

New Jersey Antimicrobial Stewardship Learning Action Collaborative Update

December 11, 2018 Meeting

Tiered Approach to Implementation of Practices

- Tier 1 “Basic Antimicrobial Stewardship Interventions”
 - Tier 2 “Intermediate Antimicrobial Stewardship Interventions”
 - Tier 3 “Advanced Antimicrobial Stewardship Interventions”
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- Currently we are focused on Tier 2- Intermediate Interventions
 - These are more complex than basic, and require more resources and coordination to implement

Partners in Collaboration

- Administrative Leadership:
 - NJHA Institute for Quality and Patient Safety
Shannon Davila, MSN, RN, CIC, CPHQ
- Clinical Leadership: Jefferson Health (New Jersey division)
 - Cindy Hou, DO, MA, MBA, FACOI, FACP
 - Marianne Kraemer, RN, MPA, ED. M., CCRN
 - David Condoluci, DO, MSc., and MACOI
- Collaborative facilities include acute care, long term acute care, post-acute care facilities

Partners from Across New Jersey and Nationally

- New Jersey Department of Health
- QIO- Healthcare Quality Strategies Inc.
- Centers for Disease Control and Prevention
- Ernest Mario School of Pharmacy
- Ronald G Nahass, MD, MHCM – President ID Care
- Quality Insights Renal Network 3
- New Jersey APIC chapters
- Partners from Long Term Care

Some Highlights Since July's Meeting

NJHA Antimicrobial Stewardship Collaborative Webinar

Lauren Pino, PharmD, BCPS, MTM-C
Woodbury Pharmacy Clinical Coordinator

Craig Sastic, PharmD, BCPS
Antimicrobial Stewardship Pharmacist

September 13, 2018

inspira
HEALTH NETWORK

Beta-Lactam Allergies and Skin Testing

Ted Louie, MD
Clinical Associate Professor of Medicine
Robert Wood Johnson Medical School

Andrew A. Aziz, PharmD, BCPS
Clinical Pharmacy Specialist
Saint Peter's University Hospital

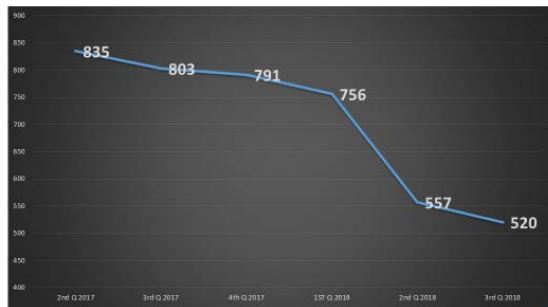
Jefferson Health.

Common Obstacles Encountered in Implementing a Successful Antimicrobial Stewardship Program in Long Term Care Facilities

Michael Barnish, DO, FACP
Jefferson Health Infectious Diseases

HOME OF SIDNEY KIMMEL MEDICAL COLLEGE

IHN DOT/1000 Days Present



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HEALTH NETWORK

Exanthematous (morbilliform) drug eruption



Numerous erythematous macules and papules are present in this child with a morbilliform drug eruption.

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UpToDate

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Introduction
Data
NHSN Submission

Inpatient Locations
Medication Administration
Patient Volume

We Build Formulary-NHSN Crosswalk

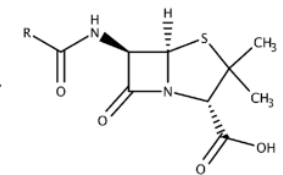
Hospital Formulary



Specific Formulations

Local Code \Rightarrow NDC

NHSN Antimicrobials



Abstract Antimicrobial

RxNorm \Rightarrow NHSN

Image Source: <https://pixabay.com/en/medications-com-tablets-pharmacy-257489/>

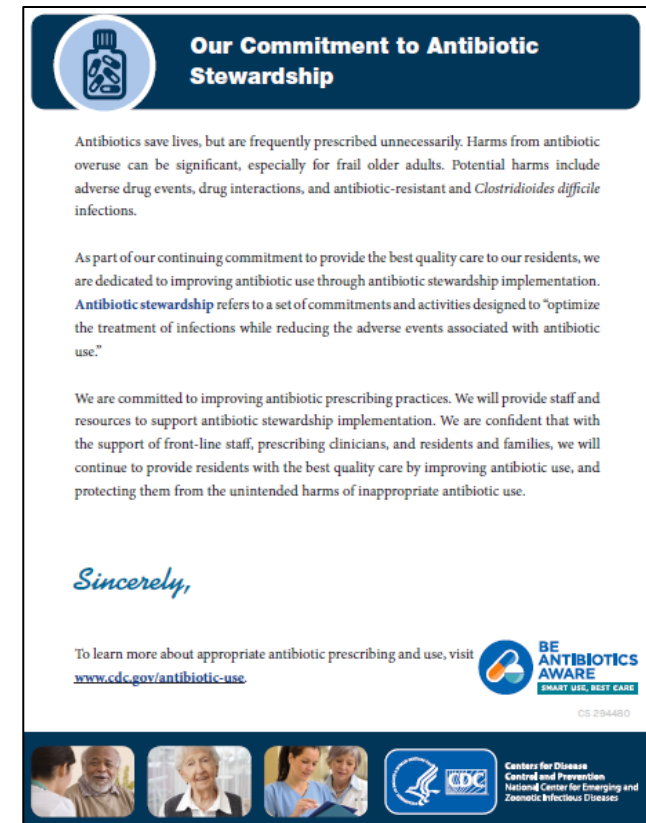
Image Source: <https://pixabay.com/en/penicillin-antibiotic-medicine-294684/>

Andy Walsh, Cindy Hou, Nikunj Vyas

Automating NHSN Antimicrobial Usage Submission

National Awareness Around the Issue

- Series of powerful CDC Healthcare Blogs including a story about a family that lost their daughter, who had just beat cancer, later succumbed to an antibiotic-resistant infection.
 - https://blogs.cdc.gov/safehealthcare/?s_cid=NCEZID-AntibioticUse-045
- CDC's Online Antibiotic Stewardship Training Course- 8 hrs of free CEU
 - https://www.train.org/cdctrain/training_plan/3697



- <https://www.cdc.gov/antibiotic-use/week/pdfs/Stewardship-Leadership-Commitment-Letter-8.5x11.pdf>

Consumer Messages

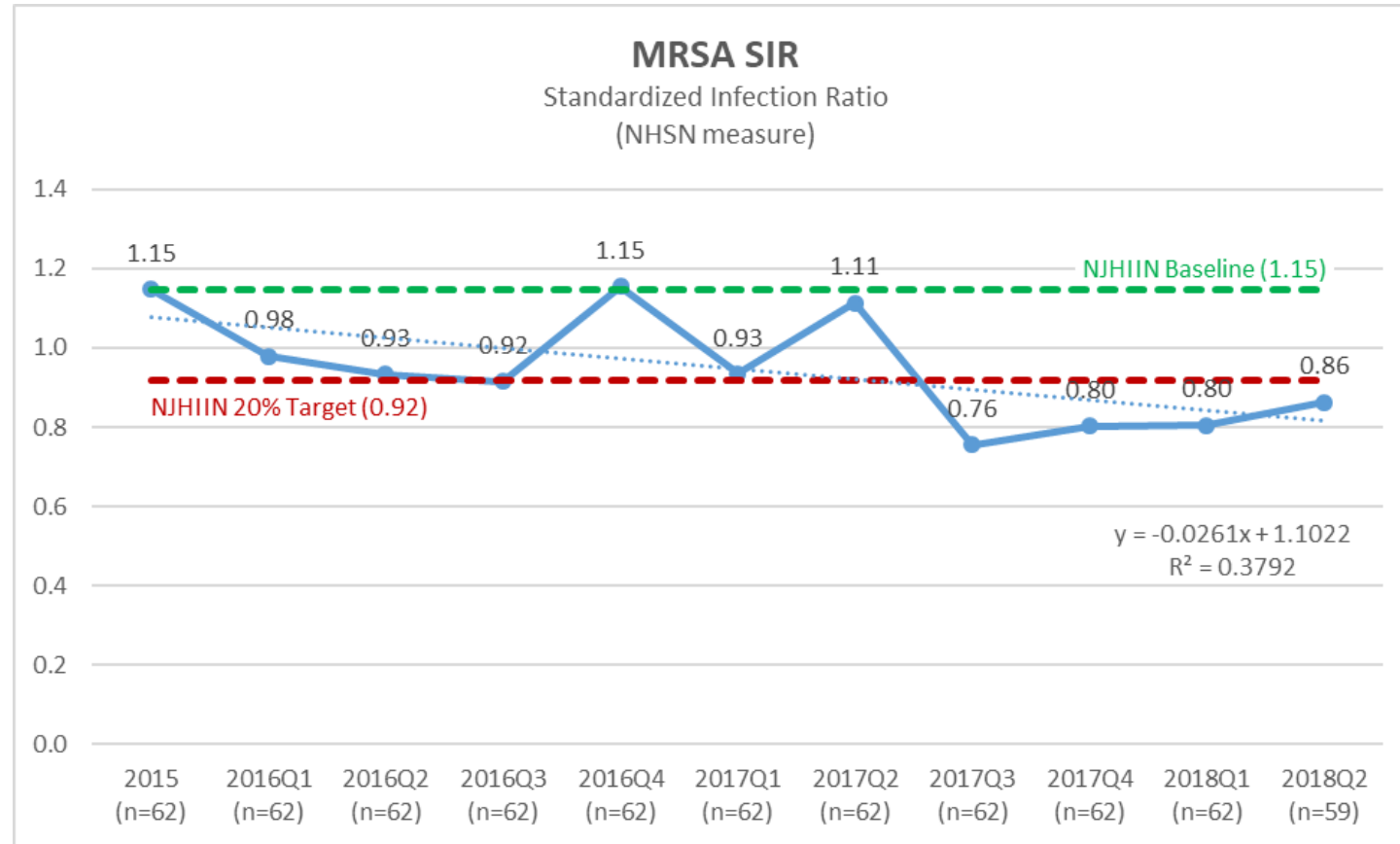
- **Antibiotics save lives.** When a patient needs antibiotics, the benefits outweigh the risks of side effects and antibiotic resistance.
- **Antibiotics aren't always the answer.** Everyone can help improve antibiotic prescribing and use. Improving the way healthcare professionals prescribe antibiotics, and the way we take antibiotics, helps keep us healthy now, helps fight antibiotic resistance, and ensures that these lifesaving antibiotics will be available for future generations.
- **Antibiotics do not work on viruses**, such as those that cause colds, flu, bronchitis, or runny noses, even if the mucus is thick, yellow, or green.
- **Antibiotics are only needed for treating infections caused by bacteria, but even some bacterial infections get better without antibiotics.** Antibiotics aren't needed for many sinus infections and some ear infections.
- **An antibiotic will not make you feel better if you have a virus.** Respiratory viruses usually go away in a week or two without treatment. Ask your healthcare professional about the best way to feel better while your body fights off the virus.
- **When antibiotics aren't needed, they won't help you, and the side effects could still cause harm.** Side effects range from minor to very severe health problems. When you need antibiotics for a bacterial infection, then the benefits usually outweigh the risk of side effects.
- **Taking antibiotics can lead to antibiotic resistance.** Antibiotic resistance occurs when bacteria develop the ability to defeat the drugs designed to kill them.
- **If you need antibiotics, take them exactly as prescribed.** Talk with your doctor if you have any questions about your antibiotics.
- **Talk with your doctor if you develop any side effects**, especially severe diarrhea, since that could be a *Clostridioides difficile* (*C. difficile* or *C. diff*) infection, which needs to be treated.
- **Do your best to stay healthy and keep others healthy** by cleaning hands, covering coughs, staying home when sick, and getting recommended vaccines, such as the flu vaccine.



**BE
ANTIBIOTICS
AWARE**
SMART USE, BEST CARE

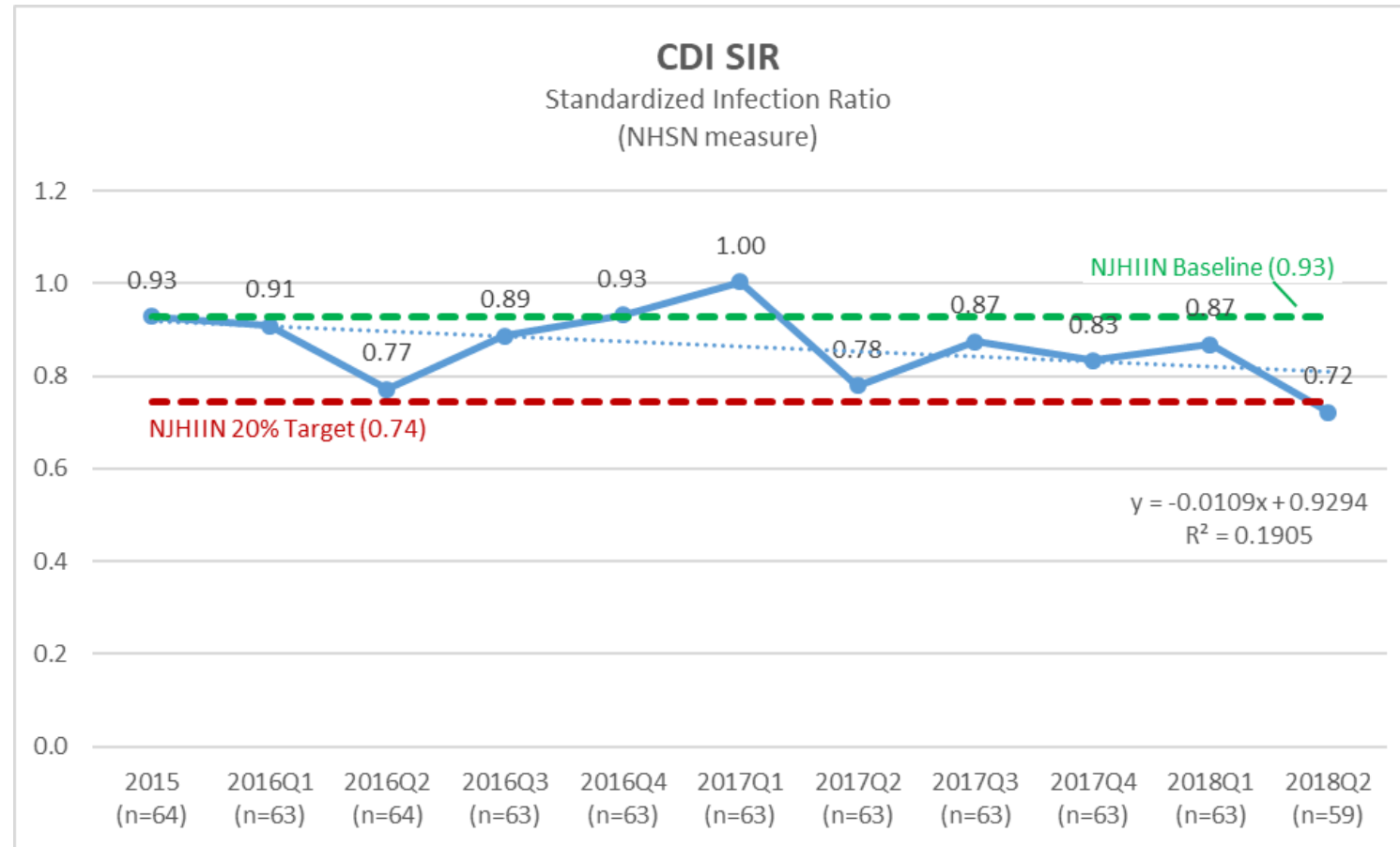
**U.S. ANTIBIOTIC
AWARENESS WEEK**
November 12-18, 2018
www.cdc.gov/antibiotic-use

Data Update

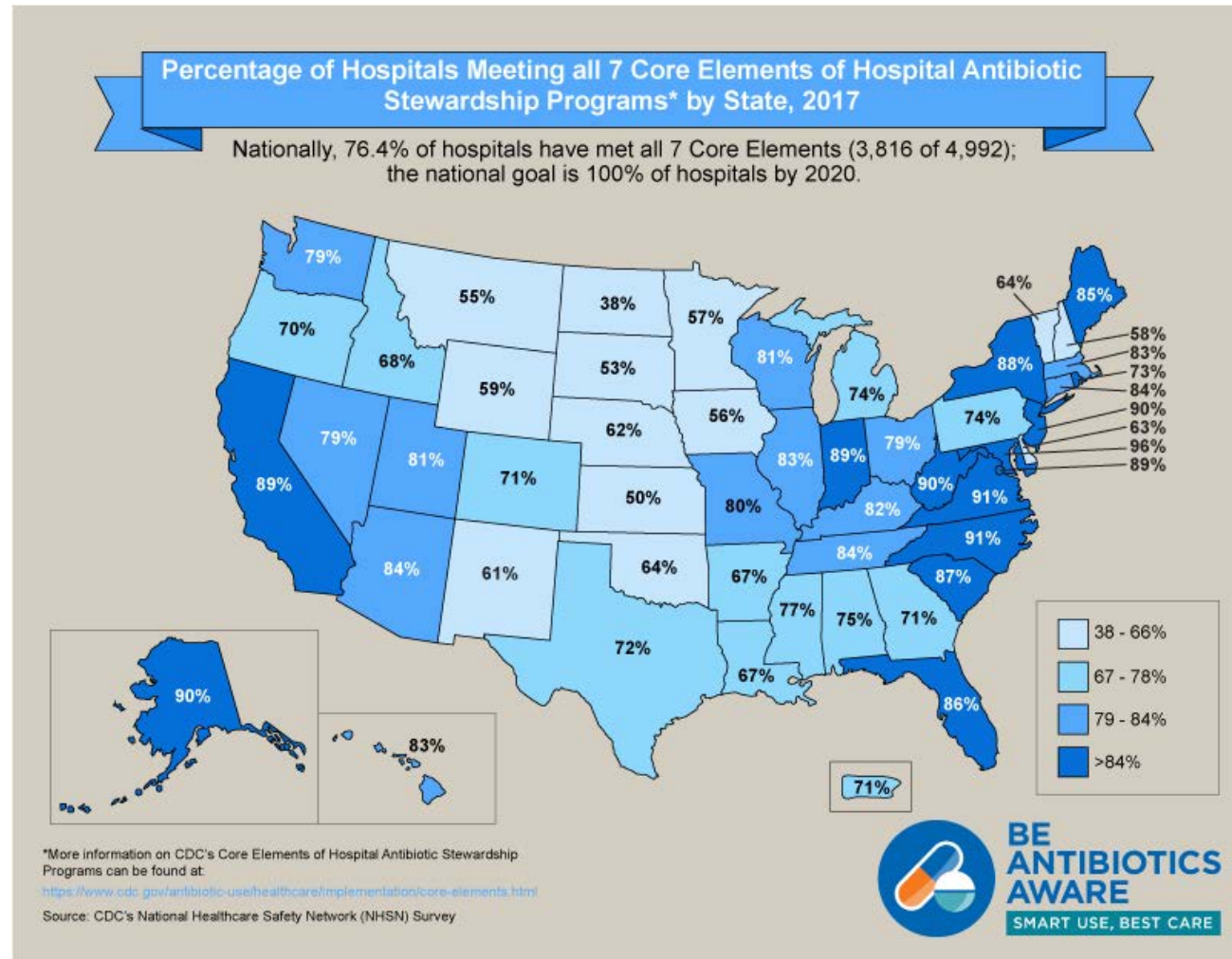


Met Target

Data Update



Data Updates



<https://www.cdc.gov/antibiotic-use/community/images/materials/2017-Core-Elements-Percentages.jpg>

Opportunities

- Collect data.
- Collaborate with nursing on antimicrobial stewardship and develop training/education.
- Improvement for prevention of pneumonia.
- Outreach from acute care to beyond the borders into the community and with partners.

Opportunity: Collect Data

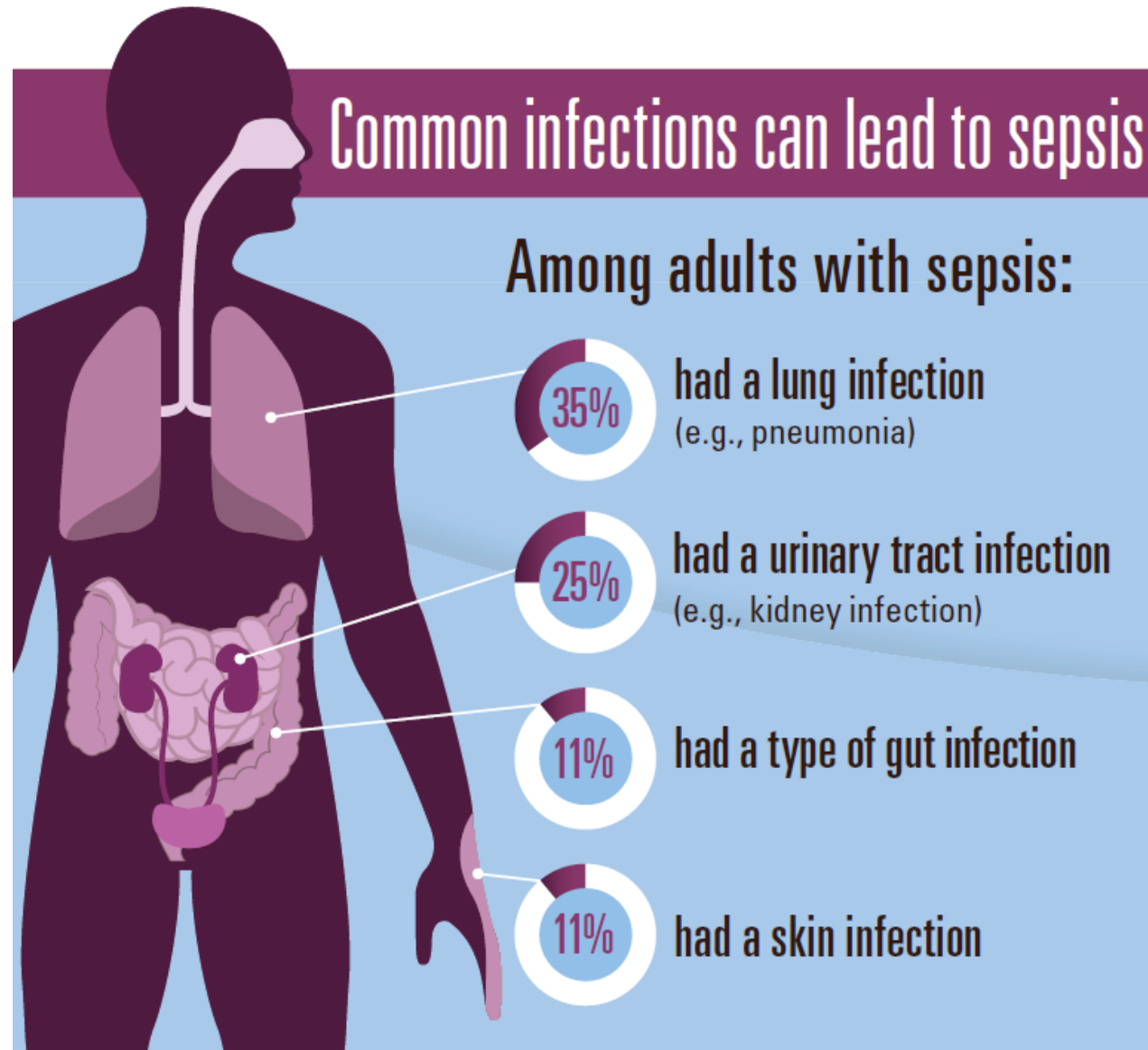
- There may be challenges with obtaining antibiotic data.
- Benefit to see if interventions are helping and to influence prescriber behavior by showing data and impact of antimicrobial stewardship.
- National Healthcare Safety Network (NHSN), Antimicrobial Use: Common asked questions – hyperlink also discusses which vendors send information to NHSN. <https://www.cdc.gov/nhsn/faqs/faq-au.html#q1>
- Monitoring Antimicrobial Use with Free or Widely Available Software. Jonathan Beus, MD, MS. https://www.qualityinsights-qin.org/Files/C1/201509_PDPH_Webinar.aspx

Opportunity: Nursing in Antimicrobial Stewardship

- The Critical Role of the Staff Nurse in Antimicrobial Stewardship—Unrecognized, but Already There. <https://academic.oup.com/cid/article/62/1/84/2462624>
- The Nursing Core Checklist for Antibiotic Stewardship: How to Engage Nursing to Curtail Antibiotic Usage. [https://www.ajicjournal.org/article/S0196-6553\(17\)30358-9/pdf](https://www.ajicjournal.org/article/S0196-6553(17)30358-9/pdf)
- Redefining the Antibiotic Stewardship Team: Recommendations from the American Nurses Association/Centers for Disease Control and Prevention Workgroup on the Role of Registered Nurses in Hospital Antibiotic Stewardship Practices <https://www.cdc.gov/antibiotic-use/healthcare/pdfs/ANA-CDC-whitepaper.pdf>
- Antimicrobial Stewardship and Infection Prevention—Leveraging the Synergy: A Position Paper Update. [https://www.ajicjournal.org/article/S0196-6553\(18\)30001-4/pdf](https://www.ajicjournal.org/article/S0196-6553(18)30001-4/pdf)

Opportunity: Prevent Pneumonia

- One potential area of focus is prevention of pneumonia beyond traditional measures such as pneumonia vaccine and a bundle to prevent ventilator-associated pneumonia.
- How to prevent non-ventilator associated pneumonia.



1768. Reduction in the prevalence of healthcare-associated infections in U.S. acute care hospitals, 2015 versus 2011

Session: Oral Abstract Session: National Trends in HAIs

Saturday, October 7, 2017: 8:30 AM

Room: 08

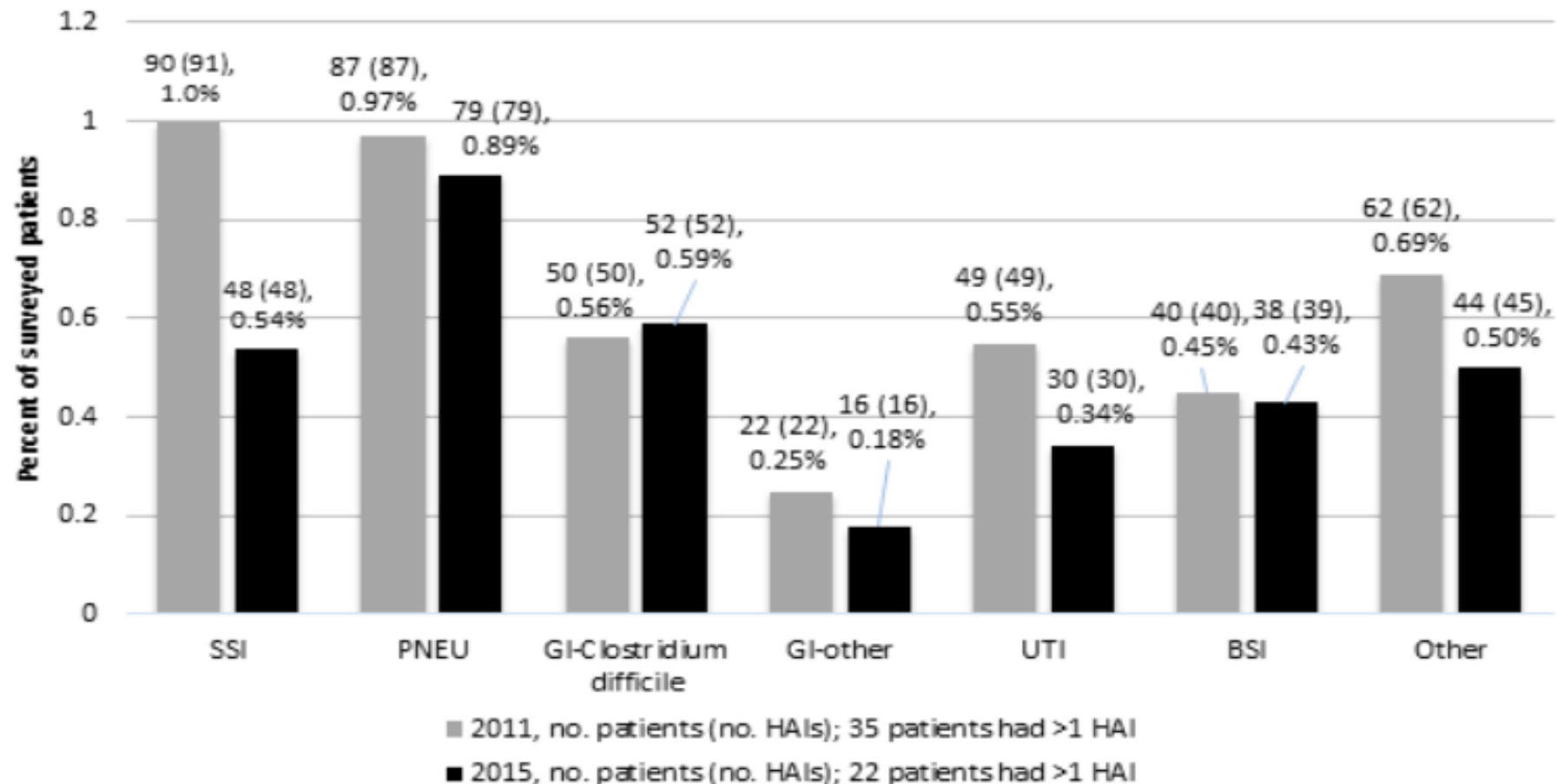
Background: A 2011 prevalence survey conducted by CDC and the Emerging Infections Program (EIP) showed that 1 in 25 hospital patients had ≥ 1 healthcare-associated infection (HAI). We repeated the survey in 2015 to assess changes in HAI prevalence.

Methods: In EIP sites (CA, CO, CT, GA, MD, MN, NM, NY, OR, TN) hospitals that participated in the 2011 survey were recruited for the 2015 survey. Hospitals selected 1 day from May–September 2015 on which a random patient sample was identified from the morning census. Trained EIP staff reviewed patient medical records using comparable methods and the same National Healthcare Safety Network HAI definitions used in 2011. Proportions of patients with HAIs were compared using chi-square tests; patient characteristics were compared using chi-square or median tests (OpenEpi 3.01, SAS 9.3).

<https://idsa.confex.com/idsa/2017/webprogram/Paper63280.html>

Conclusion: HAI prevalence was significantly lower in 2015 compared to 2011. This is partially explained by fewer SSI and UTI, suggesting national efforts to prevent SSI, reduce catheter use and improve UTI diagnosis are succeeding. By contrast, there was no change in the prevalence of the most common HAIs in 2015, PNEU and CDI, indicating a need for increased prevention efforts in hospitals.

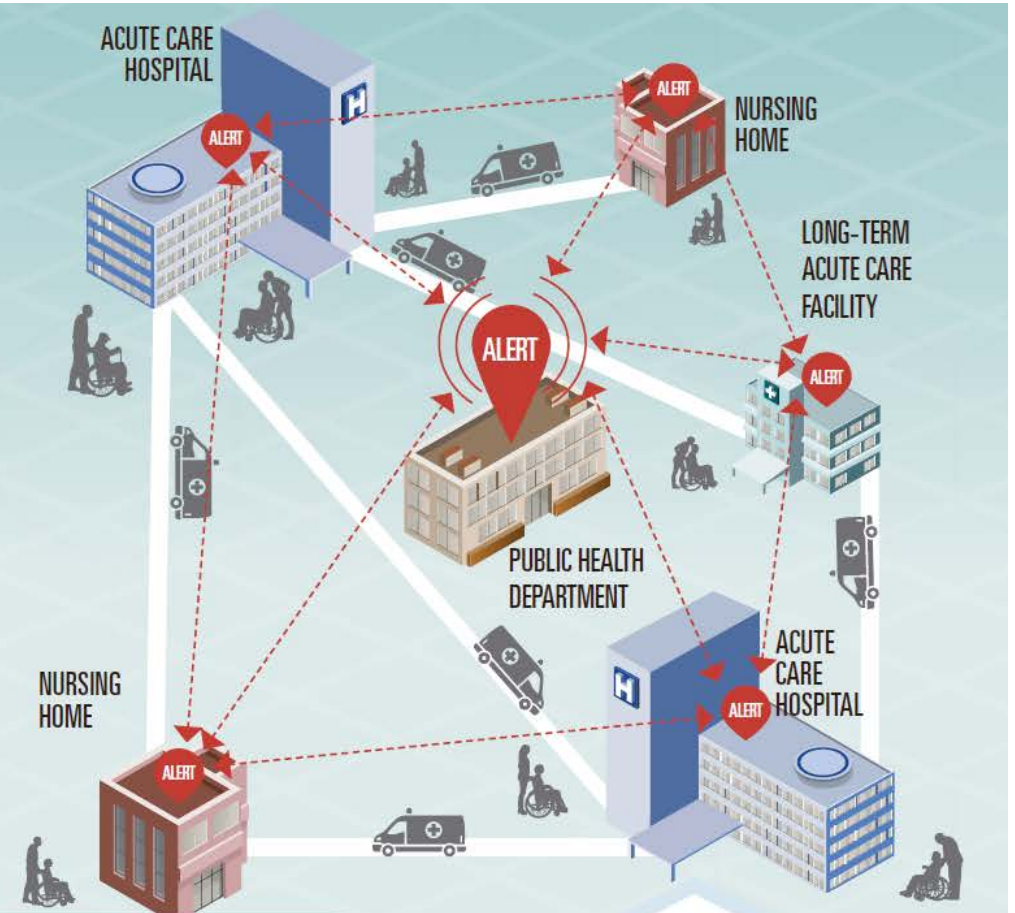
Figure: Prevalence and Distribution of HAIs, 2011 vs. 2015



Opportunity: Outreach

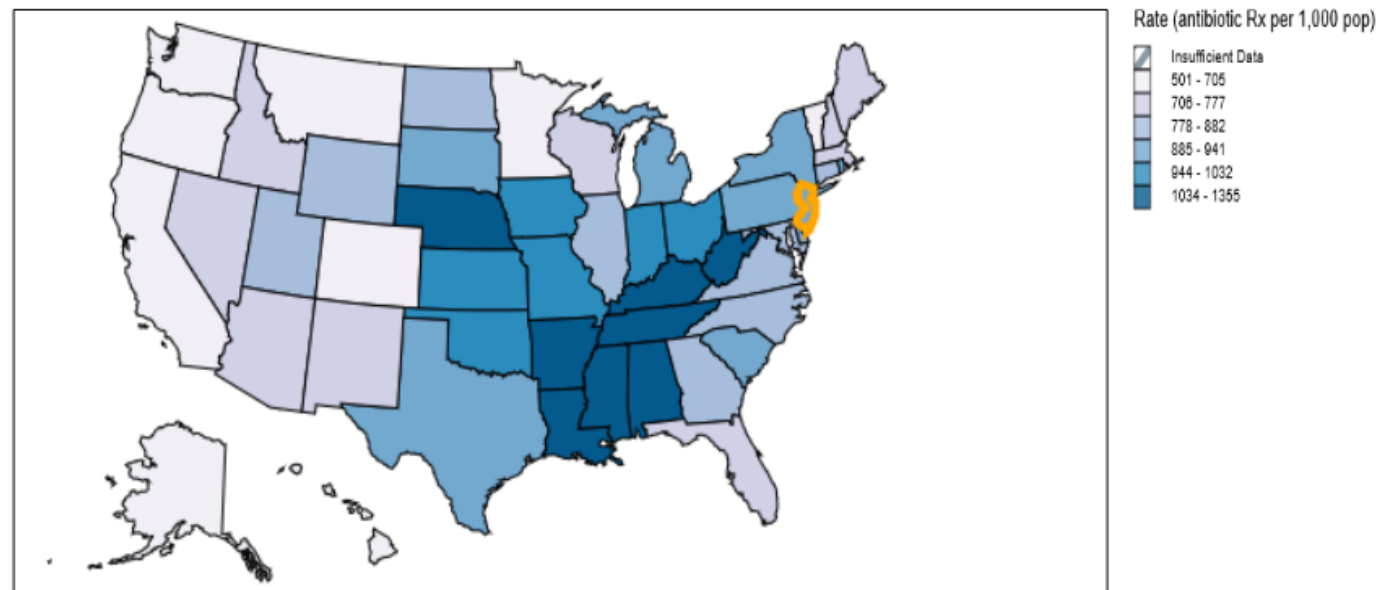
- Regardless of what area we work in – acute care, post-acute care, community, and more – how to perform antibiotic stewardship outside our walls, and how to collaborate with each other.

Work together to better detect outbreaks, prevent infections, and improve prescribing.
With a coordinated approach, healthcare facilities and public health authorities share information and implement targeted infection prevention and control actions.



The Coordinated Approach

Antibiotic Prescriptions Dispensed in U.S. Community Pharmacies Per 1000 Population | All classes | 2015



NATIONAL

838

Antibiotic prescriptions dispensed
PER 1000 POPULATION

NEW JERSEY

903

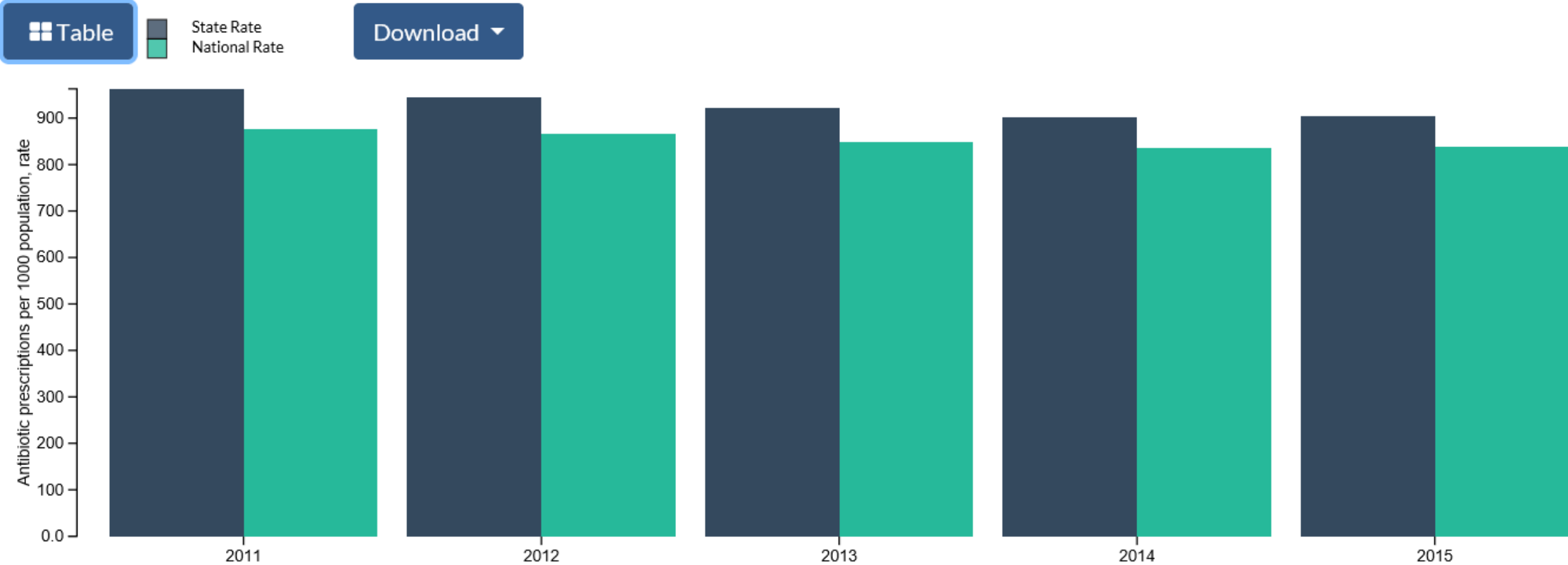
Antibiotic prescriptions dispensed
PER 1000 POPULATION

Footnotes

- These data are from the IMS Health Xponent database and reflect all antibiotic prescriptions dispensed from U.S. community and mail-order pharmacies. These data do not include antibiotic prescriptions dispensed from federal facilities.
- Data reflect annual rates of antibiotic prescriptions dispensed per 1000 population, i.e. the number of antibiotic prescriptions dispensed per year for every 1000 people living in that state. Annual rates allow for comparisons of the number of antibiotic prescriptions dispensed in different geographic areas or over time while controlling differences in the size of the underlying population.
- The legend reflects sextiles (i.e. categories each with one-sixth of states) of antibiotic prescribing rates based on all years of data and may differ from the individual annual summaries. Sextiles within a year may not contain one-sixth of states for that year as sextiles are calculated based on all years of data.
- Due to missing data, totals by age group and/or sex may not add up to all oral prescriptions.
- Antibiotic class defines a set of related antibiotics. Penicillins, macrolides, cephalosporins, and fluoroquinolones are included, but do not sum to all antibiotic classes due to missing classes at the state level.
- Data are not available for geographic regions smaller than states.

New Jersey Antibiotics Dispensed in U.S. Community Pharmacies Per 1000 Population

All Antibiotic Classes | Over Time



Questions/comments?