html)

## Healthcare providers need to

- **Prevent infections and their spread:** Follow recommendations for preventing *C. difficile* and infections that can occur after surgery or related to single-use catheters placed in the body. Follow recommended actions with every patient every time. Isolate patients when appropriate, and know antibiotic resistance patterns in your facility/area.
- **Improve antibiotic use:** Prescribe antibiotics correctly. Get cultures, start antibiotics promptly, and reassess 24-48 hours later. Know when to stop antibiotic treatment.

## Health care facility CEOs/ administrators can

- **Prevent infections and their spread:** Follow CDC guidelines for preventing infections and promote data use to target prevention and improvements. Make sure staff follow hand hygiene, isolation, and environmental/device cleaning practices.  
[www.cdc.gov/hai/prevent/tap.html](http://www.cdc.gov/hai/prevent/tap.html)

- **Improve antibiotic use:** Establish stewardship program and enroll your hospital to submit data to CDC's Antimicrobial Use and Resistance (AUR) Module to target improvements.  
<http://www.cdc.gov/nhsn/acute-care-hospital/aur/index.html>
- **Prioritize:** Make infection prevention, sepsis prevention, and stewardship a priority; participate in a Quality Innovation Network.

## State and local health departments can

- **Prevent infections and their spread:** Set goals, monitor your state's progress in preventing infections, promote action, and achieve regional prevention. Support institutions to meet goals.  
[www.cdc.gov/hai/progress-report](http://www.cdc.gov/hai/progress-report)
- **Improve antibiotic use:** Support stewardship efforts and know antibiotic resistance patterns in your area.

## Patients and their families can

- **Prevent infections and their spread:** If you have a catheter, ask daily if it's necessary. If you are having surgery, ask your doctor how he/she prevents infections. Insist that everyone clean their hands before touching you. Clean your hands often. Explore Hospital Compare tool for HAI data.  
<https://www.medicare.gov/hospitalcompare/search.html>
- **Improve antibiotic use:** Ask if your antibiotic is necessary and what is being done to improve antibiotic use and protect patients.

For more information, please contact  
1-800-CDC-INFO (232-4636)  
TTY: 1-888-232-6348  
[www.cdc.gov](http://www.cdc.gov)

**Centers for Disease Control and Prevention**  
1600 Clifton Road NE, Atlanta, GA 30333  
Publication date: 03/03/2016



# Making Health Care Safer

## Stop Spread of Antibiotic Resistance

We're at a tipping point: an increasing number of germs no longer respond to the drugs designed to kill them. Inappropriate prescribing of antibiotics and lack of infection control actions can contribute to drug resistance and put patients at risk for deadly diarrhea (caused by *C. difficile*). Even if one facility is following recommended infection controls, germs can be spread inside of and between health care facilities when patients are transferred from one health care facility to another without appropriate actions to stop spread. Lack of coordination between facilities can put patients at increased risk. Now more than ever is the time for public health authorities and health care facilities to work together, sharing experiences and connecting patient safety efforts happening across the state.

### Health care facility CEOs/administrators can:

- Implement systems to alert receiving facilities when transferring patients who have drug-resistant germs.
- Review and perfect infection control actions within your facility.
- Get leadership commitment to join healthcare-associated infection (HAI)/antibiotic resistance prevention activities in the area.
- Connect with the public health department to share data about antibiotic resistance and other HAIs.
- Make sure clinical staff have access to prompt and accurate laboratory testing for antibiotic-resistant germs.

Want to learn more? [www.cdc.gov/vitalsigns/stop-spread](http://www.cdc.gov/vitalsigns/stop-spread)



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Control and Prevention  
National Center for Emerging and  
Zoonotic Infectious Diseases

2  
Million

Antibiotic-resistant  
germs cause more than  
2 million illnesses and  
at least 23,000 deaths  
each year in the US.

70%

Up to 70% fewer  
patients will get CRE  
over 5 years if facilities  
coordinate to protect  
patients.

37,000

Preventing infections  
and improving  
antibiotic prescribing  
could save 37,000 lives  
from drug-resistant  
infections over 5 years.



# Problem:

## Germs spread between patients and across health care facilities.



### Antibiotic resistance is a threat.

- Nightmare germs called CRE (carbapenem-resistant *Enterobacteriaceae*) can cause deadly infections and have become resistant to all or nearly all antibiotics we have today. CRE spread between health care facilities like hospitals and nursing homes when appropriate actions are not taken.
- MRSA (methicillin-resistant *Staphylococcus aureus*) infections commonly cause pneumonia and sepsis that can be deadly.
- The germ *Pseudomonas aeruginosa* can cause HAIs, including bloodstream infections. Strains resistant to almost all antibiotics have been found in hospitalized patients.
- These germs are some of the most deadly resistant germs identified as “urgent” and “serious” threats.

### *C. difficile* infections are at historically high rates.

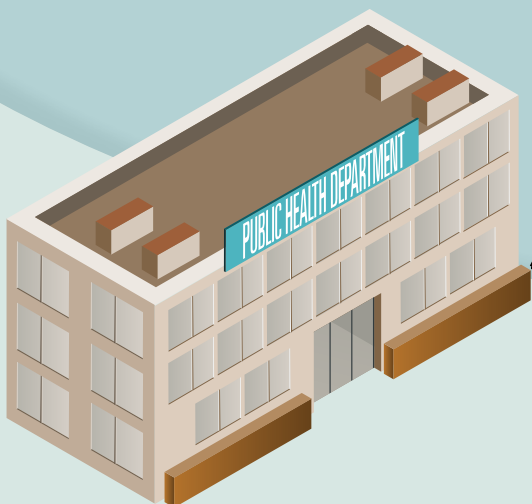
- *C. difficile* (*Clostridium difficile*), a germ commonly found in health care facilities, can be picked up from contaminated surfaces or spread from a healthcare provider’s hands.

- Most *C. difficile* is not resistant to antibiotics, but when a person takes antibiotics, some good germs are destroyed. Antibiotic use allows *C. difficile* to take over, putting patients at high risk for deadly diarrhea.

### Working together is vital.

- Infections and antibiotic use in one facility affect other facilities because of patient transfers.
- Public health leadership is critical so that facilities are alerted to data about resistant infections, *C. difficile*, or outbreaks in the area, and can target effective prevention strategies.
- When facilities are alerted to increased threat levels, they can improve antibiotic use and infection control actions so that patients are better protected.
- National efforts to prevent infections and improve antibiotic prescribing could prevent 619,000 antibiotic-resistant and *C. difficile* infections over 5 years.

## Take Steps Now! Public health departments should lead coordination.



- Identify the health care facilities in the area and how they are connected.
- Dedicate staff to improve connections and coordination with health care facilities in the area.
- Work with CDC to use data for action to better prevent infections and improve antibiotic use in health care settings.
- Know the antibiotic resistance threats in the area and state.

# Facilities work together to protect patients.

## Common Approach *(Not enough)*

- Patients can be transferred back and forth from facilities for treatment without all the communication and necessary infection control actions in place.

## Independent Efforts *(Still not enough)*

- Some facilities work independently to enhance infection control but are not often alerted to antibiotic-resistant or *C. difficile* germs coming from other facilities or outbreaks in the area.
- Lack of shared information from other facilities means that necessary infection control actions are not always taken and germs are spread to other patients.

## Coordinated Approach *(Needed)*

- Public health departments track and **alert** health care facilities to antibiotic-resistant or *C. difficile* germs coming from other facilities and outbreaks in the area.
- Facilities and public health authorities share information and implement shared infection control actions to stop spread of germs from facility to facility.



## More patients get infections when facilities do not work together.

(Example: 5 years after CRE enters 10 facilities in an area sharing patients)

### Common Approach (status quo)



CRE will impact **12%** of patients.

### Independent Efforts



CRE will impact **8%** of patients.

### Coordinated Approach



CRE will impact **2%** of patients.



# What Can Be Done?



## The Federal government is

- Implementing activities across all government agencies to address the National Action Plan for Combating Antibiotic-Resistant Bacteria.  
[www.whitehouse.gov/sites/default/files/docs/national\\_action\\_plan\\_for\\_combating\\_antibiotic-resistant\\_bacteria.pdf](http://www.whitehouse.gov/sites/default/files/docs/national_action_plan_for_combating_antibiotic-resistant_bacteria.pdf)
- For example, CDC is:
  - ▶ Protecting more people by tracking outbreaks, monitoring antibiotic use and resistance, improving prescribing, and preventing infections through investment in State HAI/Antibiotic Resistance Protect Programs, as described in the President's proposed FY16 budget.  
[www.cdc.gov/drugresistance/solutions-initiative/index.html](http://www.cdc.gov/drugresistance/solutions-initiative/index.html)
  - ▶ Supporting health departments, health care facilities, health care networks, and professional and quality improvement organizations to track and respond to data about HAIs and antibiotic-resistant infections.

## State and local health departments can

- Identify the health care facilities in the area and how they are connected. Know their infection prevention and antibiotic stewardship activities.
- Dedicate staff to improve connections and coordination with health care facilities in the area.
- Work with CDC to use data for action to better prevent infections and improve antibiotic use in health care settings.
- Know the antibiotic resistance threats in the area and state.

For more information, please contact

1-800-CDC-INFO (232-4636)

TTY: 1-888-232-6348

[www.cdc.gov](http://www.cdc.gov)

Centers for Disease Control and Prevention

1600 Clifton Road NE, Atlanta, GA 30333

Publication date: 8/4/2015

## Health care facility CEOs/ administrators can

- Implement systems to alert receiving facilities when transferring patients who have drug-resistant germs.
- Review and perfect infection control actions within your facility.
- Get leadership commitment to start or join HAI/antibiotic resistance prevention activities in the area.
- Connect with the public health department to share data about antibiotic resistance and other HAIs.
- Make sure clinical staff have access to prompt and accurate laboratory testing for antibiotic-resistant germs.

## Prescribers and healthcare staff can

- Prescribe antibiotics correctly. Get cultures then start the right drug promptly at the right dose for the right duration. Know when to stop antibiotics.
- Be aware of antibiotic resistance patterns in your facility and area to protect your patients.
- Ask patients if they have recently received care in another facility.
- Follow hand hygiene and other infection control measures with every patient.  
[www.cdc.gov/handhygiene/](http://www.cdc.gov/handhygiene/)

## Patients and their families can

- Ask your healthcare provider what they and the facility will do to protect you and your family from an antibiotic-resistant or *C. difficile* infection.
- Tell your doctor if you have been hospitalized in another facility.
- Insist that everyone wash their hands before touching you, and wash your hands often.



# CDC's Antibiotic Resistance (AR) Solutions Initiative

COMBATING THE GLOBAL THREAT JEOPARDIZING MODERN MEDICINE

**\$160  
MILLION  
to:**

- Tackle the threat of antibiotic resistance (when bacteria no longer respond to the drugs designed to kill them)
- Transform how CDC and public health partners address and slow resistance at all levels with an ambitious approach
- Empower the nation to respond comprehensively, efficiently, and effectively

## Detect & Respond

**AR Lab Network**  
for nationwide detection of new & known threats

**Whole genome sequencing**  
to fight resistance in food-related infections

**Robust systems**  
to track resistance, antibiotic use, infections in the community & healthcare

**50-state lab capacity**  
to track and stop the nightmare bacteria, CRE

## Prevent

**Expanded overseas tuberculosis screenings**

**Education, prevention**  
for antibiotic stewardship, sepsis prevention

**State prevention programs**  
to drive adoption of the coordinated approach

**Rapid gonorrhea detection, tracking, and treatment**

## Innovate

**Discover new ways to protect patients**  
from resistant infections

**New ways to ensure successful tuberculosis treatment**

**AR Isolate Bank**  
to support new drug and diagnostic development

**Microbiome research**  
to unlock mysteries of the gut-drug relationship

## State Programs to Fight Antibiotic Resistance in:

- Healthcare facilities
- Community infections, like drug-resistant gonorrhea
- Foodborne infections

For more information, visit  
[www.cdc.gov/drugresistance](http://www.cdc.gov/drugresistance)

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MILLION**

Increased funding for FY17 will ensure the nation's ability to stand up a full response faster, protecting Americans and today's antibiotics from resistant germs sooner.