

Nebraska Antimicrobial Stewardship Updates

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2024 Nebraska Antimicrobial
Stewardship Summit

Disclosures

I have no relevant financial conflicts of interest to report related to this presentation.

Objectives

- Provide an overview of the latest statewide antimicrobial stewardship practices across healthcare settings in Nebraska.
- Evaluate the role of public health department antimicrobial stewardship programs in successful antimicrobial stewardship initiatives.
- Identify resources for ongoing education and training for healthcare professionals to enhance their antimicrobial stewardship knowledge and skills.

Hospital Antibiotic Stewardship

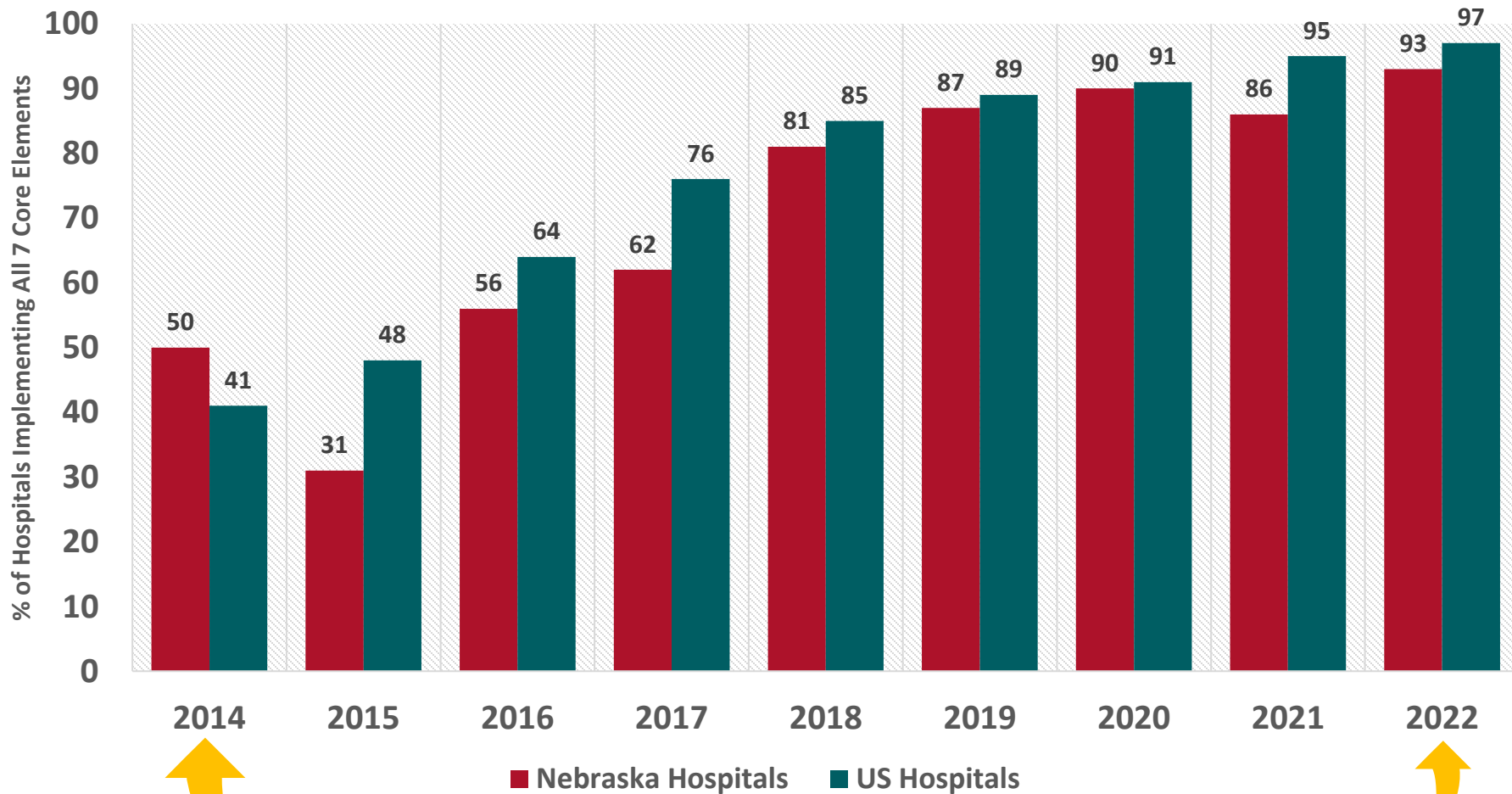
 **ASAP**

CDC Core Elements of Antibiotic Stewardship



[Link: Core Elements of Antibiotic Stewardship | Antibiotic Use | CDC](#)







CDC Core Element Implementation *Hospitals*



Hospital Core Elements released, 28 Nebraska hospitals reporting

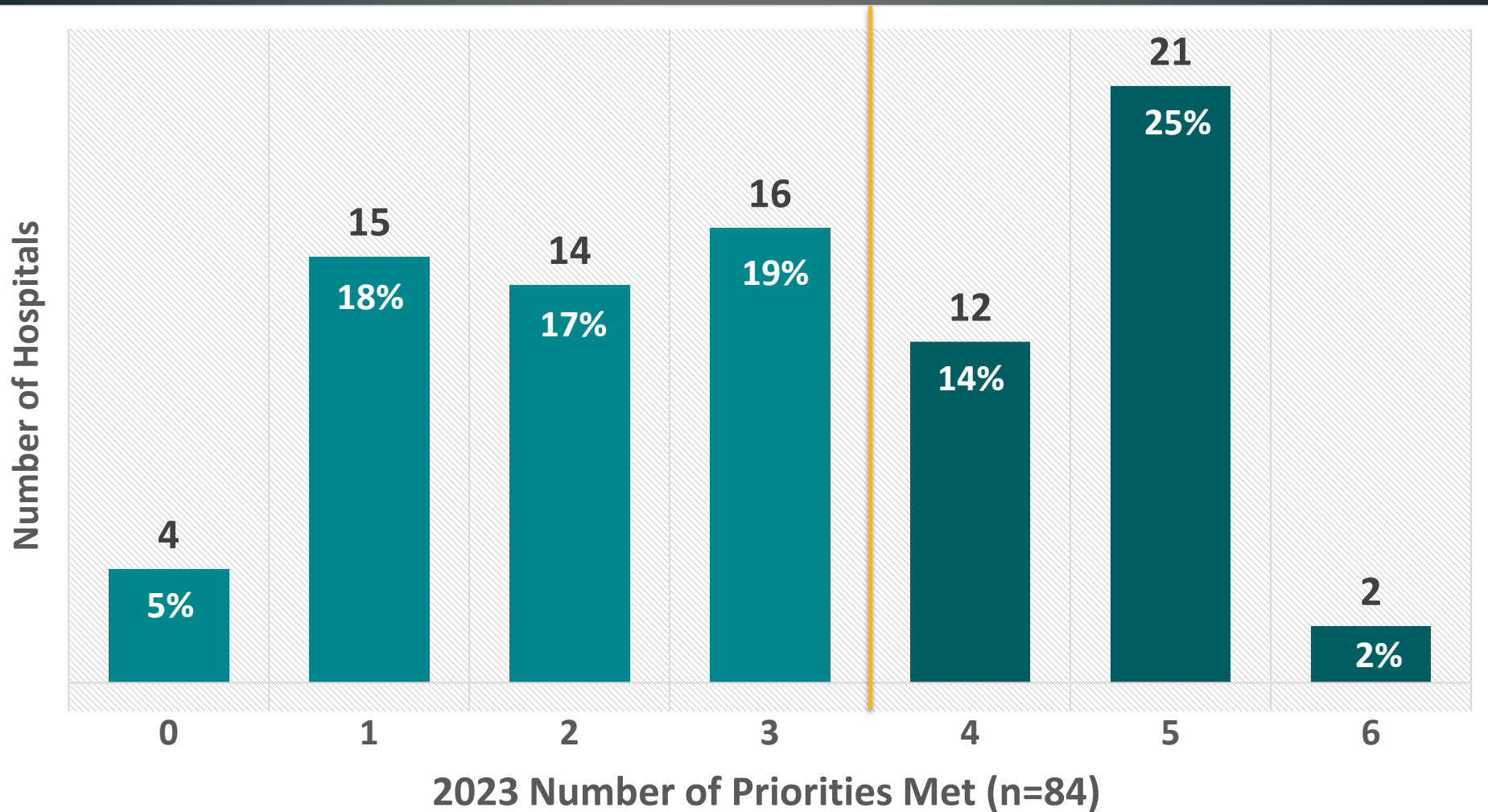
88 Nebraska hospitals reporting

Priorities for Hospital Core Element Implementation (2022)

Hospital Core Elements	Priorities for Hospital Core Element Implementation
Hospital Leadership Commitment	
 <p>Dedicate necessary human, financial, and information technology resources.</p>	Antibiotic stewardship physician and/or pharmacist leader(s) have antibiotic stewardship responsibilities in their contract, job description, or performance review.
Accountability	
 <p>Appoint a leader or co-leaders, such as a physician and pharmacist, responsible for program management and outcomes.</p>	Antibiotic stewardship program is co-led by a physician and pharmacist.*
Pharmacy/Stewardship Expertise	
 <p>Appoint a pharmacist, ideally as the co-leader of the stewardship program, to help lead implementation efforts to improve antibiotic use.</p>	Antibiotic stewardship physician and/or pharmacist leader(s) have completed infectious diseases specialty training, a certificate program, or other training on antibiotic stewardship.
Action	
 <p>Implement interventions, such as prospective audit and feedback or preauthorization, to improve antibiotic use.</p>	Antibiotic stewardship program has facility-specific treatment recommendations for common clinical condition(s) and performs prospective audit/feedback or preauthorization.
Tracking	
 <p>Monitor antibiotic prescribing, impact of interventions, and other important outcomes, like <i>C. difficile</i> infections and resistance patterns.</p>	Hospital submits antibiotic use data to the NHSN Antimicrobial Use Option.
Reporting	
 <p>Regularly report information on antibiotic use and resistance to prescribers, pharmacists, nurses, and hospital leadership.</p>	Antibiotic use reports are provided at least annually to target feedback to prescribers. In addition, the antibiotic stewardship program monitors adherence to facility-specific treatment recommendations for at least one common clinical condition.

Priorities for Hospital Core Element Implementation | Antibiotic Use | CDC

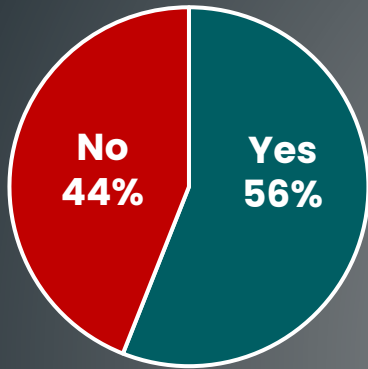
59% of Nebraska Hospitals have met ≤ 3 Priorities for Core Element Implementation



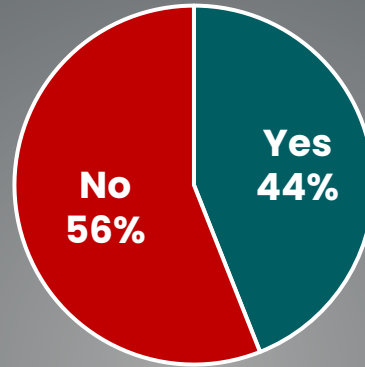
Data Source: NHSN Annual Survey

Priorities for Hospital Core Element Implementation

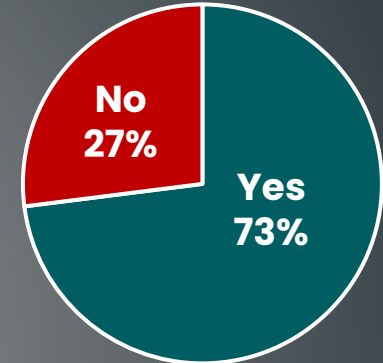
Nebraska Hospitals, 2023 (n=84)



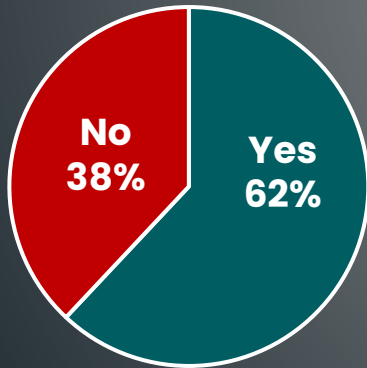
Physician and/or pharmacist has AS in job description



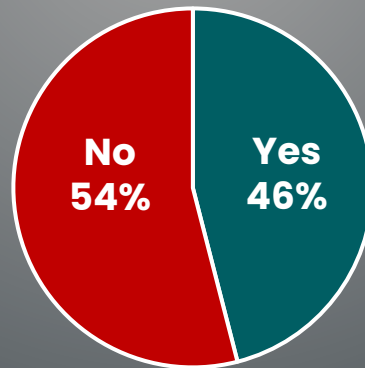
Program is co-led by a physician and pharmacist



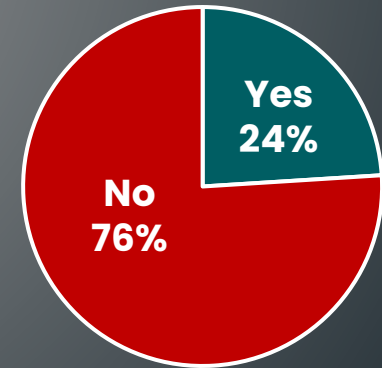
ID specialty training (residency, fellowship, certificate program)



Facility-specific treatment recs + performs prospective audit/feedback

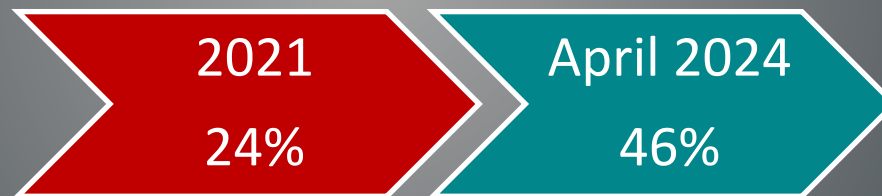


Antibiotic Use data submitted to NHSN



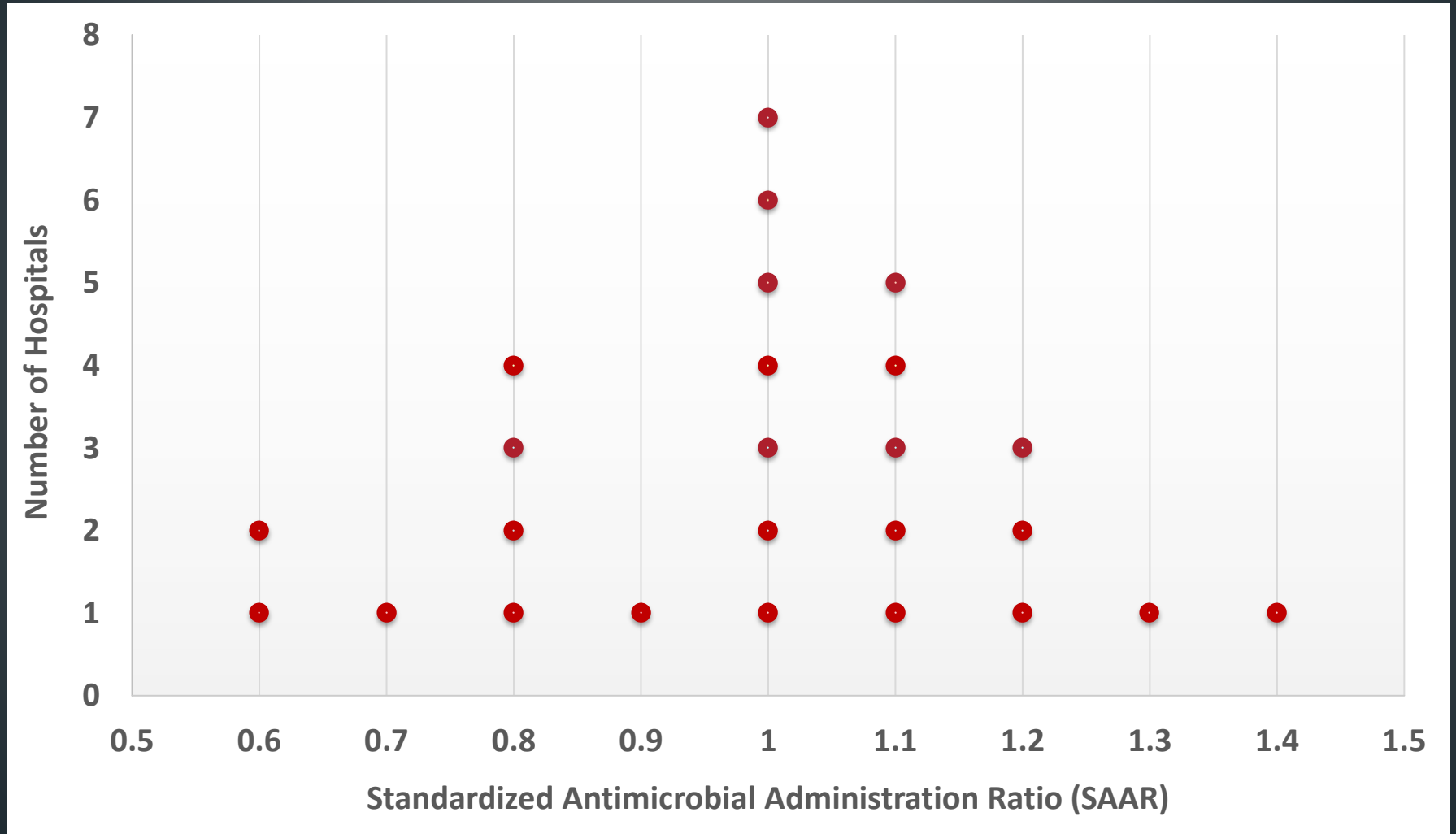
Annual provider feedback reports + monitors adherence to guidelines

NHSN Antibiotic Use and Resistance Module



Rapid increase in number of Nebraska facilities reporting!

Nebraska Statewide SAAR Distribution – All Antimicrobials, 2023



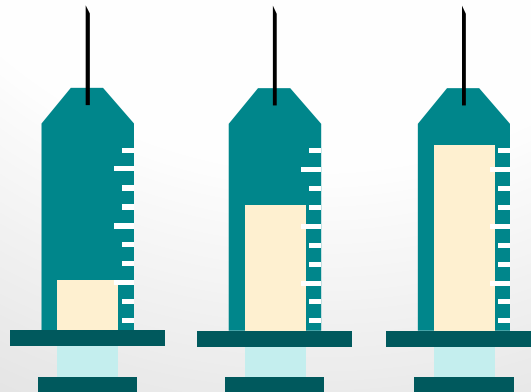
Data Source: NHSN AUR Module

2023 Nebraska Hospital Antibiotic Use: Rates/1,000 Days Present*

n=38

	Ceftriaxone	Cefepime	Meropenem	Vancomycin	Piperacillin/ Tazobactam	FQN
Lowest third of hospitals	44	11	1.4	25	25	9
Middle third of hospitals	79	29	9	59	52	20
Highest third of hospitals	141	64	24	94	94	45
Highest 3 hospitals	203	87	37	120	123	76

FQN = fluoroquinolones, includes levofloxacin and ciprofloxacin



*Note: the NHSN denominator of days present should not be directly compared to patient days as there is a difference of 25-30%

Long-Term Care Antibiotic Stewardship



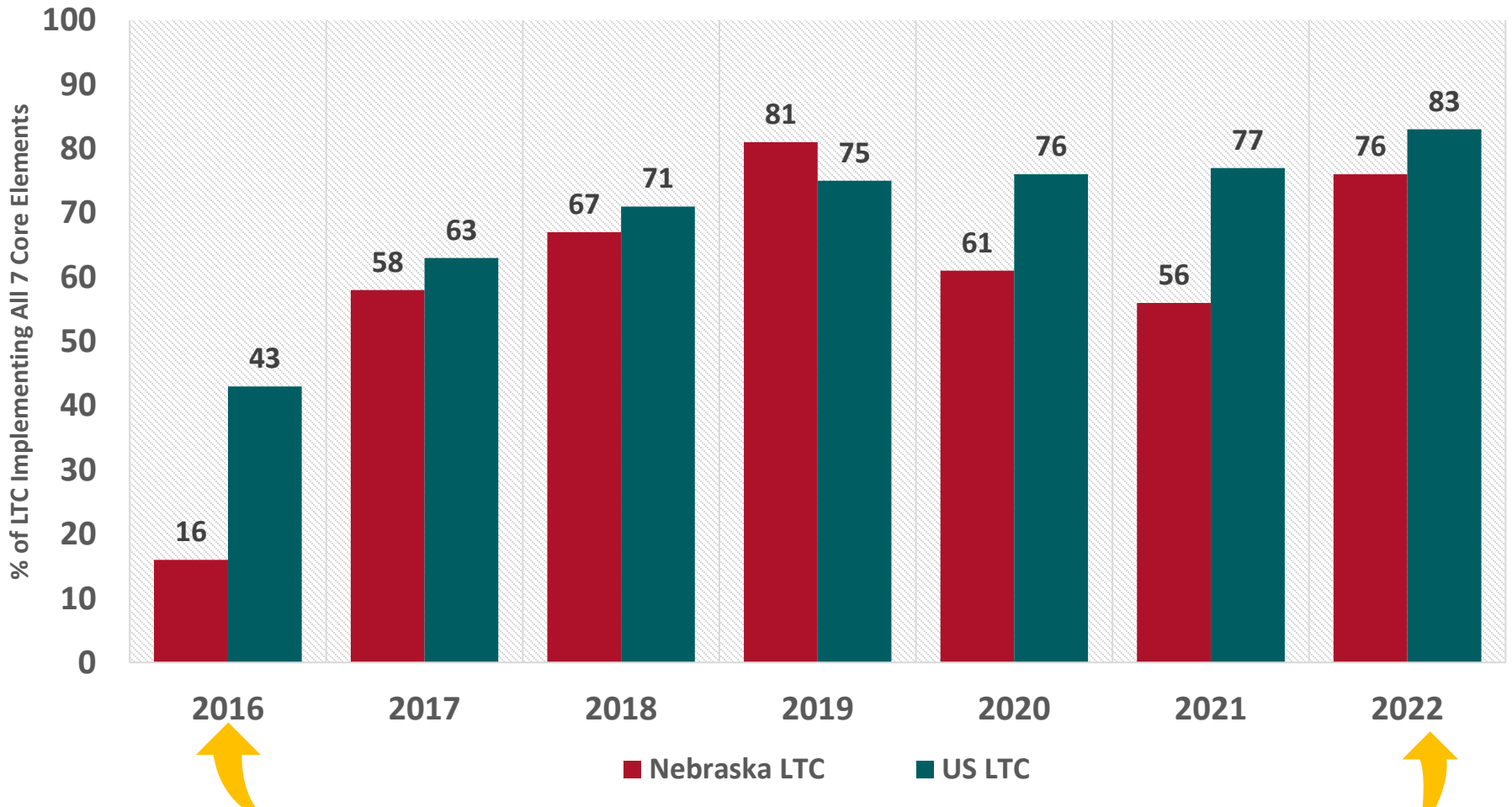
CDC Core Elements of Antibiotic Stewardship



[Link: Core Elements of Antibiotic Stewardship | Antibiotic Use | CDC](#)

CDC Core Element Implementation

Long-Term Care



LTC Core Elements released, 32 Nebraska facilities reporting

66 Nebraska LTC reporting

Drug Expertise Core Element for LTC:

Establish access to consultant pharmacists with experience or training in antibiotic stewardship for your facility.

CONSULTANT PHARMACIST TRAINING TO PROMOTE AND SUPPORT ANTIMICROBIAL STEWARDSHIP IN LONG TERM CARE

A UNMC ID Project ECHO Series



August 2023 – June 2024

- Partnered with UNMC ID ECHO and Nebraska Pharmacists Association
- 37 Consultant Pharmacists currently participating
- Will be issued a certificate of completion for attending all sessions
- After program is completed, goal to add to the ASAP/ICAP website so any consultant pharmacist can complete

[Core Elements of Antibiotic Stewardship for Nursing Homes](#) | [Antibiotic Use](#) | [CDC](#)

LTCF COVID-19 Therapeutics Utilization in Nebraska

- Nebraska ASAP developed an ID pharmacist-led program to assist LTCF in obtaining treatments in 2020
- Any LTCF could fill out an online survey to request treatment assistance
- ASAP coordinated delivery of the appropriate COVID-19 therapeutic with Consonus Pharmacy (formerly Community Pharmacy)
- Checked NHSN daily for newly reported LTCF COVID cases. Facilities were contacted by phone or email to offer ASAP assistance in obtaining therapeutics
- ASAP ID pharmacists and ID physicians were available for facility and prescriber questions
 - Telephone hotline 7 days a week
 - Website contact portal
 - Direct email



Note: SNFs were required to document treatment of residents with COVID therapeutics in NHSN from May 2021 – December 2022

77%

Nebraska SNFs that provided at least one COVID therapeutic course to residents (151/197)



This ranks Nebraska 8th nationally in highest percentage of SNFs providing treatments.

60%

Nationwide SNFs that provided at least one COVID therapeutic course to residents

35%

Nebraska SNF residents that received treatment with a COVID therapeutic (2,161 courses/6,139 cases)

18%

Nationwide SNF residents that received treatment with a COVID therapeutic

79%

November 2021
Nebraska peak month of percentage of positive residents receiving treatment

33%

November 2021
Nationwide peak month of percentage of positive residents receiving treatment

ASAP assisted with 1,004 therapeutic courses in 98 unique facilities (SNF only)

May 2021 – December 2022



519
monoclonal
antibody
infusions

233
courses of
nirmatrelvir/
ritonavir



252
courses of
molnupiravir

Graphics credit: Slidesgo

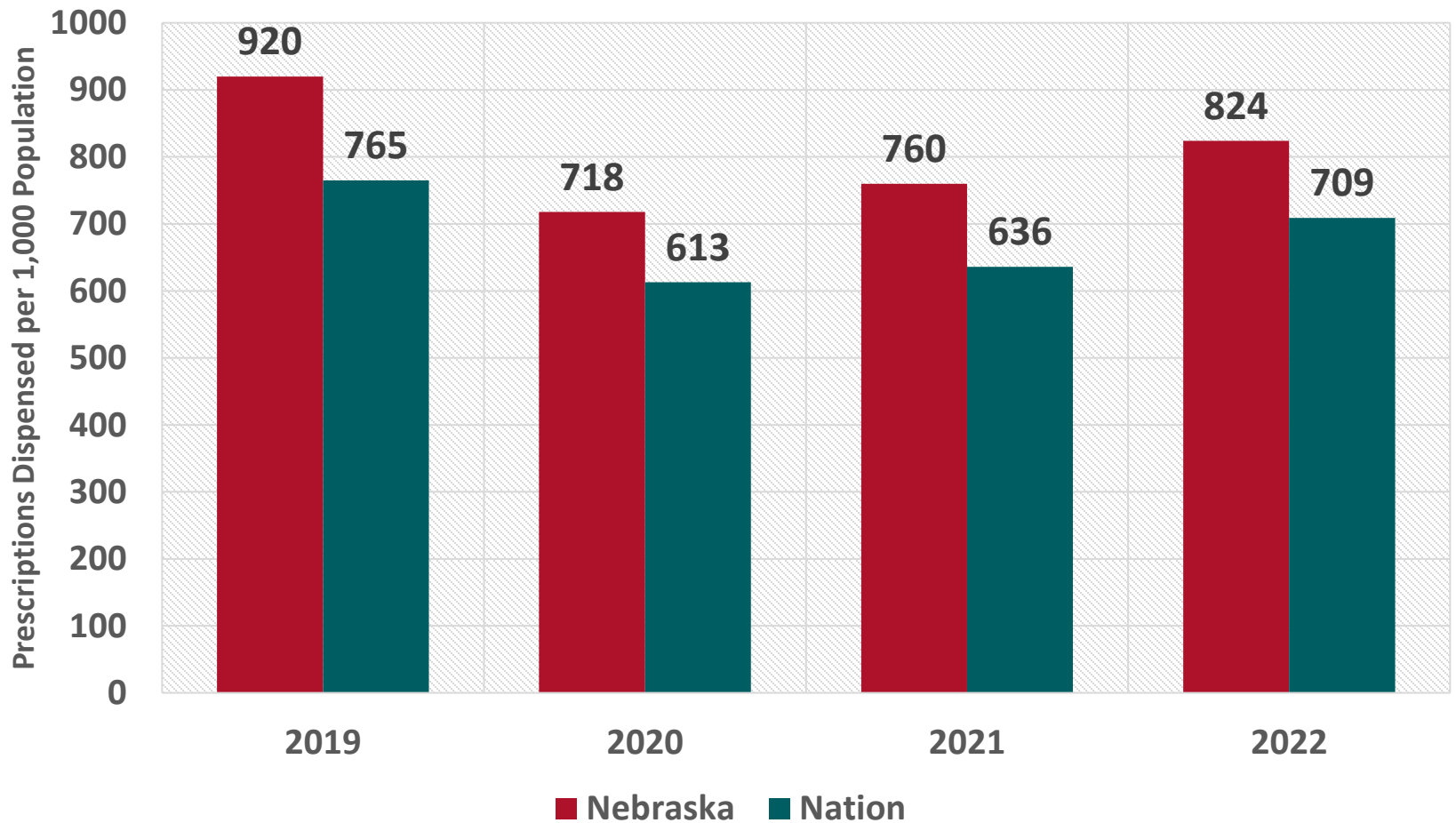
Additionally, ASAP assisted with 409 therapeutic courses in 89 unique ALF facilities

May 2021 – December 2022

Outpatient Antibiotic Stewardship

 **ASAP**

Outpatient Antibiotic Use



Nebraska consistently prescribes antibiotics in the outpatient setting at a higher rate than the national average.

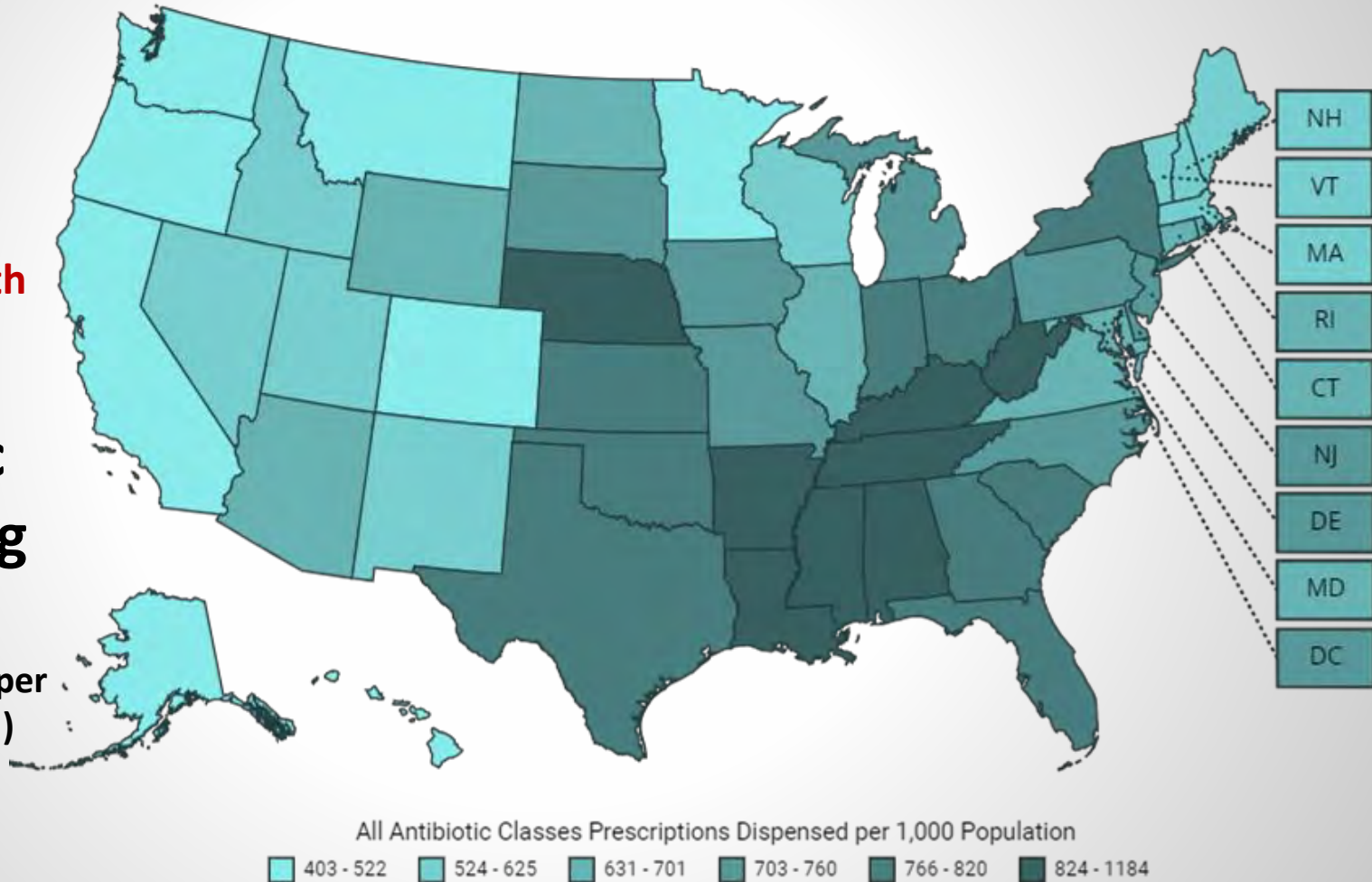
All Antibiotic Classes | A.R. & Patient Safety Portal ([cdc.gov](https://www.cdc.gov))

Outpatient Antibiotic Prescribing in Nebraska

All Antibiotic Classes

In 2022,
Nebraska
was the **8th**
highest
antibiotic
prescribing
state

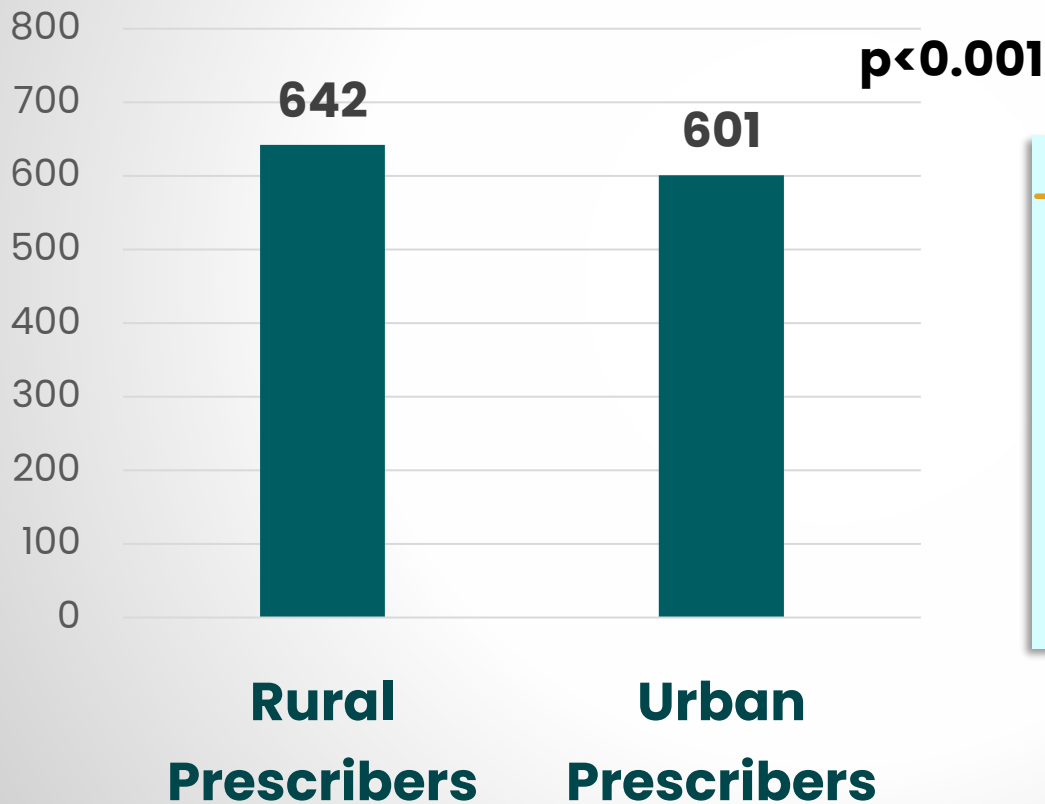
(824 prescriptions per
1,000 population)



All Antibiotic Classes | A.R. & Patient Safety Portal ([cdc.gov](https://www.cdc.gov))

Nebraska Rural and Urban Prescribing Trends

Prescriptions per 1,000 Medicare Part D Beneficiaries in Nebraska, 2021



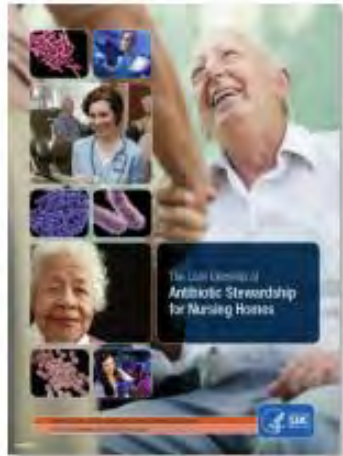
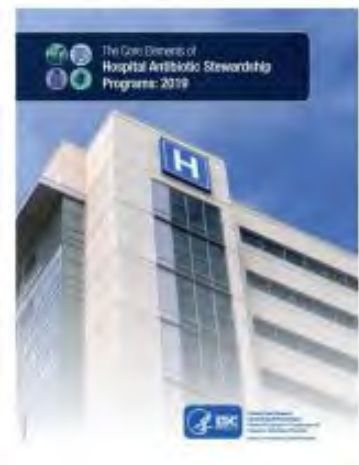
Nebraska providers in rural areas prescribed antibiotics at significantly higher rates than those in urban areas

Practice setting (urban or rural) was determined by USDA Rural-Urban Commuting Area codes using prescriber addresses
Data Source: CMS Medicare Part D claims database (cms.gov)

Public Health Antibiotic Stewardship

 **ASAP**

CDC Core Elements of Antibiotic Stewardship



New in 2023 Core Elements for Health Departments





Leadership Commitment

Dedicate human and financial resources for state and local health department antibiotic stewardship programs.



Accountability

Designate a leader or co-leaders, such as physician and pharmacist, responsible for the health department antibiotic stewardship program.



Stewardship Expertise

Ensure that the antibiotic stewardship program leader or co-leaders have expertise and experience implementing stewardship activities.



Action

Support the implementation of antibiotic stewardship activities by leveraging local partners or stewardship collaboratives.



Tracking

Monitor stewardship activities and antibiotic use data to inform and assess stewardship actions across the spectrum of health care.



Reporting

Report data on stewardship activities and antibiotic use to health department leadership, local partners, stewardship collaboratives, healthcare professionals and the public.



Education

Provide antibiotic stewardship education to healthcare professionals and the public to optimize antibiotic use.

Meet our ASAP Team

Infectious Disease Physicians



Dr. Ashraf

Dr. Van Schooneveld

Dr. Teran

Dr. Keintz

Infectious Disease Pharmacists



Dr. Preusker

Dr. Schroeder

Dr. Bergman

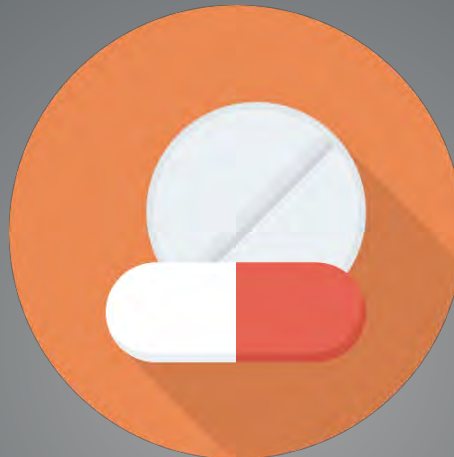
[Our Team - ASAP \(nebraskamed.com\)](http://nebraskamed.com)

[Our Team - ICAP \(nebraskamed.com\)](http://nebraskamed.com)

Antibiotic Stewardship Program Assessments



Baseline ASP
Assessment
for Hospitals



Baseline ASP
Assessment
for Long-Term Care
Facilities



Baseline ASP
Assessment
for Outpatient
Facilities

Assessments are **non-regulatory** and **no-cost** to the facility.

A background image of a city skyline at dusk, with several skyscrapers illuminated against a dark blue sky. The buildings are in various shades of blue and yellow, with some lights glowing from the windows.

HAI/AR Advisory Council Antimicrobial Stewardship Subcommittee

Goals

- Create a statewide collaborative to align state level antimicrobial stewardship resources with facility needs
- Be inclusive of various practice settings in Nebraska, including but not limited to acute care hospitals, critical access hospitals, long-term care facilities, and ambulatory care
- Provide an avenue for stakeholders to share current projects, successes, and barriers to antimicrobial stewardship in Nebraska

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DEPT. OF HEALTH AND HUMAN SERVICES

**DIVISION OF
PUBLIC HEALTH**

NHSN AUR Reporting Implementation – Nebraska DHHS Hospital Funding Assistance

- Nebraska DHHS HAI/AR program currently has funding available to dedicate towards assisting hospitals with implementing NHSN Antibiotic Use and Resistance module - **timeline extended!!**
- Funding distributed by reimbursing expenses for reporting implementation
- Facilities meeting all requirements for funding may request reimbursement for related eligible expenses up to the maximum amount allowed for their facility based on licensed bed size. (\$10,000-\$20,000)

[AUR Implementation Reimbursement Requirements – Nebraska DHHS Healthcare Associated Infections \(ne.gov\)](https://www.ne.gov)

Any questions, please contact Jenna Preusker at jenna.preusker@nebraska.gov

Antimicrobial Stewardship Committee
XXX Hospital Address
XXX, Nebraska Zip code

Date: TBD

Dear Members of the XXX hospital Antimicrobial Stewardship Committee:

Purpose: The purpose of this annual report is to support hospital antimicrobial stewardship efforts by summarizing hospital NHSN AU Option data and providing comparisons to other hospitals in Nebraska. Through a partnership with Nebraska DHHS, Nebraska ASAP has reviewed antibiotic use data that your facility submitted to the NHSN AUR module.

Data Included:

Section 1 contains data for all antimicrobial agents (facility-wide and NHSN-reportable locations)
Section 2 contains data by SAAR category (facility-wide and NHSN-reportable locations)

Abbreviations used in this report:

BSHO: Broad spectrum antibacterial agents predominantly used for hospital-onset infections
BSCA: Broad spectrum antibacterial agents predominantly used for community-acquired infections
GramPOS: Antibacterial agents predominantly used for resistant gram-positive infections
NSBL: Narrow spectrum beta-lactam agents
CDI: Antibacterial agents posing the highest risk for *Clostridioides difficile* infection

Calculations used in this report:

SAARs (Standardized Antimicrobial Administration Ratio) are calculated as observed days of antimicrobial therapy divided by predicted days of antimicrobial therapy.

- SAARs <1 indicate antimicrobial use less than predicted for your institution type and location(s)
- SAARs >1 indicate antimicrobial use more than predicted for your institution type and location(s)

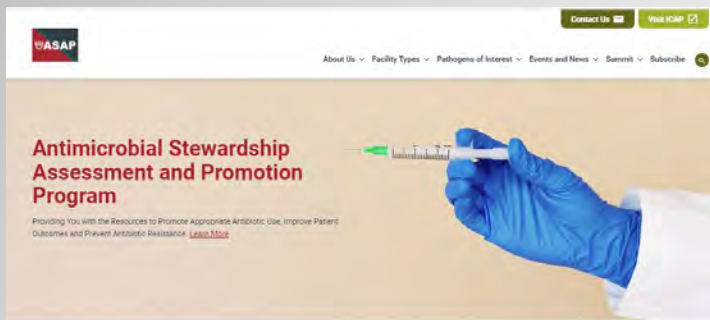
SAAR values are broken down by antimicrobial categories (e.g., broad-spectrum agents for community-acquired infections, broad-spectrum agents for hospital-onset infections) and patient care locations (i.e., ward vs. ICU). The Ward location is all wards combined (medical, surgical, med-surg, etc) and the ICU location is all ICUs combined (MICU, SICU).

SAARs do not evaluate the appropriateness of antibiotics. However, they can be used as a tool to identify areas where antibiotic overuse may be occurring. Further investigation into areas with elevated SAARs is recommended.

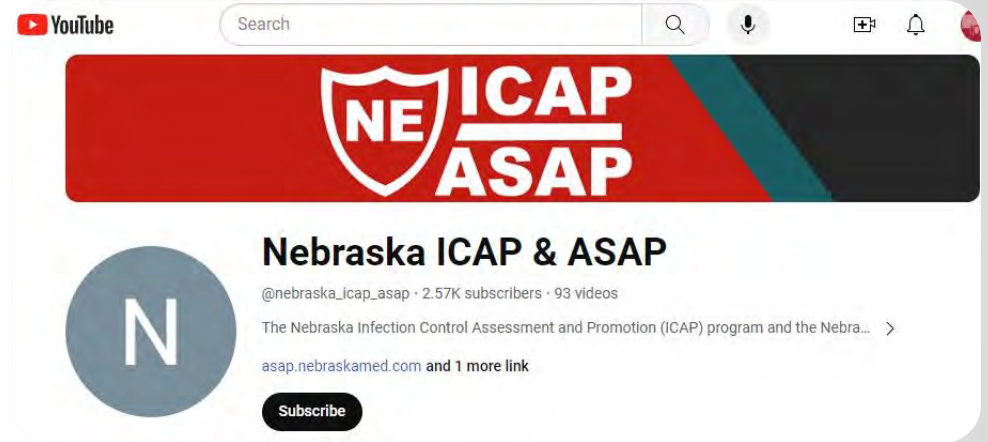
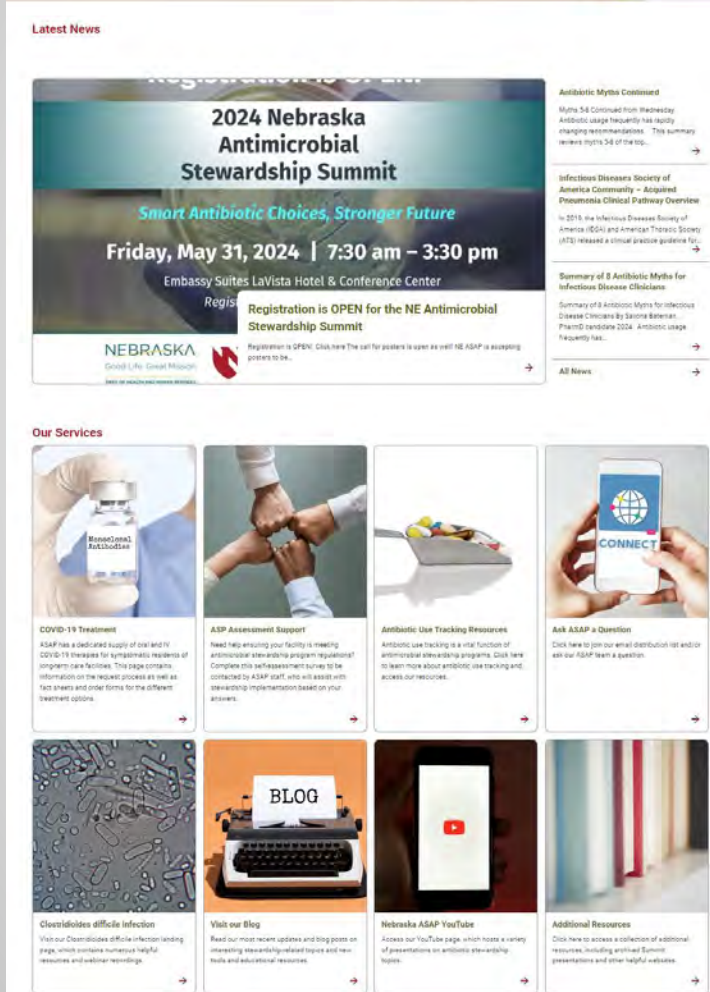
Annual Hospital NHSN Antibiotic Use Reports

**Nebraska
ASAP
Antibiotic
Stewardship
Resources**





ASAP Website and YouTube channel




Nebraska ICAP & ASAP - YouTube



<https://asap.nebraskamed.com/>

New in 2024 – ASAP Newsletter: The Antimicrobial Advocate



The Antimicrobial Advocate
Nebraska ASAP Newsletter

Issue 1 Volume 1

Welcome to the Nebraska Antimicrobial Stewardship Assessment and Promotion Program Newsletter!
The goal of this newsletter is to share timely information related to antimicrobial stewardship practices with facilities throughout the state.



Volume 1 Issue 2

The Antimicrobial Advocate
Nebraska ASAP Newsletter



Vol 1 | Issue 3 March 2024

The Antimicrobial Advocate
Nebraska ASAP Newsletter



Volume 1 Issue 4 April 2024

The Antimicrobial Advocate
Nebraska ASAP Newsletter

Educational Opportunities

Registration link
Impacts of Antimicrobial Resistance on Cancer Care
Tuesday, April 9, 2024 | 10-11:00 AM, EDT



2024 ANTIMICROBIAL STEWARDSHIP SUMMIT
Smart Antibiotic Choices, Stronger Future



Issue 5: Volume 1

The Antimicrobial Advocate
Nebraska ASAP Newsletter

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Intro

Proud to provide infection control and antimicrobial stewardship support to Nebraska. Call us!

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icap.nebraskamed.com

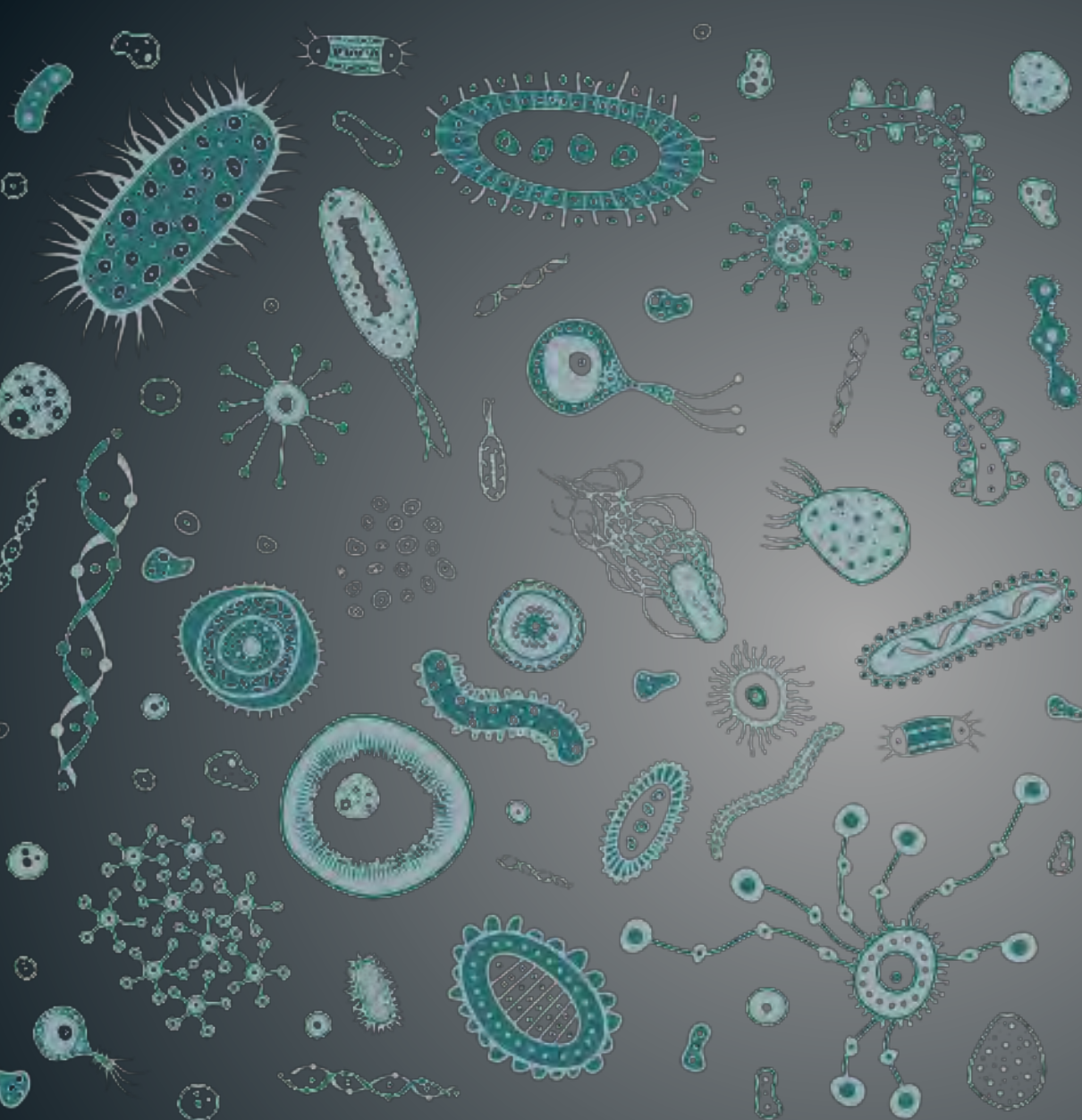
Photos | See all photos

PROUD TO SUPPORT BE ANTIBIOTICS AWARE

ICAP ICAP

Nebraska ICAP & ASAP | 1d · 🌐

This place might just have the best sandwiches in Nebraska. Chris and Kate were in the area, so made a little side quest to this fave pit-stop. Thanks, Neligh Delii!



**Thank you for
attending the
Nebraska
Antimicrobial
Stewardship
Summit!**

jepreusker@nebraskamed.com

Presentation graphics credit: Slidesgo
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