DHQP Updates

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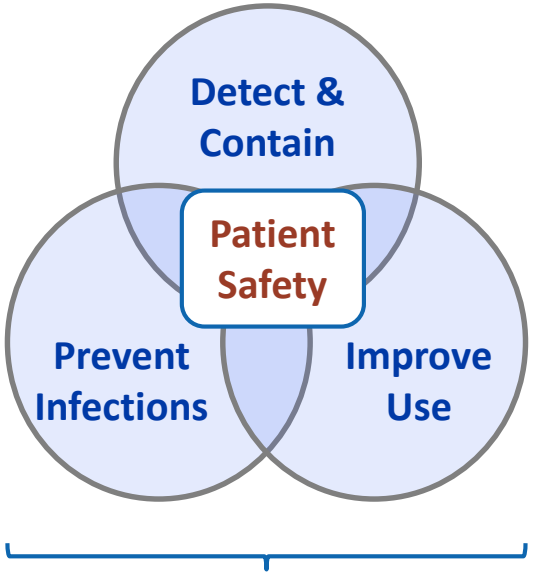
Healthcare Infection Control Practices Advisory Committee (HICPAC)

November 15, 2018

Preventing Infections and Combating Antibiotic Resistance in Healthcare and Community Settings

Centers for Disease Control and Prevention Strategy



HAI Prevalence Survey (2015) highlights progress made and areas where more work is needed

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Changes in Prevalence of Health Care–Associated Infections in U.S. Hospitals

S.S. Magill, E. O'Leary, S.J. Janelle, D.L. Thompson, G. Dumyati, J. Nadle, L.E. Wilson, M.A. Kainer, R. Lynfield, S. Greissman, S.M. Ray, Z. Beldavs, C. Gross, W. Bamberg, M. Sievers, C. Concannon, N. Buhr, L. Warnke, M. Maloney, V. Ocampo, J. Brooks, T. Oyewumi, S. Sharmin, K. Richards, J. Rainbow, M. Samper, E.B. Hancock, D. Leaptrot, E. Scalise, F. Badrun, R. Phelps, and J.R. Edwards, for the Emerging Infections Program Hospital Prevalence Survey Team*

ABSTRACT

BACKGROUND

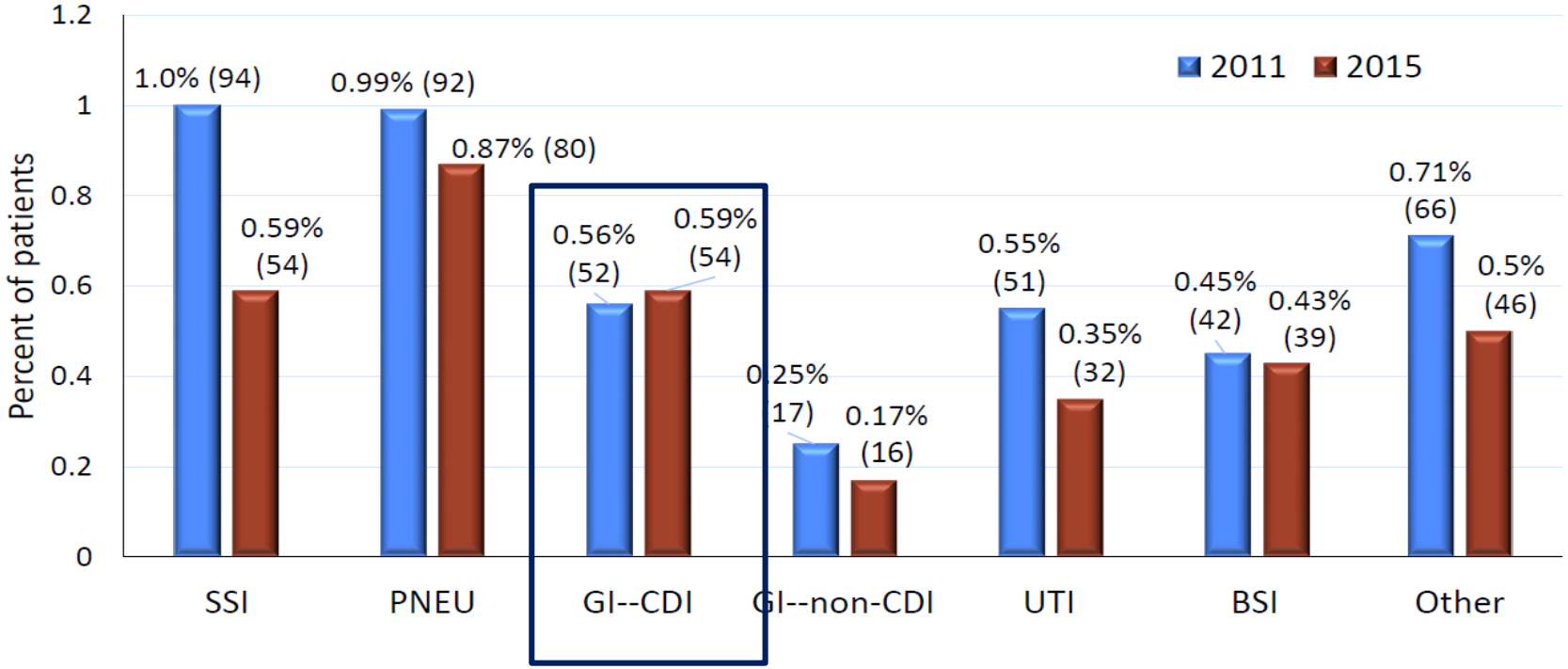
A point-prevalence survey that was conducted in the United States in 2011 showed that 4% of hospitalized patients had a health care–associated infection. We repeated the survey in 2015 to assess changes in the prevalence of health care–associated infections during a period of national attention to the prevention of such infections.

Patients were 16% less likely to have an HAI in 2015 than they were in 2011

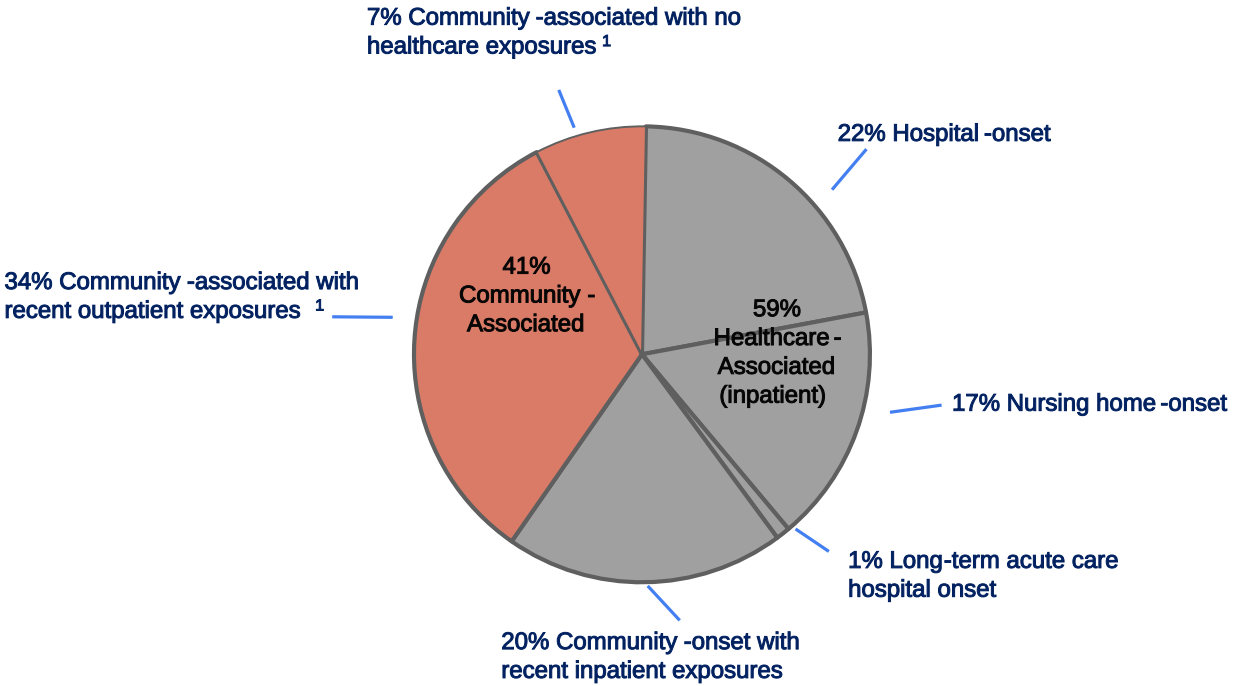
Most Common Infection Types	
pneumonia	26%
gastrointestinal infections	21%
surgical site infections	16%
BSI unrelated to an infection at another site	12%
urinary tract infections	9%

Magill, S.S., *et al.* Changes in Prevalence of Health Care-Associated Infections in U.S. Hospitals. New England Journal of Medicine. 2018. 379:1732-1744

Healthcare-associated infection (HAI) prevalence surveys, U.S. hospitals, 2011-2015

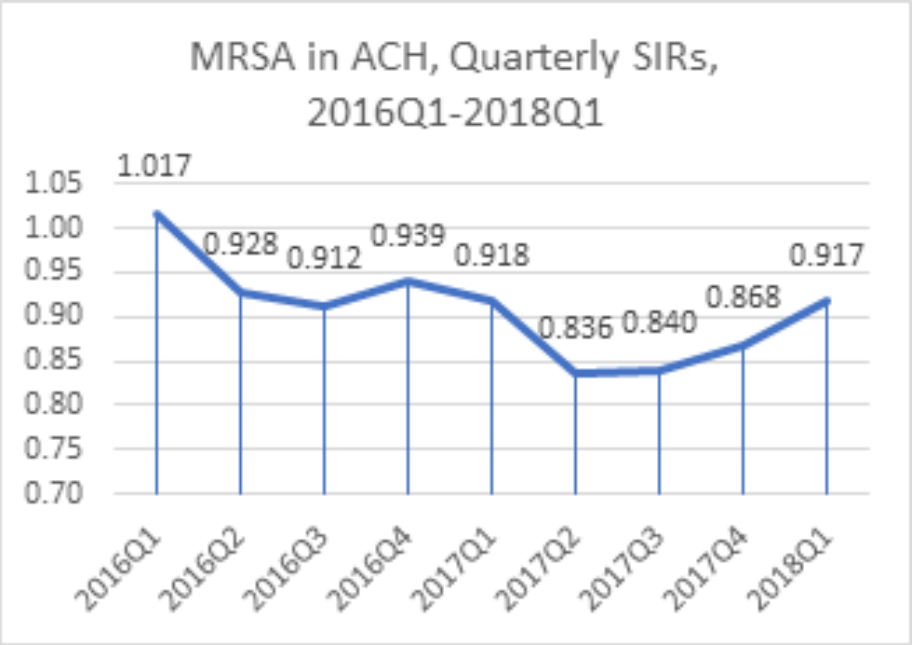


C. difficile infections in the United States: healthcare exposures are critical to community-onset



MRSA trends in U.S. hospitals - declines are not on track to meet national goals

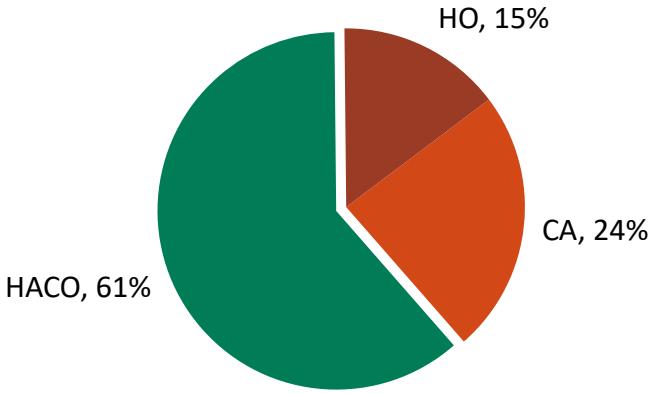
- Gradual decline in hospital-onset MRSA bacteremia, 2011-2014
- NHSN's new SIR baseline shows 6.5% decline, 2015-2016
- **HHS Target:** Reduce hospital-onset MRSA bacteremia SIR by 50% by 2020 from 2015 baseline



NHSN, 2011-2018; ACH: acute care hospitals; CMS requirements began in 2013.

Healthcare-associated, community-onset: A large part of MRSA BSI (EIP)

Distribution of MRSA BSI by Epiclass, 2016, EIP

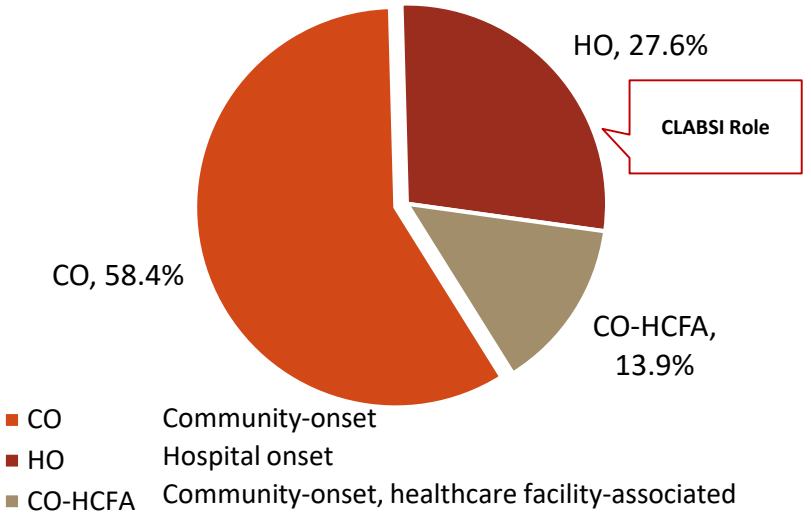


Community-associated (CA)
Healthcare-associated, community-onset (HACO)
Hospital onset (HO)

N = 7 Sites

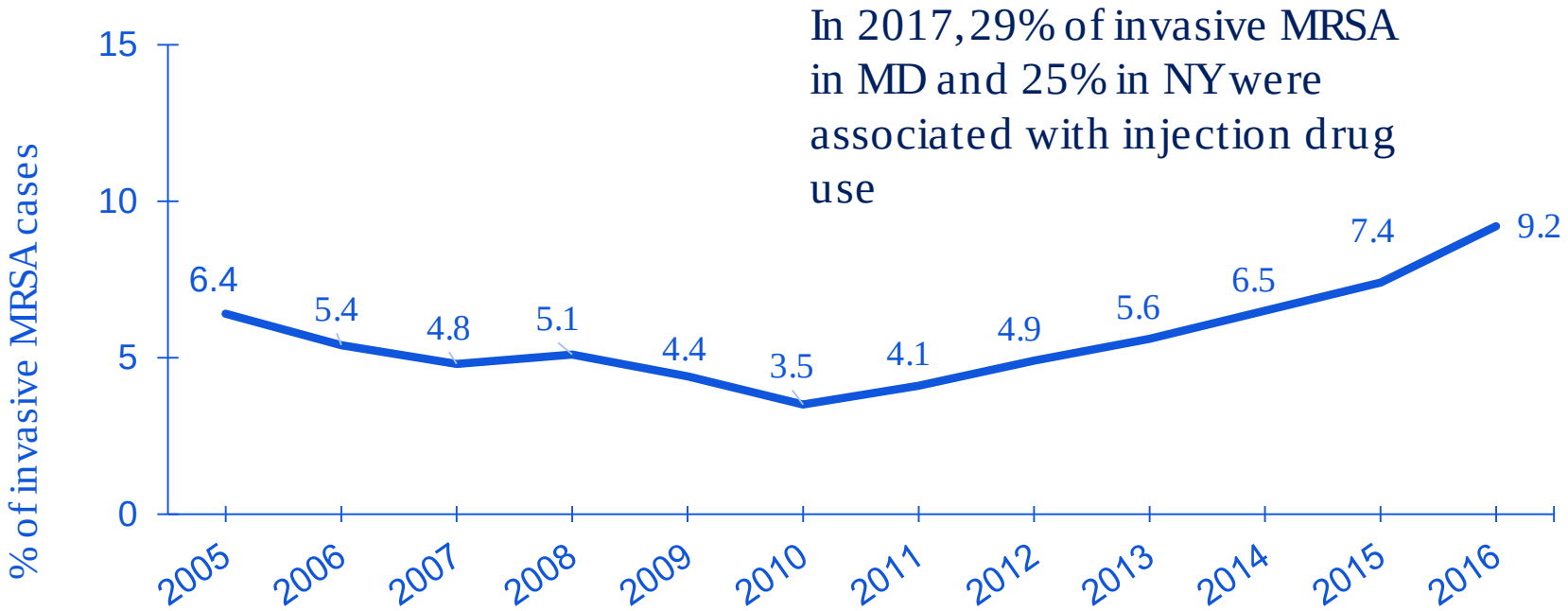
Community-onset: A large part of MRSA Bacteremia (NHSN)

Proportion of MRSA Bacteremia Events by Epiclass, 2015, NHSN



N = 72,852

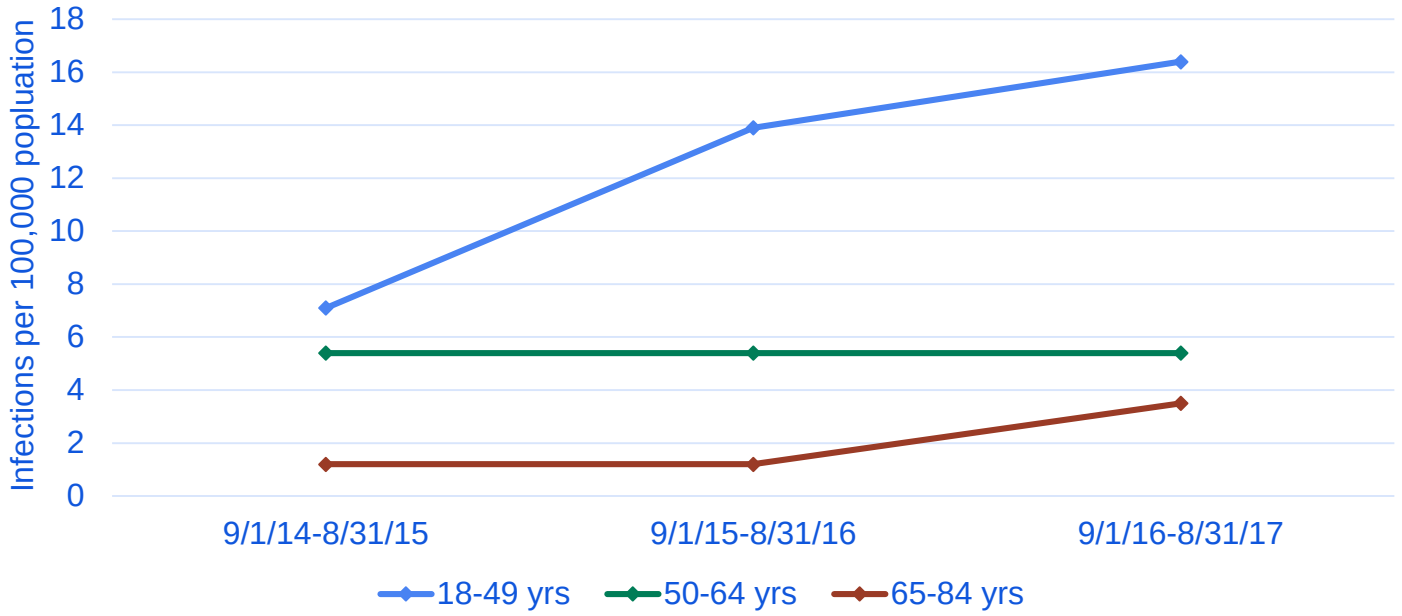
Percentage of invasive MRSA cases that are in PWID—6 EIP sites*



*Does not include CO, MD, OR (similar increases from 2010-2014) or NM (no data)

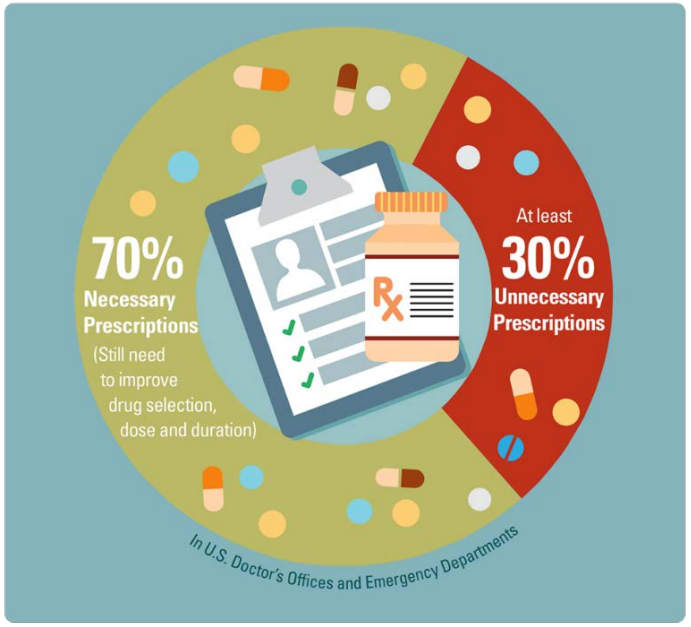
Jackson KA, Bohm MK, Brooks JT, et al. Invasive Methicillin-Resistant *Staphylococcus aureus* Infections Among Persons Who Inject Drugs — Six Sites, 2005–2016. MMWR Morb Mortal Wkly Rep 2018; 67:625–628.

Incidence of injection drug use-associated invasive *S. aureus*—Monroe County, NY, 2014-2017

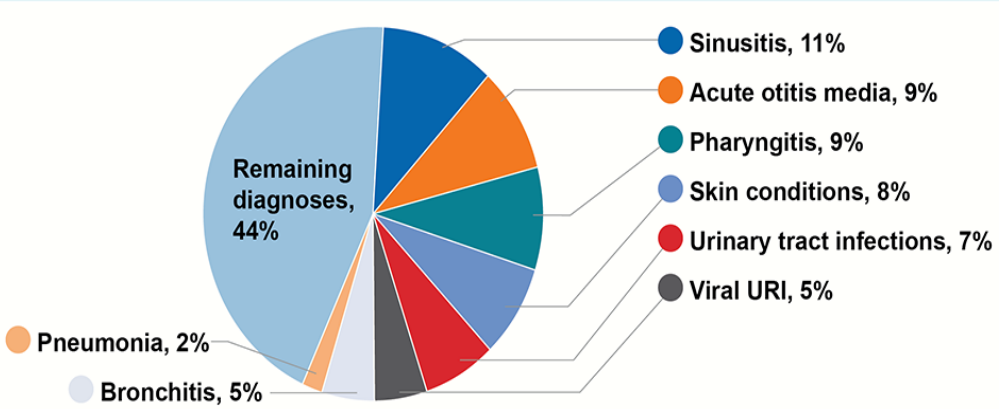


45% are endocarditis

Felsen, C.B., et al. Increasing Incidence of Invasive Methicillin-Resistant and Methicillin-Sensitive *Staphylococcus aureus* Infections among Persons Who Inject Drugs, 2014-2017. ID Week. 2018. Abstract #1211.



30% of outpatient antibiotics prescribed in U.S. doctor's offices, hospital clinics and emergency departments are unnecessary

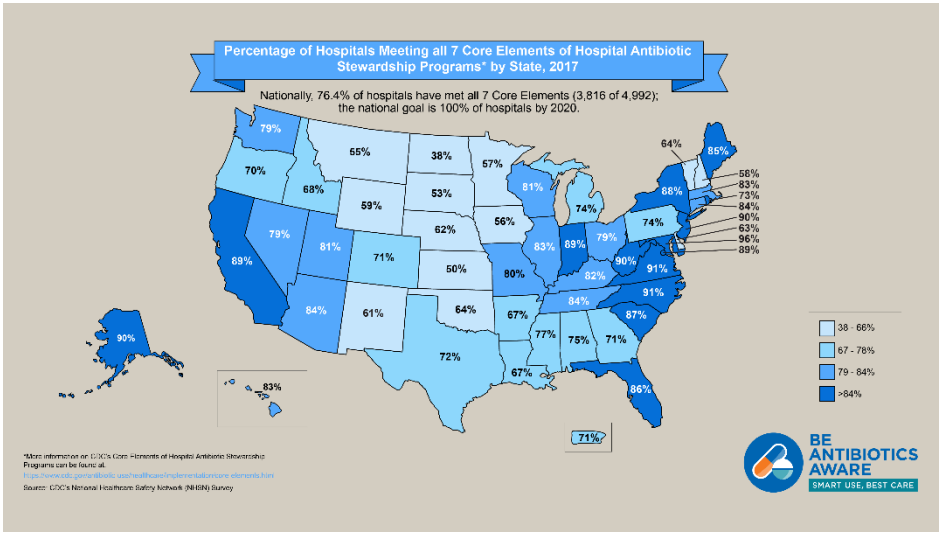


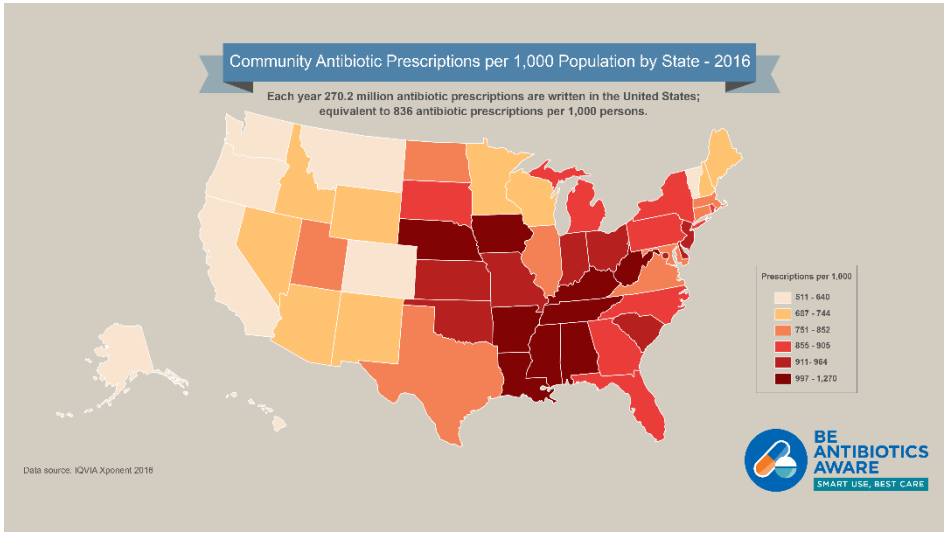
Diagnoses leading to antibiotics in doctors' offices, hospital clinics and emergency departments — US, 2010–11

Fleming-Dutra KE, Hersh AL, Shapiro DJ, et al. *JAMA* 2016 May 3;315(17):1864–73

URI=Upper respiratory infection

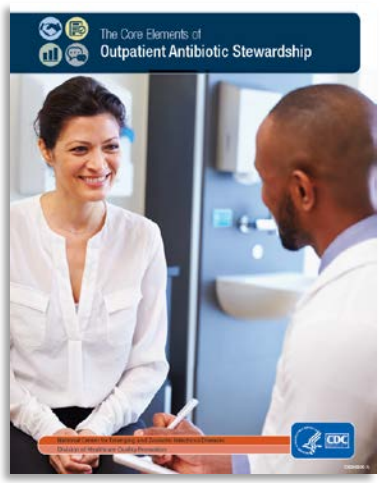
Progress in advancing antimicrobial stewardship



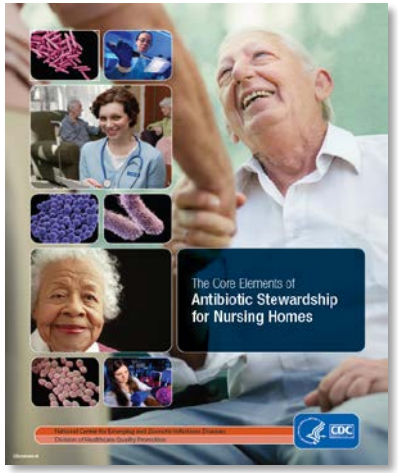


- 76% of U.S. hospitals have an antibiotic stewardship program that meets CDC's Core Elements
- 270.2 million antibiotic prescriptions were dispensed in U.S. outpatient pharmacies in 2016
- *Advances in optimizing antibiotic prescribing in outpatient settings,* BMJ (November 2018)*:* Publication summarizes the evidence on drivers of inappropriate outpatient antibiotic prescribing and potential interventions to improve outpatient antibiotic use


The Core Elements of
Hospital Antibiotic Stewardship Programs
CDC


The Core Elements of
Outpatient Antibiotic Stewardship
CDC


The Core Elements of
Human Antibiotic Stewardship Programs
in Resource-Limited Settings:
National and Hospital Levels
CDC


The Core Elements of
Antibiotic Stewardship
for Nursing Homes
CDC


Implementation of
Antibiotic Stewardship Core Elements
at Small and Critical Access Hospitals
AMBULANCE
HRSA
PEW
CDC


BE ANTIBIOTICS AWARE
SMART USE. BEST CARE
New CDC Training on Antibiotic Stewardship
CDC
U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

BE ANTIBIOTICS AWARE

SMART USE, BEST CARE

U.S. ANTIBIOTIC AWARENESS WEEK

November 12–18, 2018

www.cdc.gov/antibiotic-use

- Collaborating with domestic and international partners to raise awareness of the threat of AR and need to improve antibiotic prescribing and use.
- Promoting *Be Antibiotics Aware*, CDC's national educational effort to keep patients safe, decrease adverse drug events, and help fight antibiotic resistance.
- Highlighting AMR Challenge commitments organizations made to fight against AR.
- Aligns with World Health Organization's World Antibiotic Awareness Week and European Centre for Disease Prevention and Control's European Antibiotic Awareness Day.

CDC educates patients, physicians, and public about the importance of sepsis prevention and early intervention

GET AHEAD OF SEPSIS

KNOW THE RISKS. SPOT THE SIGNS. ACT FAST.

Public service announcements targeted English- and Spanish-speaking patients and um

Taxi Television

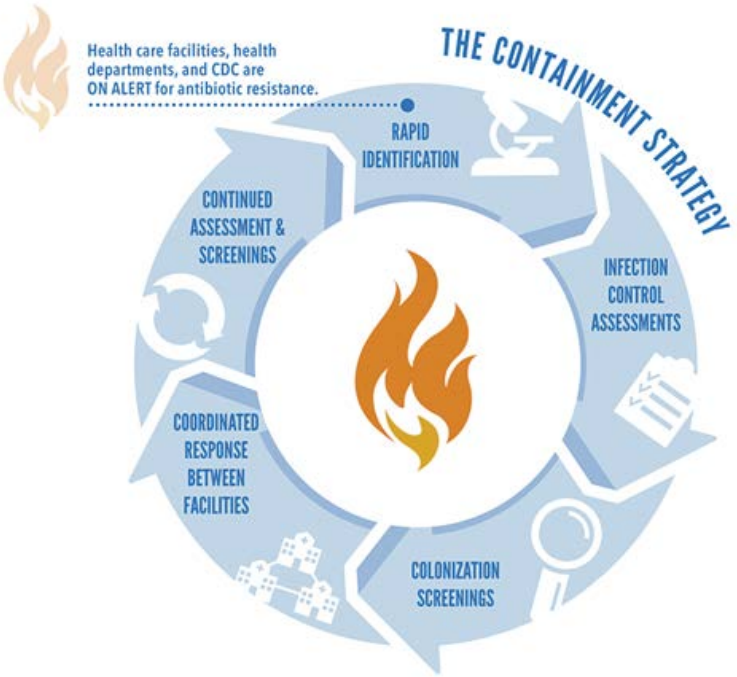
Doctor's office

Outdoor Shopping Center

Indoor Shopping Center

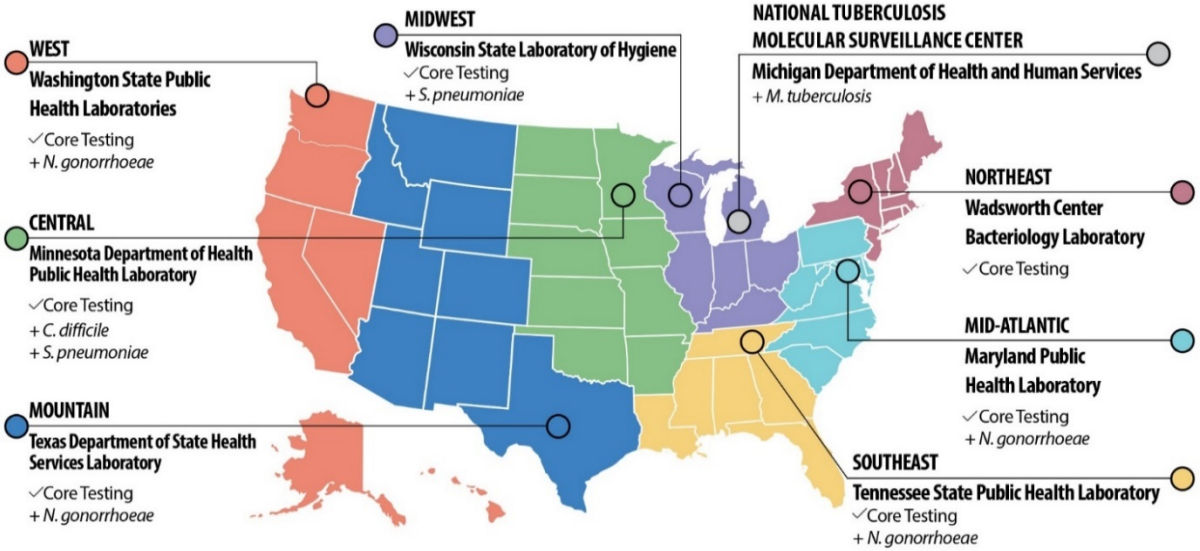
The Containment Strategy

- Rapid detection in health care facilities
- Infection control assessments led by the health department
- Colonization screenings, when needed
- Coordination between healthcare facilities
- Continued vigilance until spread is controlled



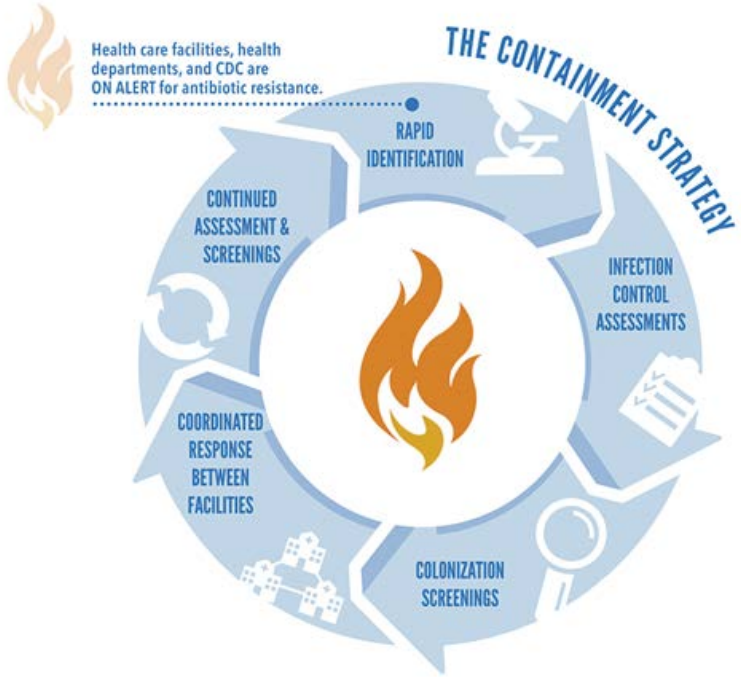
Antibiotic Resistance Laboratory Network

Nationwide lab capacity to detect AR in healthcare, food, and community. Tracks resistance to identify outbreaks faster, stop spread, and protect people.



- CDC lab expertise and coordination
- 7 regional labs
- 1 National TB Molecular Surveillance Center
- 56 state and local labs

Containment Strategy and AR Laboratory Network enable rapid detection of and response to novel resistance



Activity	2017	As of 8/31/2018
Cumulative number of isolates tested by AR Lab Network (CRE, CRPA)	11,557	12,376
Cumulative number of colonization screening swabs tested by AR Lab Network	2,022	6,581
Cumulative number of CDC-supported AR containment responses	152	107

THE AMR CHALLENGE

Will you fight or fuel antimicrobial resistance?

CDC along with HHS is leading a yearlong initiative to bolster global efforts across sectors and around the world to step up, partner, and each play our part in the fight against AMR.

Launched by HHS Sec. Azar at the U.N. General Assembly in Sept. 2018, more than 130 commitments have come in from governments, private industry, and civil society from around the world across the five commitment areas.

This initiative will conclude in September 2019 at the U.N. General Assembly meeting to show the global progress and commitment to continue the fight against AMR around the world.

Learn more on CDC's website at CDC.gov/drugresistance.

COMMIT TO ACTION
DELIVER RESULTS
COMBAT AMR

Challenge Focus Areas

Across five commitment areas, commit to action and results that combat antimicrobial resistance.

Tracking and Data

Share data and improve data collection

Infection Prevention and Control

Reduce the spread of resistant germs

Antibiotic Use

Improve appropriate antibiotic use, including ensuring access

Environment and Sanitation

Decrease antibiotics and resistance in the environment

Vaccines, Diagnostics, Therapeutics

Invest in development and improved access

THE #GLOBALAMRCHALLENGE
SEPT. 2018-SEPT. 2019

Highlights from recent meetings

2nd World Sepsis Congress September 2018	Rory Staunton Foundation 5th National Forum on Sepsis October 2018, New York City
Interdisciplinary Sepsis Symposium September 2018, Chicago	World Health Summit October 2018, Berlin
Sepsis Alliance: Sepsis Heroes September 2018, New York City	Global Grand Challenges Gates Foundation October 2018, Berlin

Sepsis Alliance recognized individuals and groups who have made a significant contribution to sepsis awareness and education

Dr. Anne Schuchat presented remarks on CDC's recent work and plans on battling sepsis in the U.S. at The Rory Staunton Foundation's National Forum on Sepsis