



Antimicrobial Steward Call

June 13, 2023

Tennessee Department of Health
Healthcare Associated Infections and Antimicrobial Resistance Program

TN

Welcome

TN

Announcements

AU Reports

- All Reports for Q1 2023 Disseminated
 - TDH AU Point Prevalence
 - AU Quality Report
 - First ever Quarterly SAAR Report
- Deadline for Q2 Data – July 31, 2023
- Follow up for non-reporters from small and critical access hospitals ongoing

SHEA Workshop

- Advancing Health Equity through Antimicrobial Stewardship
- September 6, 2023
- Loews Hotel Atlanta in Atlanta, GA (no virtual option)
- Learning Objectives
 - Describe health inequities as they relate to antimicrobial use, antimicrobial resistance and antimicrobial stewardship.
 - Define gaps and opportunities in antimicrobial stewardship equity.
 - Identify resources available and specific collaborative actions within stewardship teams as well as with other stakeholders aimed at mitigating antimicrobial prescribing inequities.
- Registration is FREE but limited
 - <https://learningce.shea-online.org/content/advancing-health-equity-through-antimicrobial-stewardship#group-tabs-node-course-default6>



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**NEW! Quarterly SAAR
Report**

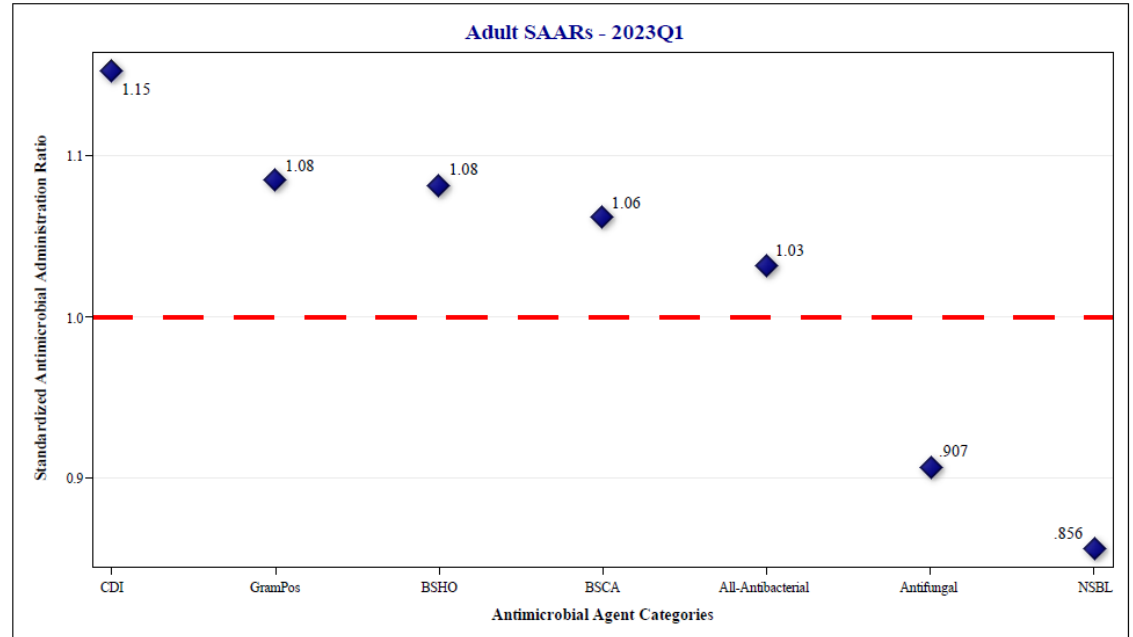
Quarterly SAAR Report Objective

- To create and distribute a meaningful report to facilities comparing SAAR values at the state-level



SAAR QUARTERLY REPORT Q1 | Tennessee, 2023

Statewide SAAR Distribution

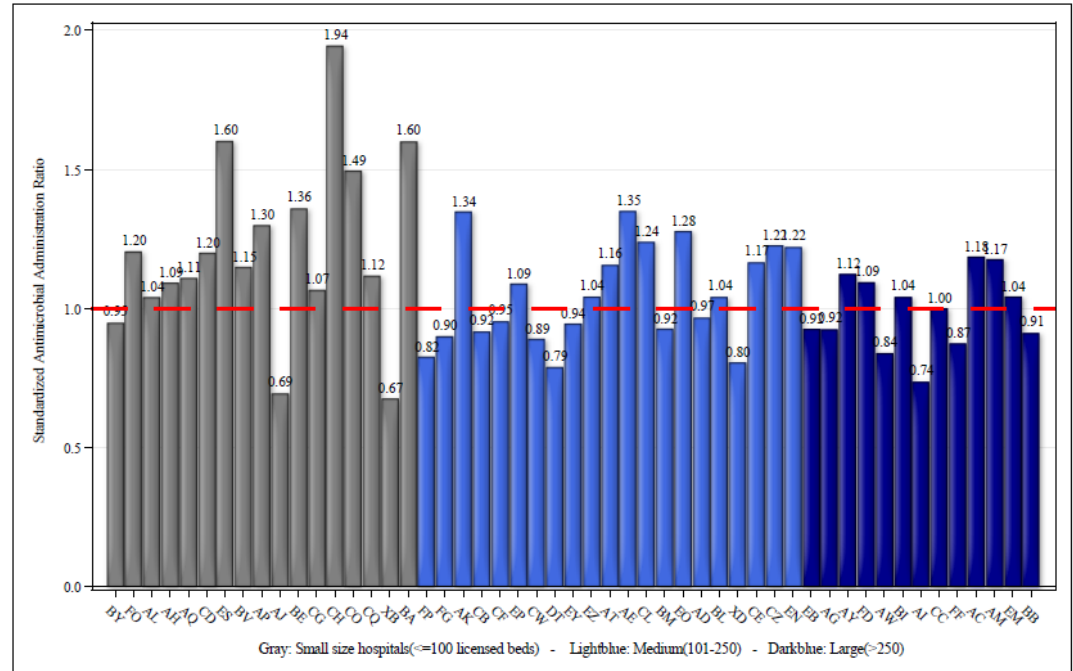


SAAR Report

- Visualize your facility SAAR values compared to others of similar size
- Compare to benchmark SAAR of 1.0 (observed = predicted use)

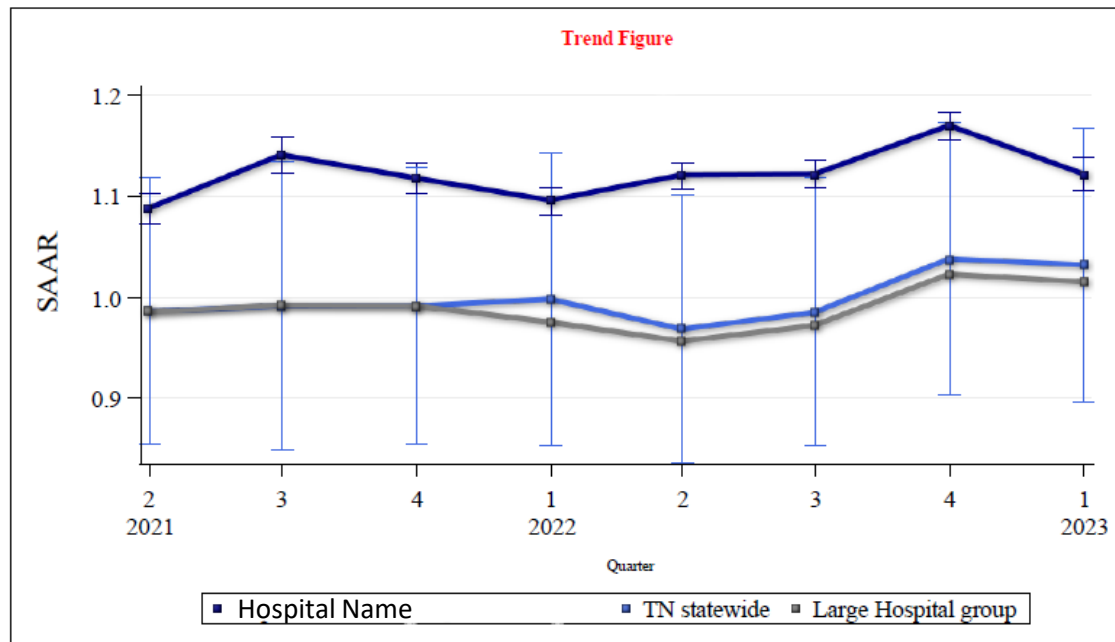
All Antibacterial Agents

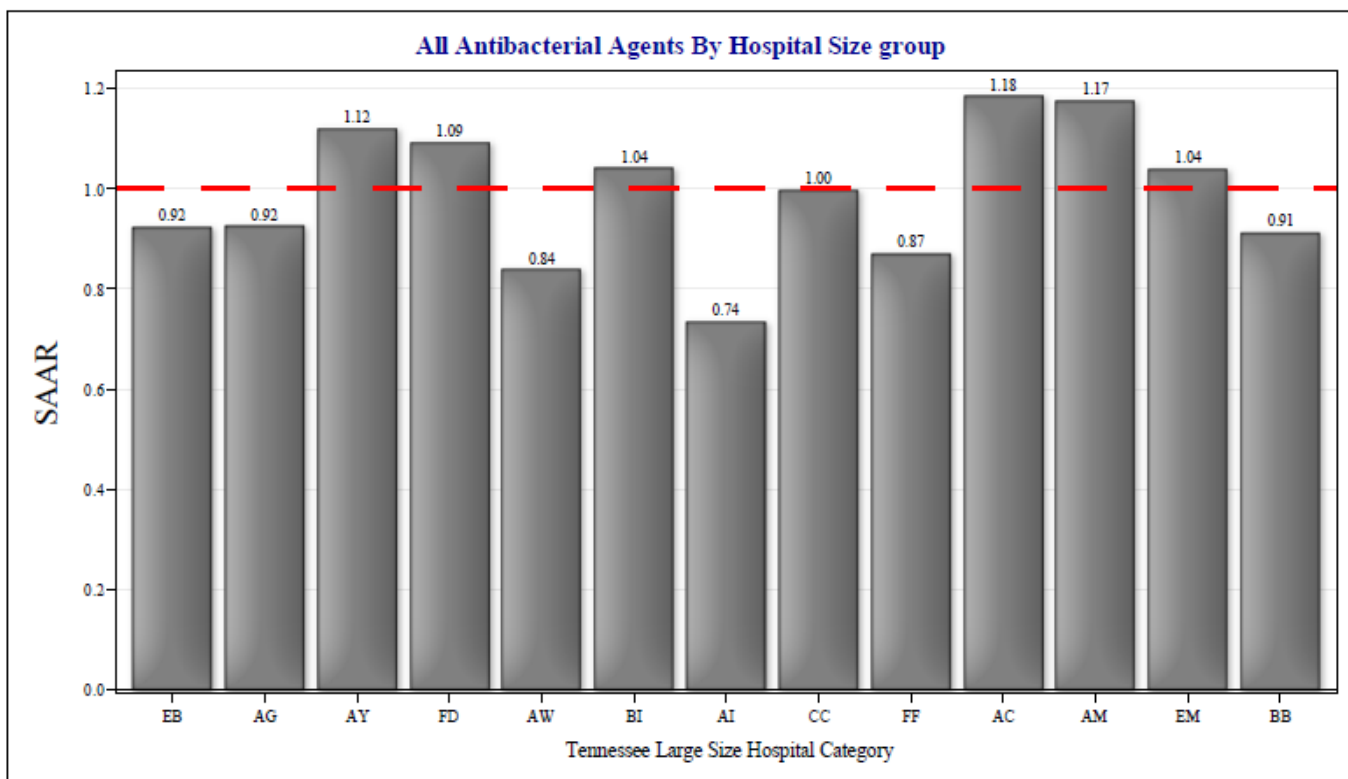
All antibacterial agents in the AUR protocol **except:** AMIKACIN LIPOSOME, CEFIDEROCOL, COLISTIN, DELAFLOXACIN, ERAVACYCLINE, IMPENEM/CILASTATIN/RELEBACTAM, LEFAMULIN, MEROPENEM/VABORBACTAM, OMADACYCLINE, PIPERACILLIN, PLAZOMICIN, TICARCILLIN/CLAVULANATE



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SAAR Categories

- Categories
 - All antibacterial agents
 - Broad-spectrum antibacterial agents used for community-acquired infections
 - Broad-spectrum antibacterial agents used for hospital-acquired infections
 - Antibacterial agents used for resistant gram-positive infections
 - Pediatric all antibacterial agents*
- Locations*
 - ICU
 - Ward
 - Step-down



*if reporting data for this location or type

Feedback and Future Directions

- We would love to hear how you are using these reports at your facility on your stewardship committees
- Please let us know if you have suggestions for additions to this report
- Contact: Callyn.Wren@tn.gov

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Stewardship Risk Score

Using NHSN Annual Facility Survey Data

- Through an NHSN User Group, TDH has access to facilities' NHSN Annual Hospital Survey
- Information on:
 - Infection Control Practices
 - Microbiology Testing
 - Antimicrobial Stewardship Interventions
 - Others...



Form Approved
OMB No. 0920-0666
Exp. Date: 12/31/23
www.cdc.gov/nhsn

Patient Safety Component—Annual Hospital Survey

Instructions for this form are available at: http://www.cdc.gov/nhsn/forms/instr/57_103-TOI.pdf

*required for saving
Facility ID: _____ Tracking #: _____
*Survey Year: _____

Facility Characteristics (completed by Infection Preventionist)

*Ownership (check one):

For profit Not for profit, including church Government
 Military Veterans Affairs Physician owned

If facility is a Hospital:

*Number of patient days: _____
*Number of admissions: _____

For any Hospital:

*Is your hospital a teaching hospital for physicians and/or physicians-in-training or nursing students? Yes No
If Yes, what type: Major Graduate Undergraduate

*Number of beds set up and staffed in the following location types (as defined by NHSN):

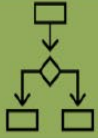
a. ICU (including adult, pediatric, and neonatal levels II/III, III, or higher): _____
b. All other inpatient locations: _____

Facility Microbiology Laboratory Practices (completed with input from Microbiology Laboratory Lead)

*1. Does your facility have its own on-site laboratory that performs bacterial antimicrobial susceptibility testing? Yes No
1a. If No, where is your facility's antimicrobial susceptibility testing performed? (check one)

Affiliated medical center
 Commercial referral laboratory
 Other local/regional, non-affiliated reference laboratory

ASP Strategies



Guidelines



Prior authorization



Education



Prospective audit with feedback



Order sets



Peer comparison



EHR alerts



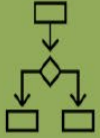
Governmental nudges

Value of Stewardship Interventions

The primary goal of antimicrobial stewardship is to optimize clinical outcomes while minimizing unintended consequences of antimicrobial use, including toxicity, the selection of pathogenic organisms (such as *C. difficile*), and the emergence of resistance.

**Which ASP interventions
are most effective?**

ASP Strategies



Guidelines



Prior authorization



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Order sets



Peer comparison

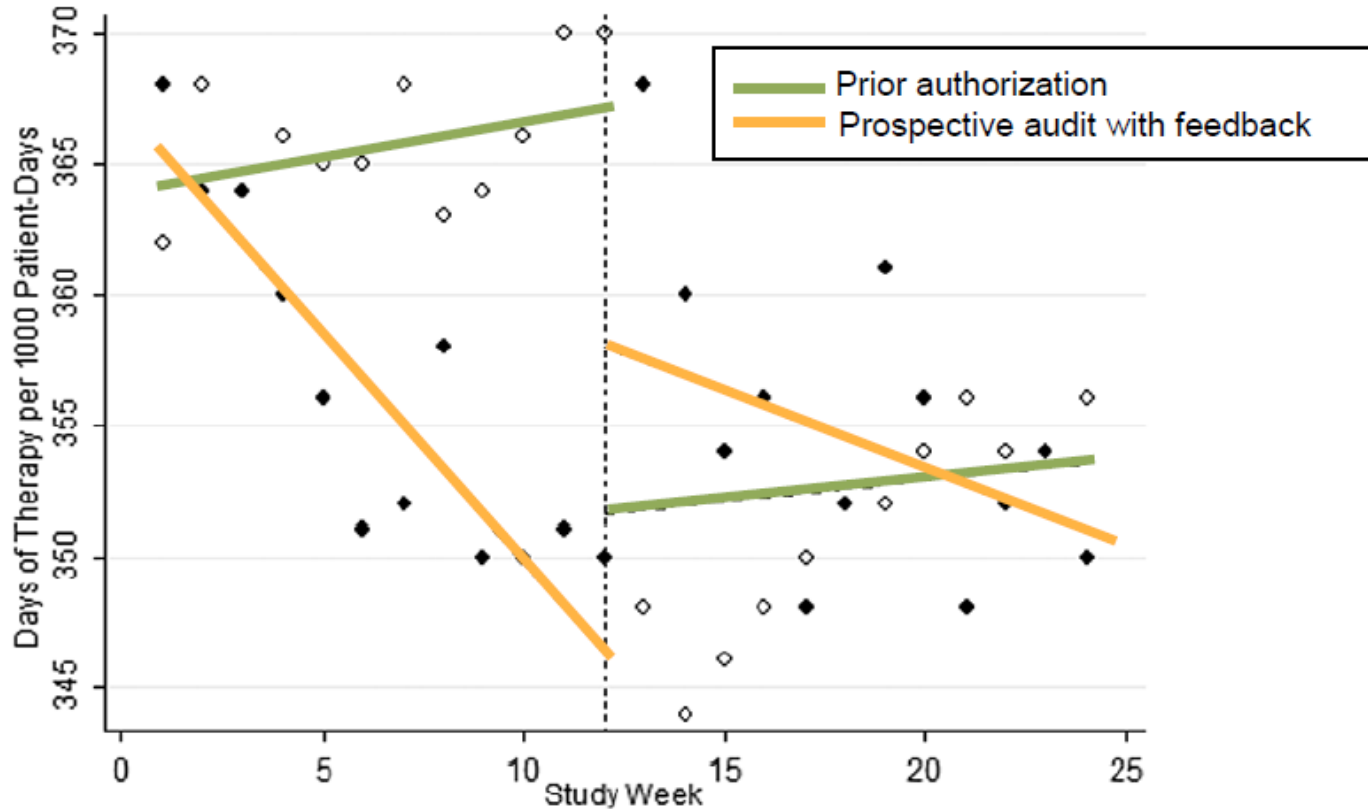


EHR alerts

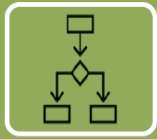


Governmental nudges

Preauthorization vs. PAF



But what about the others?



Guidelines



Prior authorization



Education



Prospective audit with
feedback



Stewardship Risk Score

- Recruiting for workgroup of subject matter experts to help determine
 - Quantify value of each stewardship intervention listed in the NHSN Annual Hospital Survey
- Sending out survey to all stewards in Tennessee, Colorado, and Virginia
 - Expect sometime in July 2023
 - Results to help guide the workgroup

Survey Questions

- For each stewardship intervention:
 - On a scale of 1 to 7, with 1 being non-essential and 7 being absolutely essential, how essential is this intervention to the success of your antimicrobial stewardship program?
 - On a scale of 1 to 7, with 1 being not effective and 7 being extremely effective, how effective is this intervention at driving antimicrobial use at your facility?

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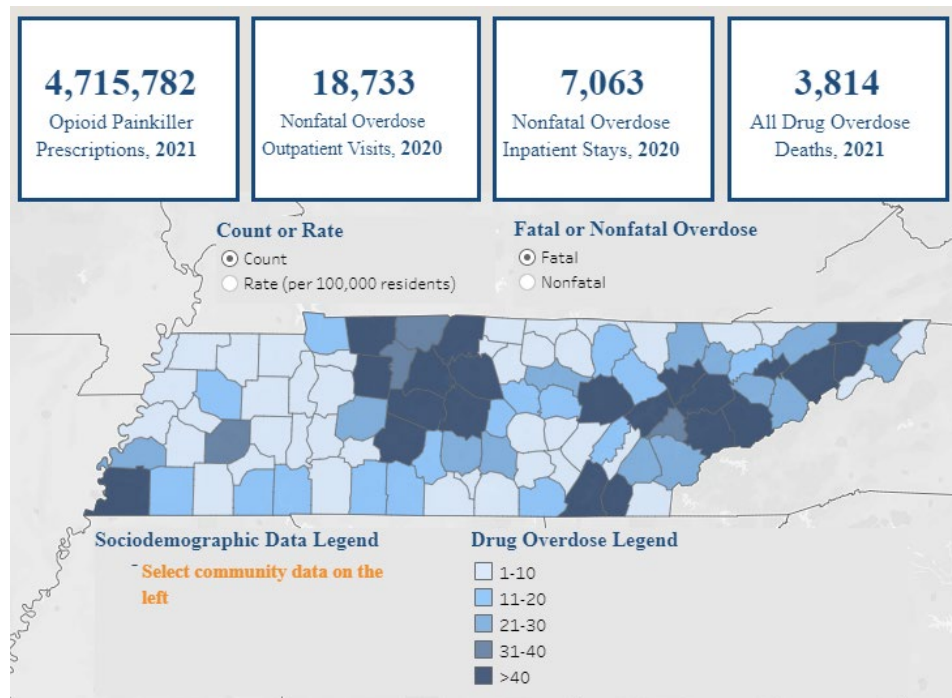
Endocarditis Survey

Management of Endocarditis in Patients Who Inject Drugs in Tennessee

Jarett Worden, PharmD, BCIDP
June 13th, 2023

Background

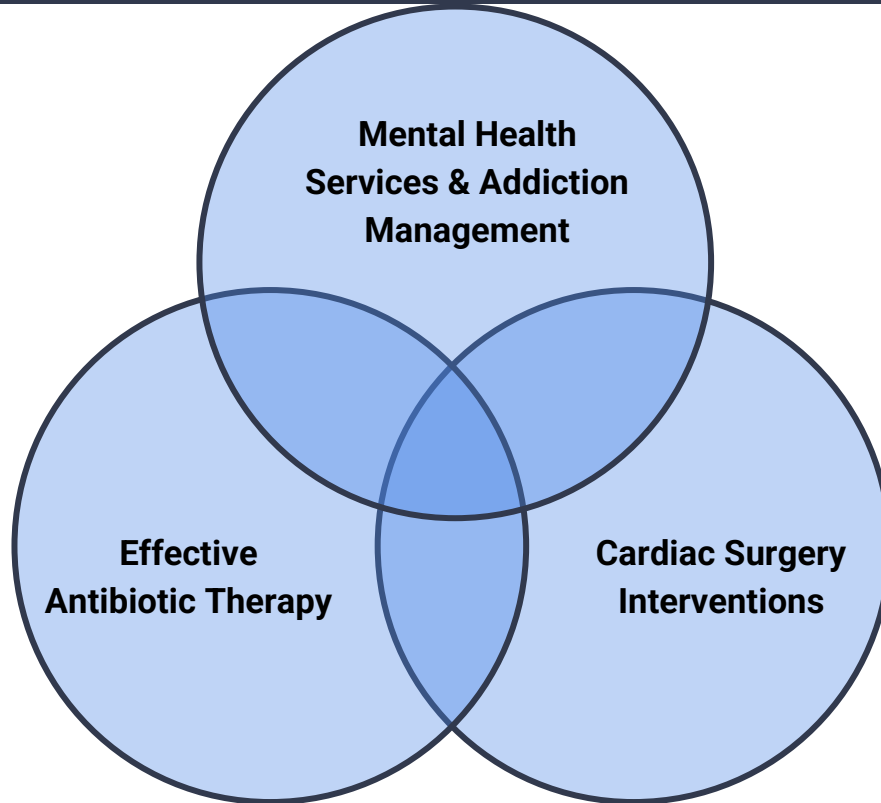
- Approximately 70,000 Tennesseans are addicted to opioids
- Each day in Tennessee, at least 3 people die from an opioid-related overdose
- Tennessee is ranked 3rd in the country for prescription drug abuse
- Tennessee remains in the top 15 of all states in drug overdose deaths



Background

- **Infective endocarditis is a complicated and life-threatening disease**
- **Approximately 85% of cases of right-sided endocarditis in patients who inject drugs (PWID) and almost 50% of left-sided endocarditis cases are attributed to *S. aureus***
- **10% of all MRSA infections in the US are now attributable to IV drug use**
- **PWID are 16 times more likely to develop invasive MRSA infections**

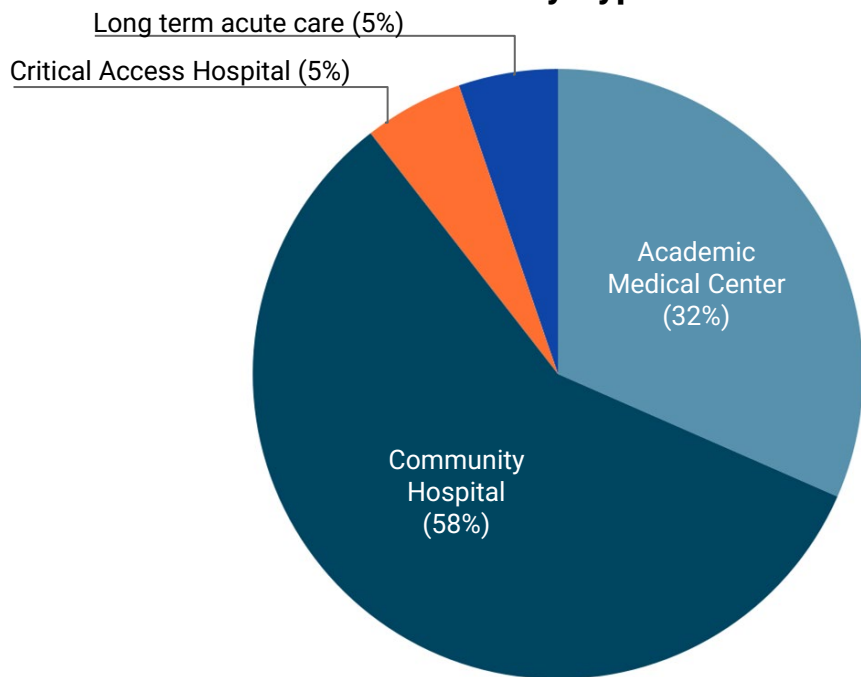
Background



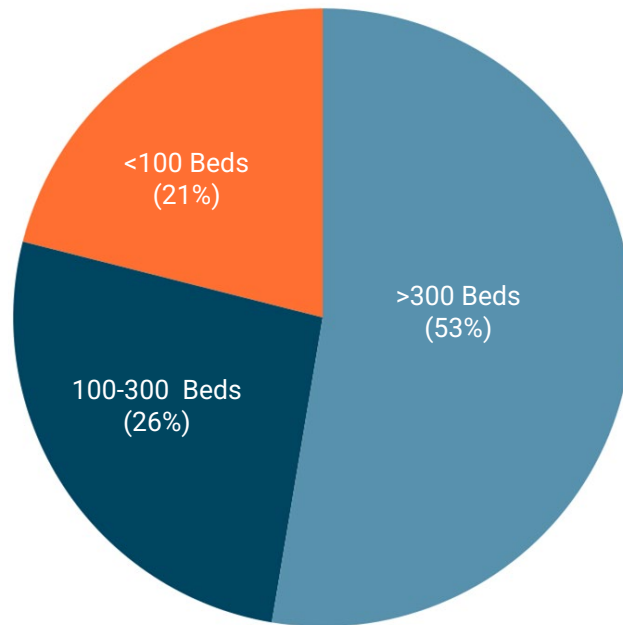
Demographics

(n = 19)

Facility Type



Facility Bed Size

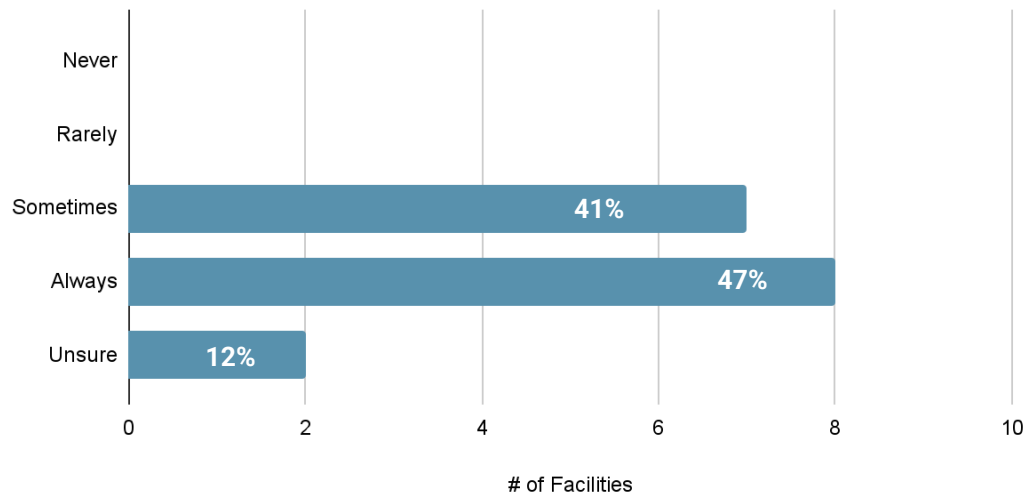


Mental Health Services & Addiction Management

Addiction Management

(n = 17)

Are patients at your facility evaluated for substance use disorders on admission?



Only 4 of 17 facilities (24%) offer Addiction Consultation Service or have Addiction-Trained Clinicians to assist with care

Addiction Management

(n = 17)

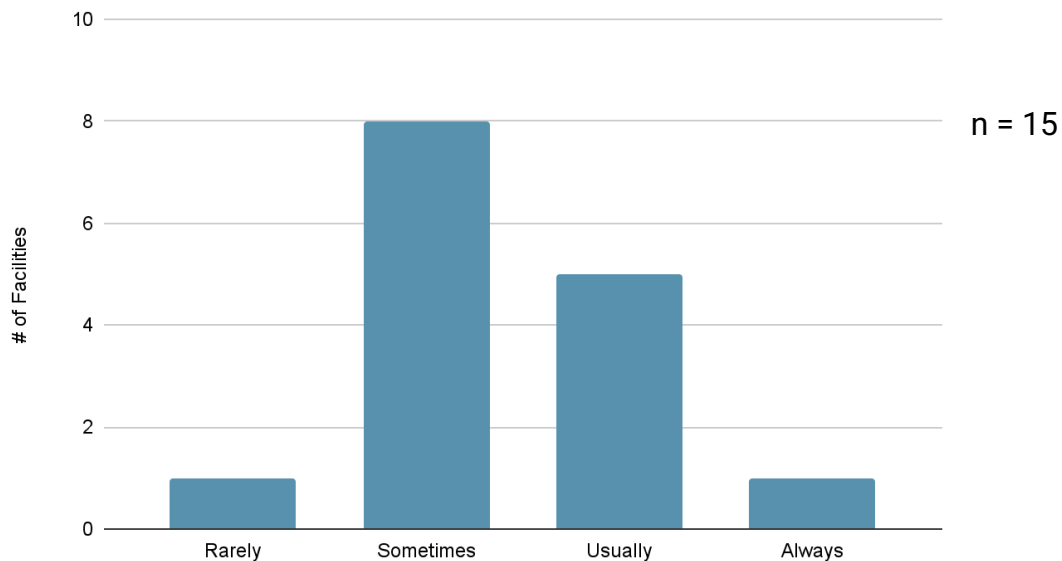
- **11 (65%)** facilities offer inpatient medications to address opioid-withdrawal
 - i.e buprenorphine, methadone, or naltrexone ER
- **6 of those 11 (55%)** facilities make efforts to ensure continuation of addiction care upon hospital discharge

Antimicrobial Therapy

Antimicrobial Therapy

(n = 16)

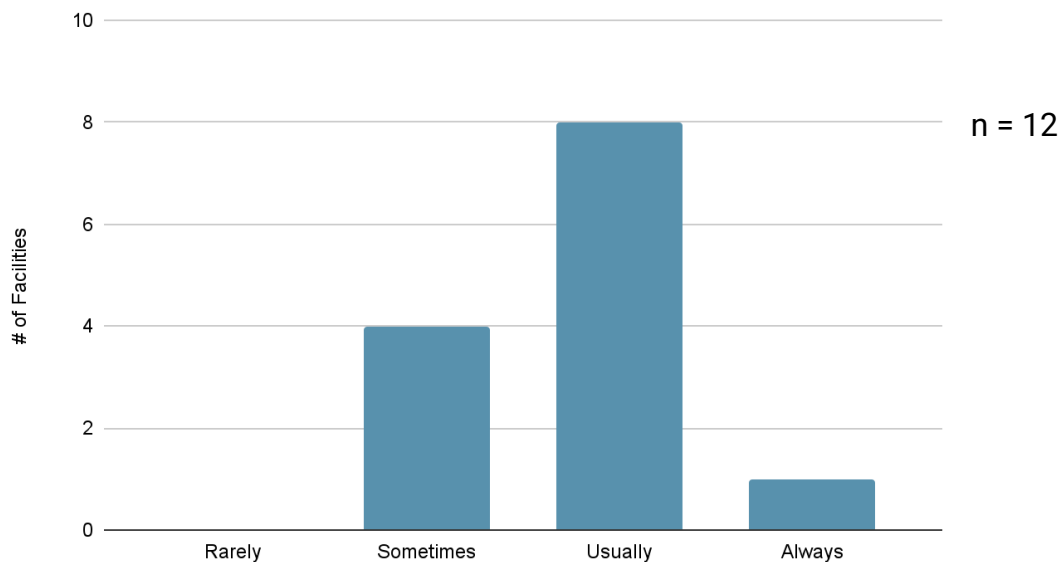
94% of facilities offer to complete IV antibiotic course inpatient in the hospital



Antimicrobial Therapy

(n = 16)

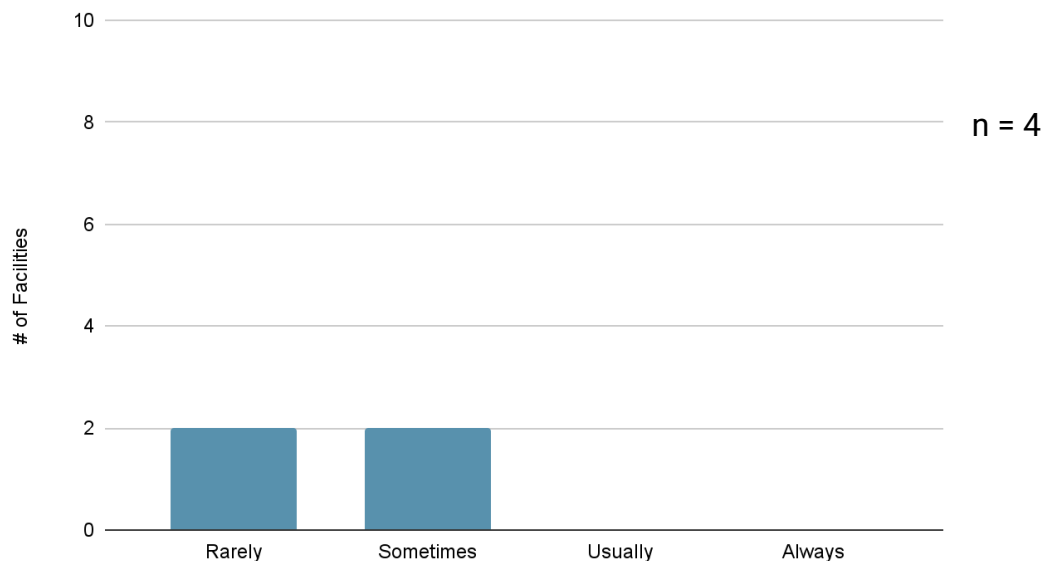
75% of facilities offer to complete IV antibiotic course at a Skilled-nursing facility (SNF)



Antimicrobial Therapy

(n = 16)

25% of facilities offer to discharge patient with PICC line to complete IV antibiotic course as Outpatient Parenteral Antibiotic Therapy (OPAT)

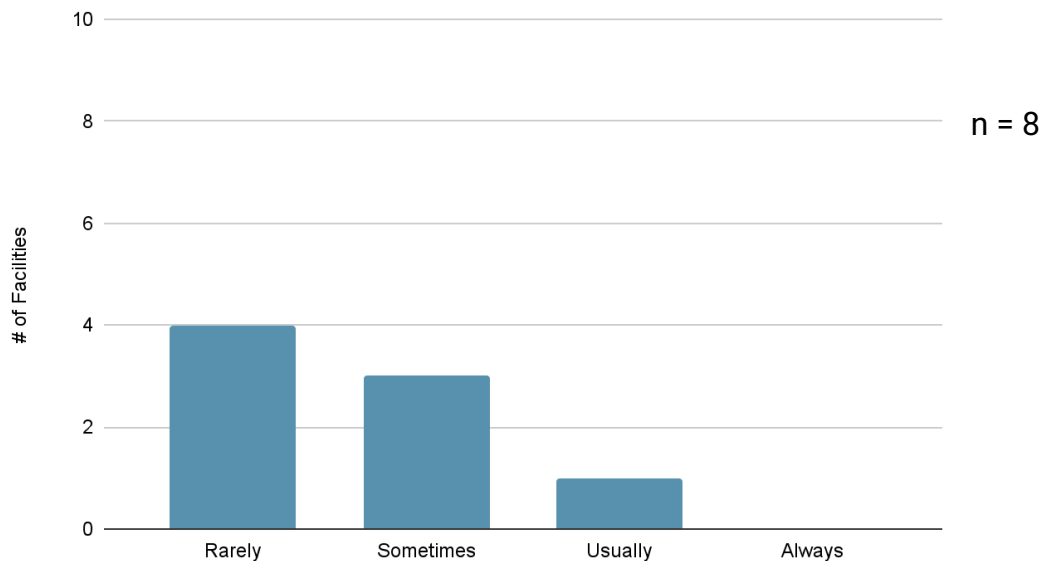


***75%** require a contract or agreement with patient regarding commitment to abstinence or substance use disorder treatment for OPAT

Antimicrobial Therapy

(n = 16)

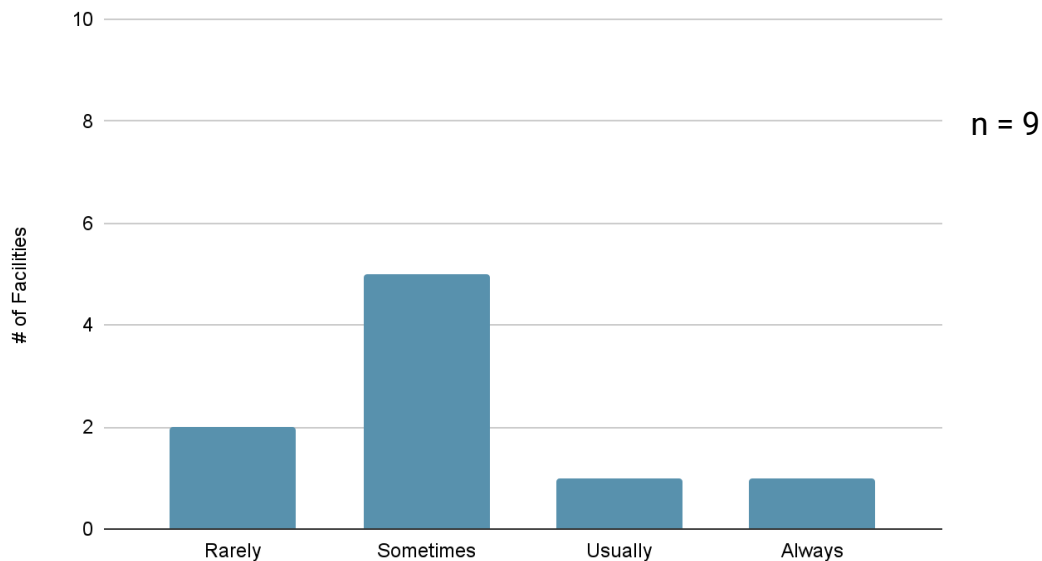
50% of facilities offer long-acting lipoglycopeptides at infusion centers
(i.e. dalbavancin or oritavancin)



Antimicrobial Therapy

(n = 16)

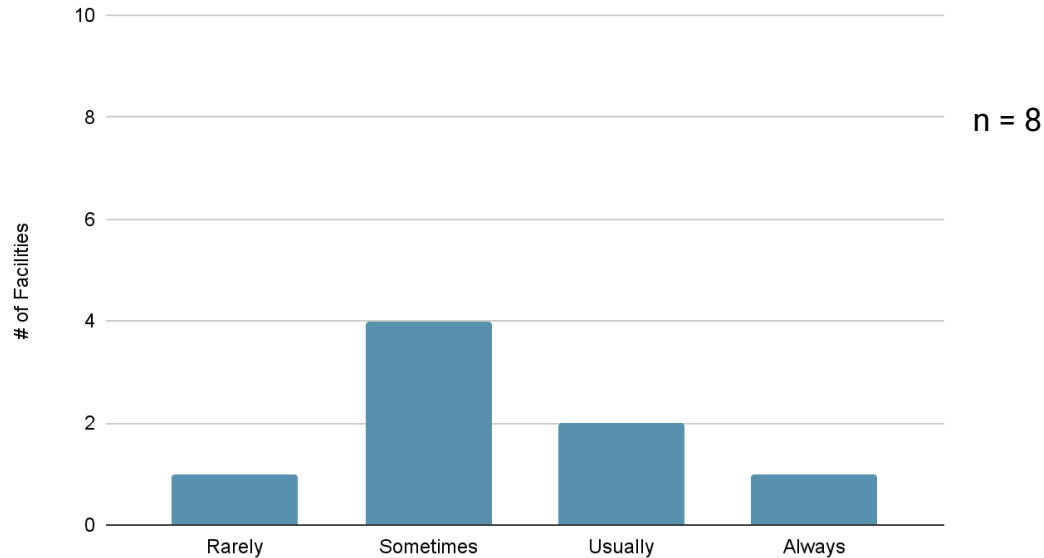
56% of facilities offer to transition to oral antibiotic course prior to or upon hospital discharge



Antimicrobial Therapy

(n = 16)

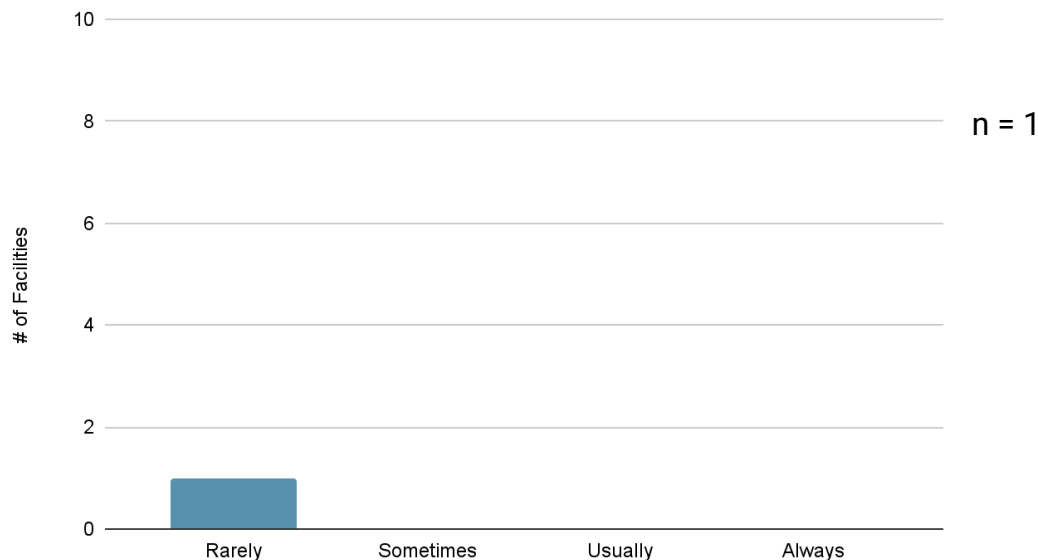
50% of facilities allow patient to leave AMA without continuation of antimicrobial therapy



Antimicrobial Therapy

(n = 16)

6% of facilities will discharge patient with PICC line to complete IV antibiotic course as OPAT if patient leaves AMA

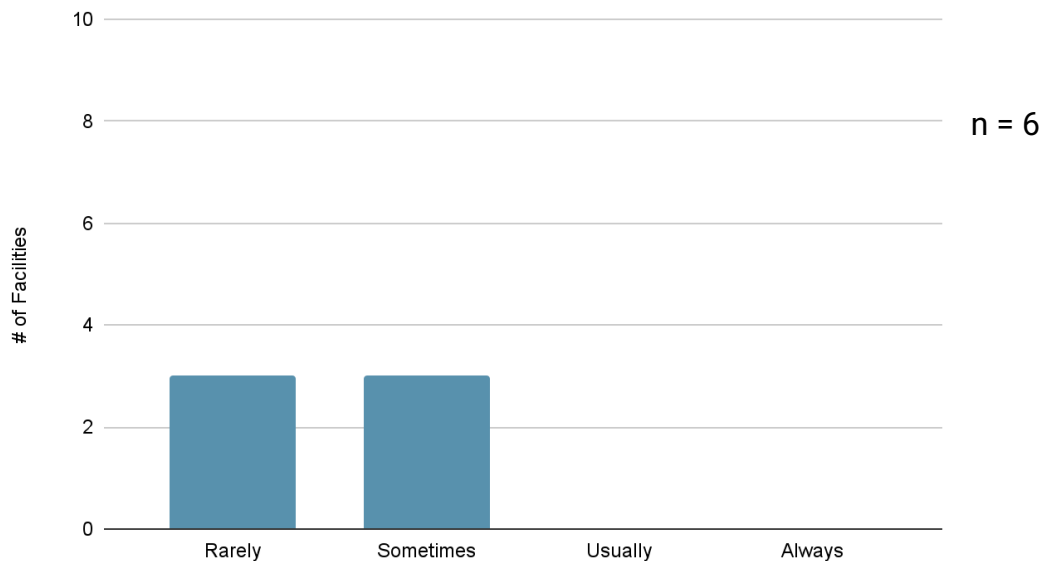


*No facilities require a contract or agreement with patient regarding commitment to abstinence or substance use disorder treatment for OPAT if leaving AMA

Antimicrobial Therapy

(n = 16)

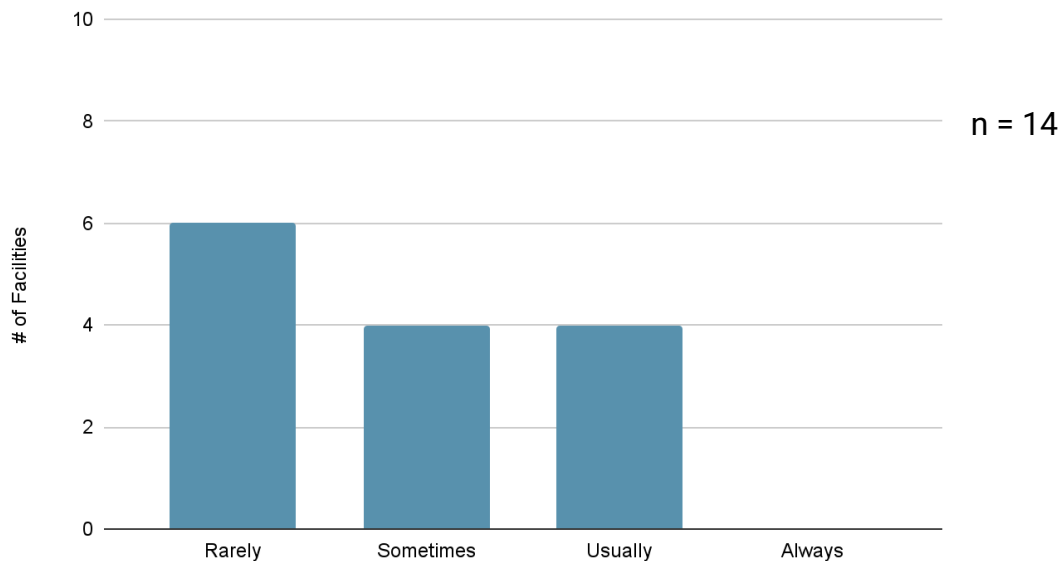
38% of facilities offer long-acting lipoglycopeptides at infusion centers if patients leave AMA



Antimicrobial Therapy

(n = 16)

88% of facilities will transition to PO antibiotic course prior to or upon hospital discharge if patient leaves AMA

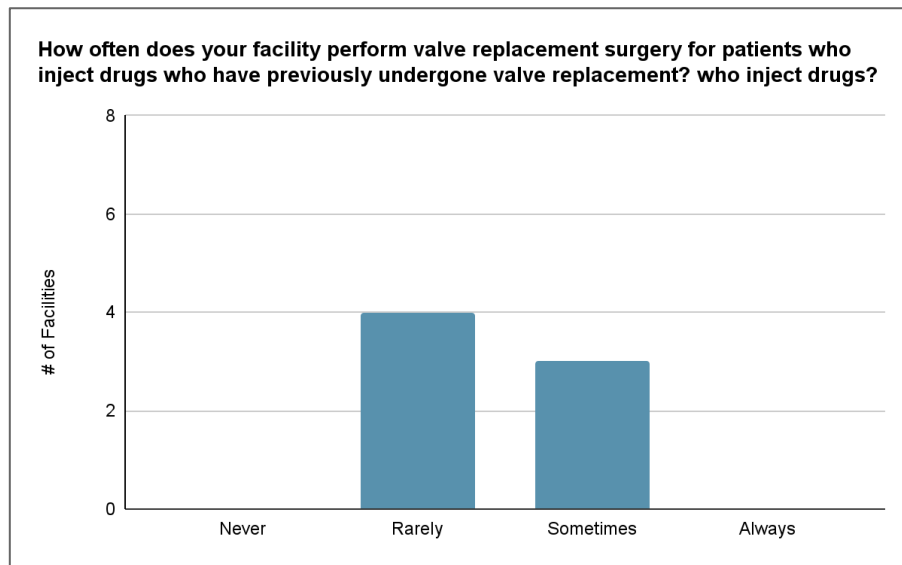
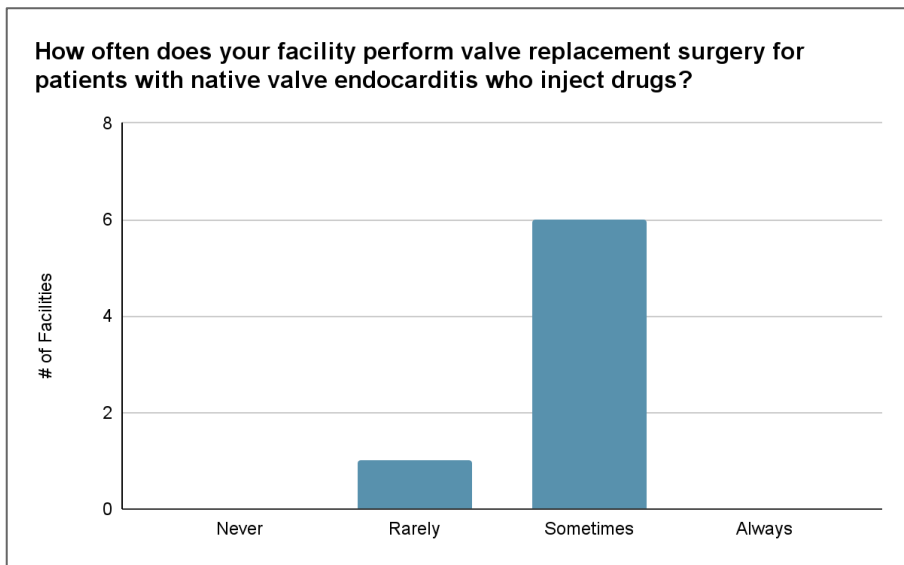


Cardiac Surgery

Cardiac Surgery

(n = 16)

- **7 of 16 (44%)** facilities perform cardiac surgery for patients with endocarditis



- **6 of 16 (38%)** facilities perform catheter-based interventions (such as AngioVac) for patients with tricuspid valve endocarditis

Summary

- Only ~25% of facilities surveyed offer Addiction Consultation Service or have Addiction-Trained Clinicians
- Majority of facilities offer medications to address opioid-withdrawal
 - Over 50% of those facilities make efforts to ensure continuation upon discharge
- Most of facilities allow patients to complete full IV antibiotic course inpatient or at a SNF
 - Only 1/4 of facilities surveyed allow discharge of PWID with a PICC line to complete IV antibiotics outpatient
- About half of facilities allow patients to transition to long-acting lipoglycopeptides or oral antibiotics to complete antibiotic therapy
- 50% of facilities allow patients to leave AMA without continuation of antimicrobial therapy
- Less than half of facilities surveyed will perform either cardiac surgery or catheter-based interventions for PWID with endocarditis

Congratulations!!!

Kate Miller

\$50 Amazon Gift Card
Winner



Management of Endocarditis in Patients Who Inject Drugs in Tennessee

Jarett Worden, PharmD, BCIDP
June 13th, 2023

TN

Project Firstline

Next Steps

- **Next Call**
 - August 15 2pm Eastern/1pm Central Time
 - Drug Diversion as an Infection Control Breach

- **Feedback always appreciated**
 - Christopher.evans@tn.gov