

Identifying and Prioritizing Metrics to Justify your New Antimicrobial Stewardship Program

Zahra Kassamali Escobar, PharmD, BCPS
UW Medicine | Valley Medical Center
zescobar@uw.edu

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This presentation is intended for educational use only, and does not in any way constitute medical consultation or advice related to any specific patient.

Agenda: To Whom do we Justify

1.) The Patient



2.) The State



3.) Hospital Administration





Justifying ASP to Patients

IMPROVING ANTIBIOTIC USE



Do I really need antibiotics?



SAY YES TO ANTIBIOTICS
when needed for certain infections caused by **bacteria**.



SAY NO TO ANTIBIOTICS
for **viruses**, such as colds and flu, or runny noses, even if the mucus is thick, yellow or green. Antibiotics also won't help for some common bacterial infections including most cases of bronchitis, many sinus infections, and some ear infections.



Antibiotics are only needed for treating certain infections caused by bacteria.

Antibiotics do NOT work on viruses.

Do antibiotics have side effects?

Anytime antibiotics are used, they can cause side effects. When antibiotics aren't needed, they won't help you, and the side effects could still hurt you. Common side effects of antibiotics can include:



Rash



Dizziness



Nausea



Yeast Infections



Diarrhea

More serious side effects include *Clostridium difficile* infection (also called *C. difficile* or *C. diff*), which causes diarrhea that can lead to severe colon damage and death. People can also have severe and life-threatening allergic reactions.

Antibiotics save lives. When a patient needs antibiotics, the benefits outweigh the risks of side effects.

1 out of 5

medication-related visits to the ED are from reactions to antibiotics.



An Example from the TASP Community: Forks Community Hospital

MENU | Subscribe

FORKS FORUM

Ask an Expert: at Forks Community Hospital

Wed Dec 12th, 2018 1:46pm · LIFE



Forks Community Hospital received two questions last week.

How does my prescription add to medication resistance? What is medication resistance?

antibiotics are used to fight infections caused by bacteria but can cause side effects and antibiotic resistance at the same time.

At Forks Community Hospital we have a multi-disciplinary team who started a focus on Antimicrobial Stewardship over 2+1/2 years ago. We

At Forks Community Hospital we have a multi-disciplinary team who started a focus on Antimicrobial Stewardship over 2 +1/2 years ago.

During this holiday season, protect you and your loved ones by frequently and thoroughly washing your hands: Sing the Happy Birthday song twice in a row to make sure you spend enough time with the soap and water. Cover your cough and even wear a mask, even if you are well and want to stay that way by avoiding germs of others. Stay rested and minimize anxiety. Gratitude helps. The best gift for everyone is the gift of health.

Janet Schade, MS, RPh, Director of Pharmacy

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Washington State: Medicaid Quality Incentive Measure Guidelines

July 1, 2018



TIER 1: WSHA AMS INTERMEDIATE TIER

Membership establish an AMS Budget, Strategic Plan and Performance

Electronic Health Record (EHR) to collect AMS data?

the AMS program, including staff? (Yes/No)

Education of clinicians

WSHA AMS Intermediate Tier

- Does your...
- Does your hospital demonstrate responsible for antibiotic utilization...
- Does your hospital review your antimicrobial... based on local antibiogram? (Yes/No)

Justifying to the State



http://www.wsha.org/wp-content/uploads/FINAL-2018_10_25-WSHA-Medicaid-QualityIncentive.pdf

Definition of Antimicrobial Stewardship Basic Tier-WSHA

The goal is to identify areas of opportunity to optimize antimicrobial utilization > antimicrobial resistance patterns, development of secondary infections and effects.

The WSHA AMS Basic Tier asks 8 questions related to leadership commitment which is fundamental to creating the infrastructure towards implementation of the intermediate tier.

Data Source:

Data are to be reported to the Quality Improvement Committee

Fields to be Reported:

Answer "Yes" or "No"

WSHA

**WSHA AMS Basic
Tier's
8 Questions**

- Does your hospital have a designated leader for antimicrobial stewardship?
- Does your hospital have a designated leader for antimicrobial stewardship who is responsible for the overall program?
- Does your hospital have a designated leader for antimicrobial stewardship who is responsible for the overall program?
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Updated October 25, 2018

Washington State Health Association (WSHA)

AMS Basic Tier Questions

- 1. Leadership commitment and accountability**
- 2. Collaboration with Infection control and Hospital QAPI leadership**
- 3. Dedicated multidisciplinary AMS team**
- 4. Reporting of and improving upon antimicrobial use data**
- 5. Require annual competency-based training of staff**
- 6. Provide patient and family education**
- 7. Implement organized protocols**
- 8. Drug expertise, including appointed pharmacist leader**

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Why should I **continue to** fund your antimicrobial stewardship program?

Thank you for your interest, I'm glad you asked.

SHARE A STORY OR A SIMPLE DATA POINT



Share a **Recent** Story

Last week...

Last month...

**Look for GOOD CATCHES that changed a patient's
OUTCOME**

-morbidity/mortality

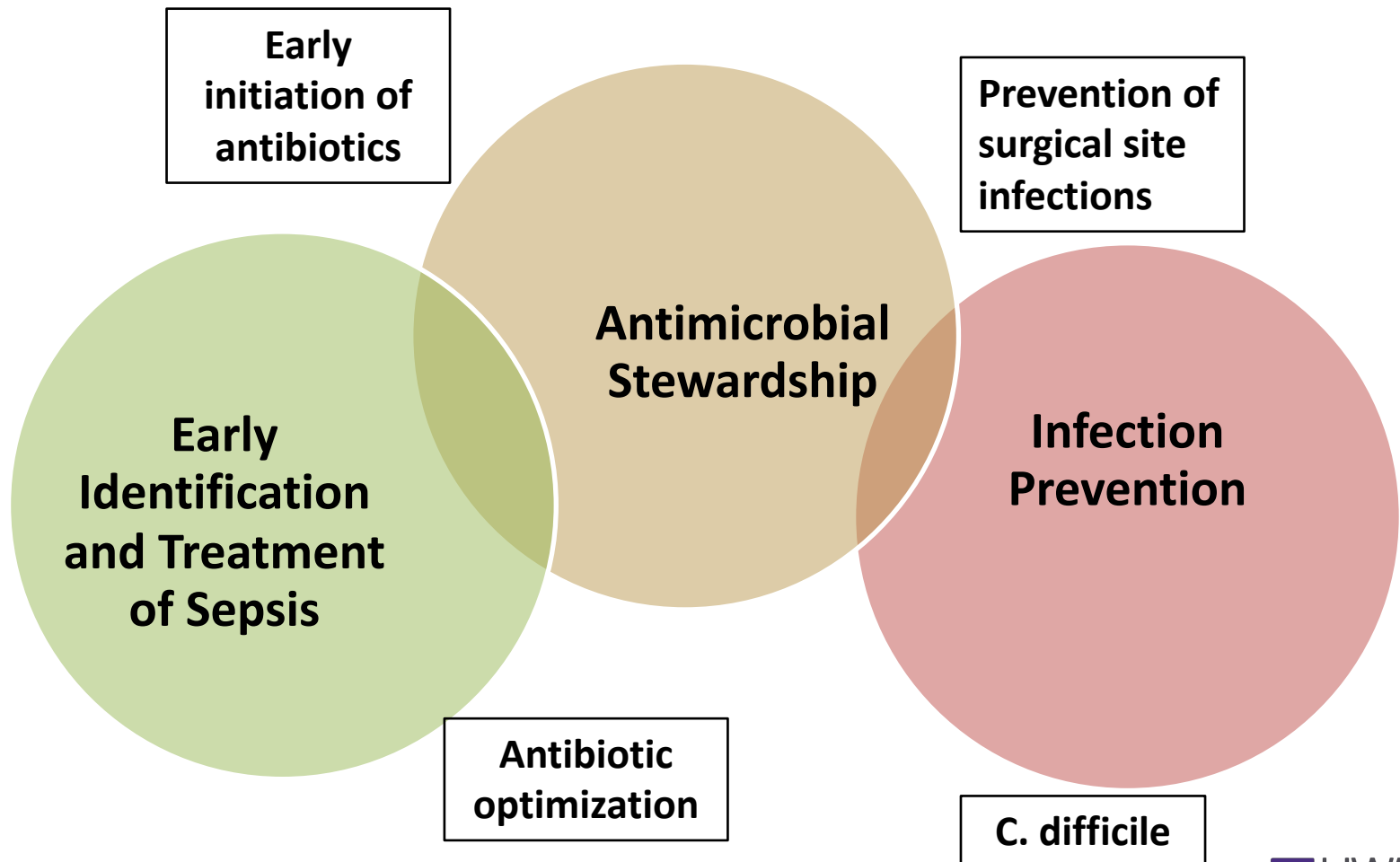
-length of stay

-adverse effect

A Simple Data Point

30% of all patients at our hospital receive an antibiotic during their stay. Our antibiotic stewardship program has a wide scope of responsibility.

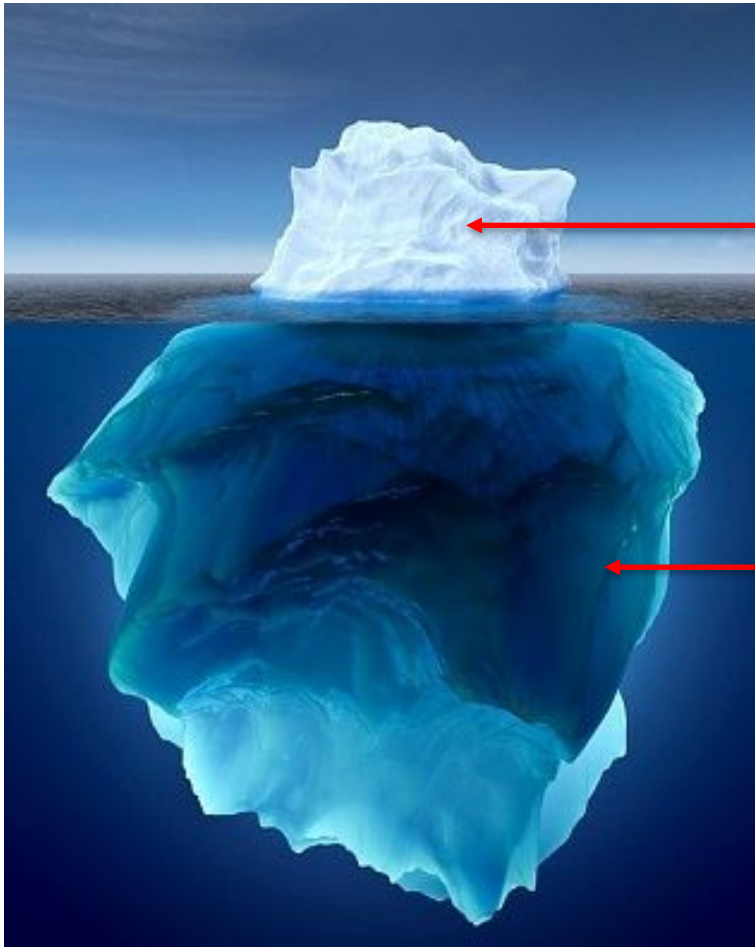
Tie Into Another Important Quality Measure



The Same People Run our Antimicrobial Stewardship Program and our Infection Control Program

- A.) Yes, same people**
- B.) Yes, most overlap**
- C.) Yes, some overlap**
- D.) No, no overlap**

Get the Most **Mileage** out of your ASP Initiatives



The part of your initiative that
people see and interact with

Planning
Education
Communication
Baseline evaluation
Post-programmatic evaluation
Program maintenance

Piperacillin-tazobactam Time-out



The part of your initiative that people see and interact with

Clinical outcomes

LENGTH OF STAY

-ICU

-Hospital

Decrease in drug expenditures

Acquisition costs

Savings in time/cost per time

-Time to make and distribute drug

-Time to hang dose

-Time to infuse dose (up to 4 hrs)

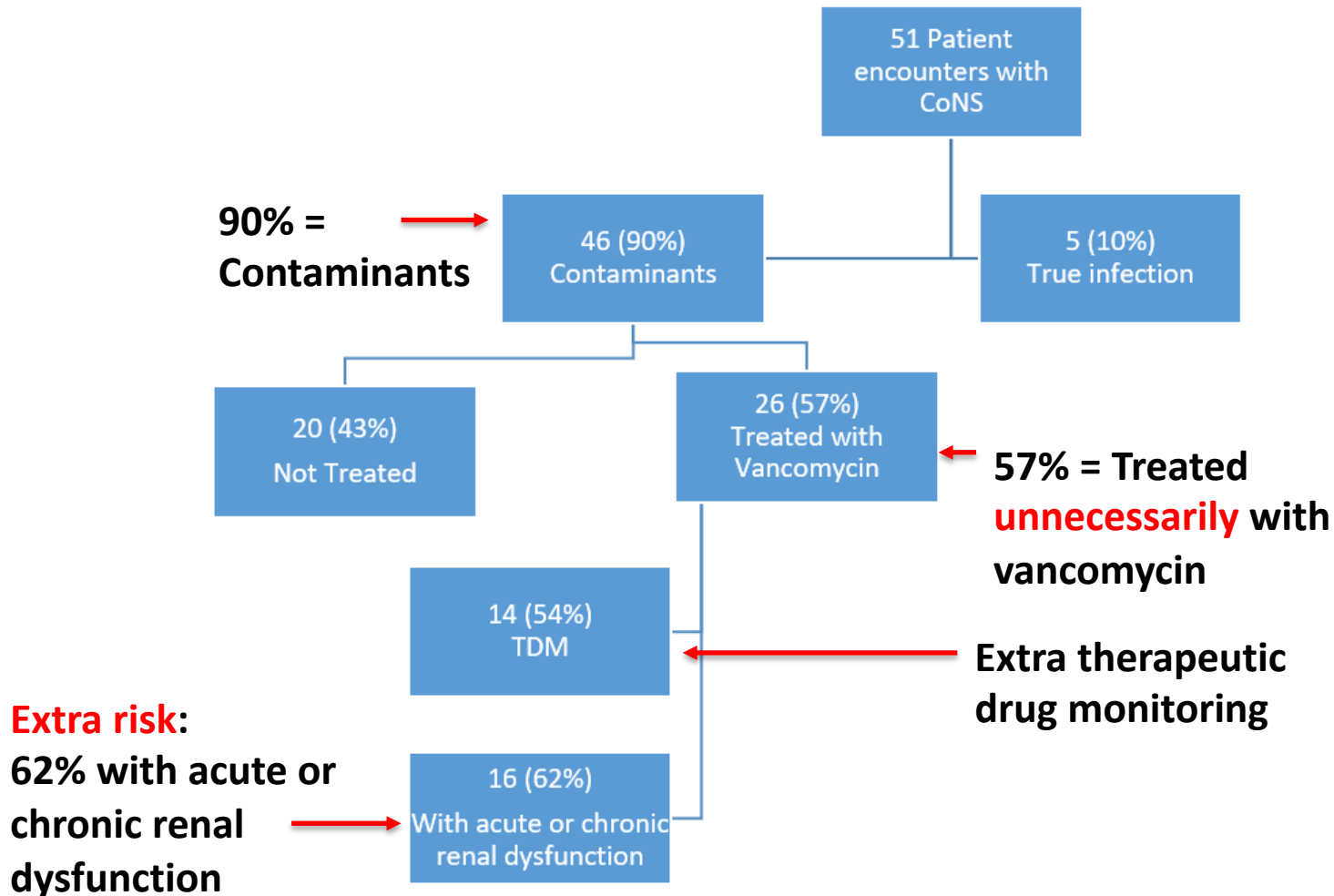
Reducing stock on hand (if applicable)

Theoretical reduced risk of
C. difficile infection
<Pt care example>

Example: Cost Justification for Rapid Diagnostics

Focus on Coagulase negative staphylococci

Figure 1: Isolation of CoNS in January 2017



Example: Cost Justification for Rapid Diagnostics

Table 2: Estimated Costs of Blood Culture Contamination with Coagulase Negative Staphylococci (CoNS)

Source of Excess Cost	Unit Cost	Frequency/Month	Cost/Month	Cost/Year
Vancomycin Drug Concentration	Lab ¹ : \$100 Pharmacist ² : \$9	20 concentrations	\$2180	\$26,160
Days of Vancomycin therapy	Drug: 2.89/1000mg vial Pharmacist ² : \$5	39 days ³ (2000 mg/day)	\$420	\$5,040
Length of Stay	\$3248/day ⁴	4 days	\$12,992	\$155,904
Total				\$187,104

Costs per Inpatient Day:

Kaiser Family Foundation Data

Hospital Adjusted Expenses per Inpatient Day



Timeframe: 2016

REFINE RESULTS

TIMEFRAME ⓘ

2016 ▼

LOCATIONS ⓘ

☐ United States

☒ States

Clear All Selections

☐ Rhode Island

☐ South Carolina

☐ South Dakota

☐ Tennessee

☐ Texas

☐ Utah

☐ Vermont

TABLE | MAP |

Location	Expense Inpatient
Washington	

NOTES

Notes

Includes all operating and non-op term general and other special hospitals whose facilities and services are available to the public.

Adjusted expenses per inpatient day include expenses incurred for both inpatient and outpatient care; inpatient days are adjusted higher to reflect an estimate of the volume of outpatient services. It is important to note that these figures are only an estimate of expenses incurred by the hospital to provide a day of inpatient care and are not a substitute for either actual charges or reimbursement for care provided.

Sources

Location	Expenses per Inpatient Day
Idaho	\$2,708
Oregon	\$3,537
Washington	\$3,467

More Ideas to Tie your ASP Interventions to Data

WSHA Patient Safety Summary

- Catheter associated urinary tract infections
- Central line associated bloodstream infections
- C. difficile infections
- Mortality due to severe sepsis and septic shock
- Antibiotic use:
 - total
 - carbapenem
 - cephalosporin
 - fluoroquinolones
 - penicillins

Does your hospital submit infection control and/or sepsis data to the state?

- A. Yes
- B. No
- C. Not Sure

Justification

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