New 2023 Antimicrobial Stewardship Standards for TJC and CMS – Are You Ready?!

Megan Metzke, PharmD, BCPS, BCCP
Antimicrobial Stewardship Coordinator
Springfield Memorial Hospital

Radhika Polisetty, PharmD
Associate Professor/ Clinical Pharmacy Specialist
Midwestern University College of Pharmacy, DG campus, IL
Northwestern Medicine Central DuPage Hospital, Winfield, IL

Natalie Tucker, PharmD, BCPS, BCIDP
Clinical Pharmacy Specialist, Antimicrobial Stewardship
HSHS St. John's Hospital

1

Disclosures

- Megan Metzke and Natalie Tucker have no relevant financial relationships with commercial interests to disclose.
- Radhika Polisetty is a consultant for Gilead Pharmaceuticals, any relevant conflicts have been resolved.

2

Objectives

At the end of this presentation, pharmacists and technicians should be able to:

1. Outline the 2023 TJC and CMS standards related to antimicrobial stewardship
2. Review individual hospital compliance with the new 2023 TJC and CMS standards related to antimicrobial stewardship
3. Discuss examples of projects and initiatives that were launched to meet the new 2023 TJC and CMS antimicrobial stewardship standards

AMS: Antimicrobial Stewardship
CMS: Centers for Medicare & Medicaid Services
TJC: The Joint Commission

3

Assumptions for this Presentation

- You are familiar with the term antimicrobial stewardship
- You are familiar with TJC and CMS
- Your hospital is accredited by TJC and/or CMS or is expecting a TJC visit in the near future

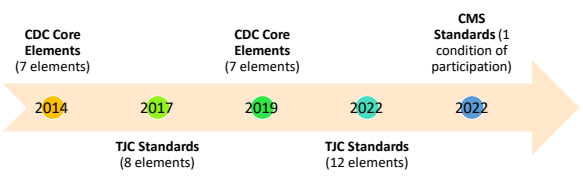
- Refer to handout for list of old and new TJC elements of performance

4

Outline the 2023 TJC and CMS Standards Related to Antimicrobial Stewardship

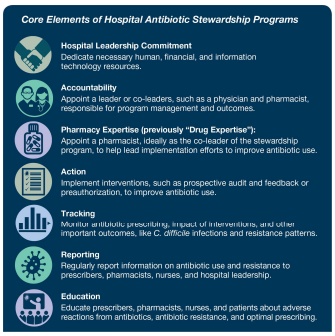
5

A History of AMS Standards



6

CDC Core Elements



2023 ICHP ANNUAL MEETING

CDC. Core Elements of Hospital Antibiotic Stewardship Programs. Atlanta, GA: US Department of Health and Human Services, CDC; 2019.

7

7

Poll Everywhere

Is the following TJC standard OLD or NEW?

The antibiotic stewardship program evaluates adherence to at least one of the evidence-based guidelines the hospital implements.

a. OLD
b. NEW

2023 ICHP ANNUAL MEETING

8

8

Poll Everywhere

Is the following TJC standard OLD or NEW?

The hospital takes action on improvement opportunities identified by the antibiotic stewardship program.

a. OLD
b. NEW

2023 ICHP ANNUAL MEETING

9

9

Out With the Old, In With the New

TJC 2017	TJC 2023
EP1	EP10
EP2	Removed
EP3	Removed previously
EP4	EP13
EP5	Removed
EP6	EP18
EP7	EP15, EP20
EP8	EP21

EP: element of performance

2023 ICHP ANNUAL MEETING

New and Revised Antibiotic Stewardship Requirements. The Joint Commission 2022.

10

10

New TJC Elements

2023 ICHP ANNUAL MEETING

New and Revised Antibiotic Stewardship Requirements. The Joint Commission 2022.
R3 Report. The Joint Commission. June 2022, Issue 35.

11

11

CMS Condition of Participation

§482.42 Condition of Participation: Infection Prevention and Control and Antibiotic Stewardship Programs

The hospital must have active hospital-wide programs for the surveillance, prevention, and control of HAIs and other infectious diseases, and for the optimization of antibiotic use through stewardship. The programs must demonstrate adherence to nationally recognized infection prevention and control guidelines, as well as to best practices for improving antibiotic use where applicable, and for reducing the development and transmission of HAIs and antibiotic resistant organisms. Infection prevention and control problems and antibiotic use issues identified in the programs must be addressed in collaboration with the hospital-wide quality assessment and performance improvement (QAPI) program.

2023 ICHP ANNUAL MEETING

Infection Prevention and Control and Antibiotic Stewardship Program Interpretive Guidance Update. CMS. 2022.

12

12

CMS Condition of Participation

- 482.42(a) Standard: IP
- **482.42(b) Standard: AMS**
- 482.42(c) Standard: Leadership Responsibilities
  - **Part (1): Both IP and AMS**
  - Part (2): IP
  - **Part (3): AMS**
- **482.42(d): IP & AMS**

13

CMS Condition of Participation

[§482.42(b)(2) The hospital-wide antibiotic stewardship program:]
(iii) Documents improvements, including sustained improvements, in proper antibiotic use, such as through reductions in CDI and antibiotic resistance in all departments and services of the hospital;

Interpretive Guidelines §482.42(b)(2)(iii)

The hospital must provide documentation of improvements and the sustained improvement toward the proper use of antibiotics through the implementation of the hospital wide antibiotic stewardship program. It is expected that the hospital will reduce patient risk for adverse drug events and potentially life-threatening, antibiotic-resistant infections, including CDIs. The antibiotic stewardship program should be updated with any advancing evidence-based improvements in antibiotic-prescribing practices.

Survey Procedures §485.640(b)(2)(iii)

- *Review documentation of improvements and/or sustainment of improvements through the use of the evidence-based hospital-wide antibiotic stewardship program recommendations.*

14

Assessment Question #1

The new AMS Standards for TJC are effective as of what date?

a. January 1, 2023
b. January 1, 2024
c. July 1, 2023
d. July 1, 2024

15

Review Individual Hospital Compliance with the New 2023 TJC and CMS Standards Related to Antimicrobial Stewardship

16

What is a Gap Analysis?

- Compares where you are to where you want to be
- Investigates why the gap exists so you can create a plan to fill the gap
- Can be used for any project, not just AMS

Current State → Future State

https://www.forbes.com/advisor/business/what-is-gap-analysis/. Accessed 8/1/23.

17

Example Tool #1: AHRQ Gap Analysis for Antibiotic Stewardship Programs

AHRQ Safety Program for Improving Antibiotic Use

Gap Analysis for Antibiotic Stewardship Programs

Instructions: Complete this document to assess your antibiotic stewardship program (ASP) on an annual basis. The ASP areas addressed in this document are those that are discussed throughout the AHRQ Safety Program Toolkit.

Unmarked questions ask about basic structure and commonly utilized interventions. The questions labeled as Enhancing Components (+) address components that may enhance ASPs. Once your ASP is established, discuss whether implementation of the Enhancing Components might be of benefit to your program and what resources would be need to operationalize them.

https://www.ahrq.gov/antibiotic-use/acute-care/improve/index.html, Page last reviewed June 2021, accessed 7/24/23

18

Example Tool #1:
AHRQ Gap Analysis for Antibiotic Stewardship Programs

ASP Area	Answers	Comments
Senior Executive Leadership		
To whom does the ASP report?		
How often does ASP leadership meet with senior leadership?	☐ Monthly ☐ Quarterly ☐ Annually ☐ Never ☐ Other:	
Does senior leadership actively promote/support antibiotic stewardship (AS) prevention activities?	☐ No ☐ Yes: ASP Committee member ☐ Yes: Provides adequate funding for ASP ☐ Yes: Provides funding for AS member training ☐ Yes: Promotes AS messages via newsletters, screen savers, etc. ☐ Yes: Provides back up to ASP if prescribers do not follow AS approaches ☐ Yes: Other:	

19

Example Tool #1:
AHRQ Gap Analysis for Antibiotic Stewardship Programs

Interventions					
Preauthorization and Post-prescription Review and Feedback					
Instructions for this section: For each agent or class, indicate whether the ASP performs pre-authorization (PA) and/or post-prescription review and feedback (PPRF), and the frequency of these interventions. PA and PPRF	**Antibiotic**	**Pre-authorization**	**Frequency**	**Post-prescription review and feedback**	**Frequency**
	Cefazolin	☐ Yes ☒ No ☐ N/A	☐ Daily weekdays ☐ Daily 7 days ☐ 2–3 times/week ☐ Other: ☐ N/A	☐ Yes ☒ No ☐ N/A	☐ Daily weekdays ☐ Daily 7 days ☐ 2–3 times/week ☐ Other: ☐ N/A
	Ceftriaxone	☐ Yes ☒ No ☐ N/A	☐ Daily weekdays ☐ Daily 7 days ☐ 2–3 times/week ☐ Other: ☐ N/A	☒ Yes ☐ No ☐ N/A	☐ Daily weekdays ☐ Daily 7 days ☐ 2–3 times/week ☒ Other:5+d of tx ☐ N/A

20

Example Tool #1:
AHRQ Gap Analysis for Antibiotic Stewardship Programs

+Are there time-sensitive automatic stop orders for specified antibiotic prescriptions?	☐ Yes ☐ No	
+Are activities conducted by the ASP to target antibiotics commonly associated with *C. difficile* infection (e.g., fluoroquinolones, clindamycin, cephalosporins)	☐ Yes ☐ No	
+Are activities being conducted by the ASP to reduce inappropriate treatment of asymptomatic bacteriuria?	☐ Yes ☐ No	
+Are activities being conducted by the ASP to guide interpretation of procalcitonin results?	☐ No procalcitonin testing ☐ Procalcitonin results not acted upon by ASP ☐ Yes: all patients ☐ Yes: select patients	

21

Example Tool #2: TJC

The Joint Commission

New and Revised Antibiotic Stewardship Requirements
Hospital (CAH) Accreditation Program

Medication Management (MM) Chapter

MM.09.01.01

The hospital establishes antibiotic stewardship as an organizational priority through support of its antibiotic stewardship program.

Element(s) of Performance for MM.

Element of Performance	Compliance (S=Satisfactory) (I=Incomplete)	Document or practice to support compliance with Standard or Reason for Insufficient Compliance and What is Needed
The hospital allocates financial resources for staffing and information technology to support the antibiotic stewardship program. (See also LD.01.03.01, EP 5 – The governing body provides for the resources needed to maintain safe, quality care, treatment, and services)		

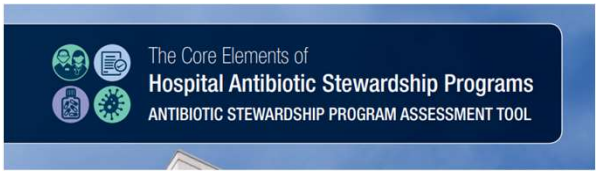
22

Example Tool #2: TJC

Element of Performance	Compliance (S=Satisfactory) (I=Incomplete)	Document or practice to support compliance with Standard or Reason for Insufficient Compliance and What is Needed
The antibiotic stewardship program implements one or both of the following strategies to optimize antibiotic prescribing: - Preauthorization for specific antibiotics that includes an internal review and approval process prior to use - Prospective review and feedback regarding antibiotic prescribing practices, including the treatment of positive blood cultures, by a member of the antibiotic stewardship program	S	Preauthorization: daptomycin, linezolid, ceftaroline, fluoroquinolones, carbapenems, ceftolozane/tazobactam, meropenem/vaborbactam, eravacycline, fidaxomicin, IV colistin, IV polymyxin B Prospective review & feedback: use of Epic reports & Theradoc alerts, recommendations made in person or via phone to attending

23

Example Tool #3:
CDC Core Elements Program Assessment Tool



24

Example Tool #3: CDC Core Elements Program Assessment Tool

CORE ELEMENTS OF HOSPITAL ANTIBIOTIC STEWARDSHIP PROGRAMS: ASSESSMENT TOOL		ESTABLISHED AT FACILITY	COMMENTS
Hospital Leadership Commitment	1. **[Priority Example]** Does facility leadership provide stewardship program leader(s) dedicated time to manage the program and conduct daily stewardship interventions?	❑ Yes ❑ No	
	2. **[Priority Example]** Does facility leadership provide stewardship program leader(s) with resources (e.g, IT support, training) to effectively operate the program?	❑ Yes ❑ No	
	3. **[Priority Example]** Does your antibiotic stewardship program have a senior executive that serves as a point of contact or "champion" to help ensure the program has resources and support to accomplish its mission?	❑ Yes ❑ No	

CDC. Core Elements of Hospital Antibiotic Stewardship Programs. Atlanta, GA: US Department of Health and Human Services, CDC; 2019.

25

25

Assessment Question #2

Which organization(s) have tools available to assess hospital compliance with AMS standards?

I. AHRQ
II. ASHP
III. TJC

a. I
b. I & III
c. II & III
d. All of the above

26

26

Discuss Examples of Projects and Initiatives that were Launched to Meet the New 2023 TJC and CMS Antimicrobial Stewardship Standards

27

27

EP18 (New)

- **Examples include, but are not limited to, the following:**
  - Community-acquired pneumonia
  - Urinary tract infections
  - Skin and soft tissue infections
  - *Clostridioides* difficile colitis
  - Asymptomatic bacteriuria
  - Plan for parenteral to oral antibiotic conversion
  - Use of surgical prophylactic antibiotics
  - Evidence-based guidelines must be based on national guidelines and also reflect local susceptibilities, formulary options, and the patients served, as needed.

r3_antibioticstewardship_july2022_final.pdf (jointcommission.org)

28

28

Example: UTI Initiative to Improve Empiric Prescribing

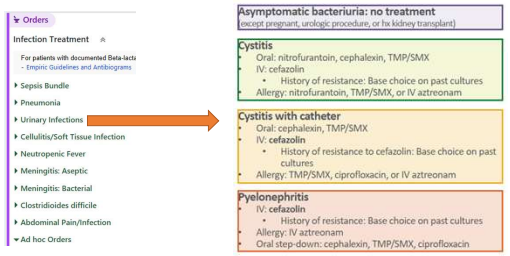
- **Step 1- Identify a problem at your institution**
  - We saw that > 60% of patients in our system institutions were being prescribed a third-generation cephalosporin for cystitis when they had no risk factors or history of resistance
- **Step 2- Develop a plan (a multi-pronged approach is most likely to yield best results)**
  - Updates to UTI order in EPIC (electronic prescribing)
  - In person and virtual education for providers and pharmacists
    - We provided in -person education to ED, ICU and Hospitalist groups during their staff meetings
  - Create a dashboard to track empiric prescribing
  - New pharmacist protocol to review all new orders with the indication of the following:
    - Asymptomatic Bacteriuria
    - Cystitis
    - Cystitis with instrumentation
    - Pyelonephritis

Northwestern Medicine Antimicrobial and Diagnostic Stewardship Program

29

29

Changed Infection Treatment Order Set to Make Appropriate Antibiotic Selection Easy & Quick!



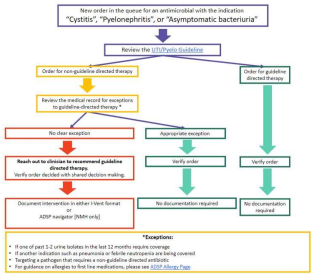
nm_adsp_urinary_tract_infections___asymptomatic_bacteruria_guidance_5.2023.pdf

30

30

Example: UTI Initiative to Improve Empiric Prescribing

- **New pharmacy process:**
  - Frontline pharmacists review every order for appropriateness
  - Call provider with alternative recommendations
  - Document interventions

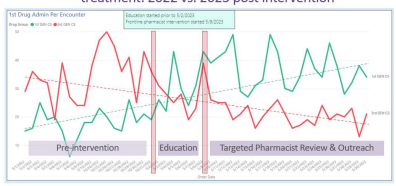


nm_adsp_urinary_tract_infections___asymptomatic_bacteruria_guidance_5.2023.pdf

31

UTI Dashboard for Real-Time Order Tracking

System-wide Cefazolin vs. Ceftriaxone for UTI treatment: 2022 vs. 2023 post intervention



1st Generation cephalosporins: cefazolin + cephalexin

3rd Generation cephalosporins: ceftriaxone + cefpodoxime + cefdinir

Northwestern Medicine

32

EP19 (New)

- The hospital may measure adherence at the group level (that is, departmental, unit, clinician subgroup) or at the individual prescriber level
- The hospital may obtain adherence data for a sample of patients from relevant clinical areas by analyzing electronic health records or by conducting chart reviews

33

EP19 Examples

- Adherence to various infection treatment orders sets/guidelines (such as UTI, CAP or MRSA infections)
  - Can be presented as a percentage of inappropriate orders (prospective audit and feedback) or prescriber level data
- Department or prescriber level data on antimicrobial prescribing for Bronchitis or pneumonia in ED, outpatient clinic, or hospital floor
- Sepsis Bundle compliance
- Antibiotic durations in order sets

34

EP19 Examples, contd.

- Screening protocols for MRSA prior to spine or orthopedic surgery
- Surgical prophylaxis order set adherence
  - Rates of surgical site infections are usually tracked by the surgical teams as well as Infection Prevention and can help guide changes to your current protocols
- Drug shortages and use of alternative agents (alternative antibiotics for bowel prep prior to colon surgery during the neomycin shortage)

35

Example: Prescriber Level Data on Antimicrobial Prescribing for URTI

Physician Specific Prescribing—June 2022 to December 2022

Note: Top performer for each section was determined by lowest prescription rate of those with at least 5 patients for bronchitis and pharyngitis. Not enough sinusitis cases to evaluate.

Top Performances:

Overall Prescribing for Likely Viral URI

Overall 1.6% (1 of 62 patients prescribed antibiotics)

Note: The number at the beginning of the bar is the total n for that diagnosis, and percent at the end is the percent of total n that was prescribed antibiotics.

Sinusitis

Highest number of sinusitis cases seen was 5, most providers saw maybe 1 or 2, if any. Did not include a top performance.

Pharyngitis

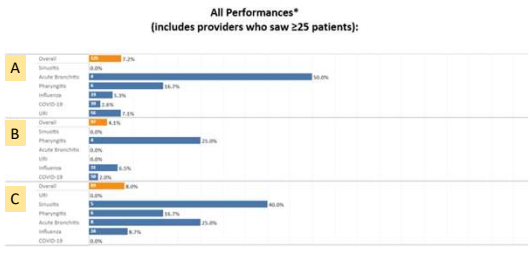
Pharyngitis 0.0% (0 of 6 patients prescribed antibiotics)

Bronchitis

Acute Bronchitis 0.0% (0 of 5 patients prescribed antibiotics)

36

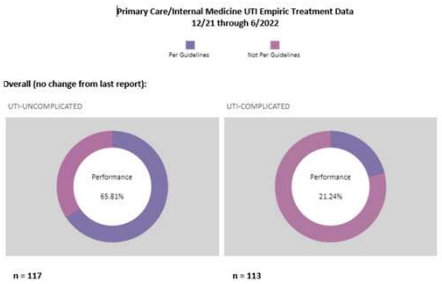
Example: Individual Prescriber Level Data for URTI



37

37

Example: Prescriber Data for UTI



38

38

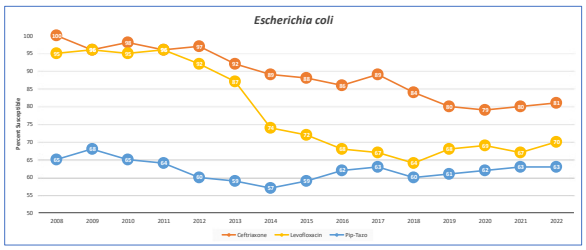
EP20 (New)

- Collect: IT resources, 3rd party resources
- Analyze: numbers, charts, trends
- Report:
  - Bimonthly meetings to prescribers, annual review to hospital board, annual P&T meetings
  - Ex: Annual goals and progress towards goals, trends in organisms, trends in antibiotic use

39

39

Example: Susceptibility Trends

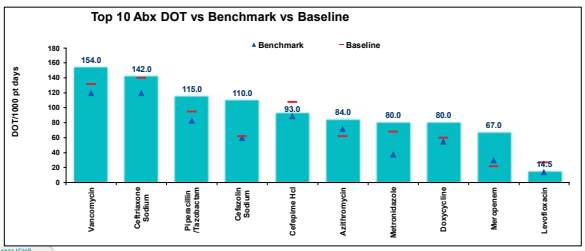


Above numbers included are fictional and for illustrative purposes only.

40

40

Example: Antibiotic DOT

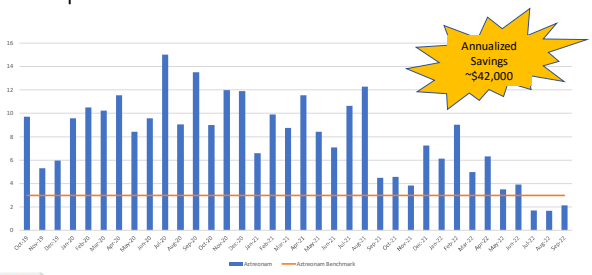


DOT: Days of therapy
Above numbers included are fictional and for illustrative purposes only.

41

41

Example: Aztreonam Utilization



42

42

EP21 (New)

- Takes action on improvement opportunities identified
- Process improvement cycles

https://www.sixsigmadaily.com/what-is-dmaic/
https://www.knowledgewave.com/blog/pdca-continuous-improvement-process

43

43

Example: Aztreonam Project

- **Define:** overuse of aztreonam
- **Measure (DOT/1000 patient days):** SMH = 9. Benchmark = 3.
- **Analyze:**
  - EHR – difficult to find patient allergy information, allergy alert misguides providers
  - Knowledge – misinformation/dated information regarding penicillin allergy and cephalosporin use
  - Process – lack of standardized process for prescribing or verifying

DOT: Days of Therapy (data provided by Cardinal Health)
SMH: Springfield Memorial Hospital
EHR: Electronic Health Record

44

44

Example: Aztreonam Project

- **Improve:**

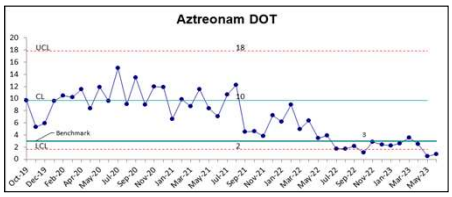
	Problem	Solution
EHR	Difficult to find allergy information	RPh assists finding information
	Allergy alert misguided MDs	Prescriber/RPh education
Knowledge	Misinformation/dated information regarding allergies	Prescriber/RPh education
Process	Lack of standardized process for prescribing and verifying	ED RPh intervention at time of verification Alert to Antimicrobial Stewardship Coordinators

45

45

Example: Aztreonam Project

- **Control:** Monitoring usage of aztreonam or inappropriate alternatives.



46

46

Example: Levofloxacin Project

- **Define:** Overuse of levofloxacin
- **Measure (DOT/1000 patient days):** SMH = 27. Benchmark = 14.
- **Analyze:** Lack of standardized prescribing process

DOT: Days of therapy (Data provided by Cardinal Health)
SMH: Springfield Memorial Hospital

47

47

Example: Levofloxacin Project

- **Improve:**
  - RPh to intervene for UTI/CAP and provide alternative recommendations
  - Guidelines for use criteria
  - Education to RPh and Providers

SMH Levofloxacin Guidelines for Use

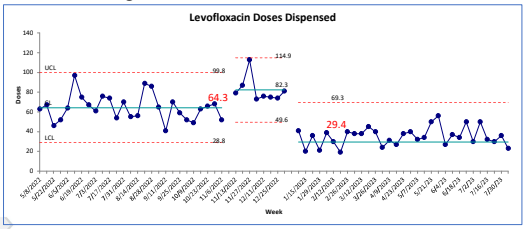
- CAP when B-lactam allergy present
- HAP/VAP: As 2nd agent if dual *Pseudomonas* coverage indicated
- Acute exacerbation of COPD
- MDR organism
- *Pseudomonas* if PO agent needed
- UTI when B-lactam allergy present (acute uncomplicated cystitis in women)
- UTI if complicated/male
- Prostatitis
- Pyelonephritis step-down
- Gram-negative (excluding *Pseudomonas*) bacteremia step-down if PO agent needed
- Intra-abdominal infection
- Uncomplicated febrile neutropenia
- Leukemia antibiotic prophylaxis
- Surgical prophylaxis if B-lactam allergy

48

48

Example: Levofloxacin Project

- Control: Monitoring levofloxacin use



49

Tips for Resource-Limited Areas

- Leverage other disciplines
  - Nursing – largest healthcare profession, closest physically to patient
  - Physicians
- Improve intervention success rate
  - Build relationships with providers
  - Recognize positive work
  - Utilize your resources. Don't reinvent the wheel
  - Make it easy for provider, when possible

50

Assessment Question #3

Which of the following examples can be used to show compliance to the new TJC standards?

a. Sepsis Bundle compliance
b. UTI or CAP Order set with prospective review of appropriateness
c. Education for ED nurses
d. A and B
e. A, B, C

51

Summary

- TJC and CMS both have new standards for AMS, which differ from past standards
- Performing a gap analysis, using available tools, can help your AMS program measure compliance to the new standards
- There are multiple ways you can show compliance with the new TJC and CMS Standards
  - Sometimes just adding a process or outcome measure to an existing project or protocol can do the trick!

52

References

- CDC. Core Elements of Hospital Antibiotic Stewardship Programs. Atlanta, GA: US Department of Health and Human Services, CDC; 2019.
- https://www.ahrq.gov/antibiotic-use/acute-care/improve/index.html. Page last reviewed June 2021, accessed 7/24/23.
- https://www.forbes.com/advisor/business/what-is-gap-analysis/. Accessed 8/1/23.
- https://www.knowledgewave.com/blog/pdca-continuous-improvement-process
- https://www.sixsigmadaily.com/what-is-dmaic/
- Infection Prevention and Control and Antibiotic Stewardship Program Interpretive Guidance Update. CMS. 2022.
- New and Revised Antibiotic Stewardship Requirements. The Joint Commission 2022.
- R3 Report. The Joint Commission. June 2022, Issue 35.

53

New 2023 Antimicrobial Stewardship Standards for TJC and CMS – Are You Ready?!

Megan Metzke: metzke.megan@mhsil.org
Radhika Polisetty: rpolis@midwestern.edu
Natalie Tucker: natalie.tucker@hshs.org

54