Welcome! We will get started momentarily.

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Antibiotic Stewardship Core Elements in Action Series

Leadership and Accountability
August 29, 2023
Collaborating to Support your Quality Improvement Efforts
Agenda for Today’s Call

• Welcome!
• Objectives
• Core Elements of Antibiotic Stewardship (ABS) Review
• Hospital Sharing
• Panel Discussion/Q&A
• Wrap Up
Objectives

1. Review the Centers for Disease Control and Prevention’s (CDC) Core Elements for Hospital Antibiotic Stewardship and identify the key features of the leadership and accountability elements.

2. Effectively translate the leadership and accountability elements into actionable interventions intended to augment your existing stewardship efforts.

3. Gather and apply lessons learned from real world stories of antibiotic stewardship work happening in small, rural and critical access hospitals.
The Core Elements of Antibiotic Stewardship

- Leadership commitment
- Accountability
- Drug expertise
- Action
- Tracking
- Reporting
- Education
Leadership and Accountability

Hospital Leadership Commitment

Support from the senior leadership of the hospital, especially the chief medical officer, chief nursing officer, and director of pharmacy, is critical to the success of antibiotic stewardship programs. A lack of necessary resources is commonly cited as the top barrier to success by stewardship programs. Hospital leadership can play a critical role in helping the stewardship program get the resources needed to accomplish its goals.

Accountability

The antibiotic stewardship program must have a designated leader or co-leaders who are accountable for program management and outcomes. Most hospitals have found a co-leadership model to be effective, according to the 2019 NHSN hospital survey, 59% of hospitals in the United States have stewardship programs that are co-led by a physician and pharmacist. Effective leadership, management and communication skills are essential for the leaders of a hospital antibiotic stewardship program.\(^{[38]}\)
Today’s Speaker(s)

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Antimicrobial Stewardship & Infectious Disease Pharmacist  
Gritman Medical Center, ID

Stacie Larmon, PharmD  
VP Pharmacy, Performance Improvement, and Patient Experience  
Northeastern Health System, OK

Stefanie Stogsdill, PharmD, BCPS  
Clinical Coordinator – Pharmacy Services  
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Hospital Progress & Success Stories
The Core Elements of Antibiotic Stewardship: Leadership and Accountability

Keriann Bennett, PharmD, BCPS, BCIDP
Antimicrobial Stewardship - Infectious Diseases Pharmacist
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Gritman Medical Center

• **Location**: Moscow, ID
• **Hospital type**: Critical Access Hospital
• **Bed size**: 25
• **Community demographics and details:**
  • Large, fluctuating student population – surrounded by University of Idaho and Washington State University
  • Serving several nearby tribal and rural communities
How Did We Start?

- Charter created in 2016 by our director of pharmacy Colleen Cochran and signed by the hospital CEO

- 2015 The Obama Administration released a National Action Plan to Combat Antibiotic Resistant Bacteria


Figure 1: Evolution of resistance.
How Did We Start?

- Gritman pharmacists completed the Society of Infectious Diseases Pharmacists Antimicrobial Stewardship Certificate Program in 2016
- In 2018 our Director of Pharmacy enrolled our hospital in the AHRQ (Agency for Healthcare Research and Quality) Safety Program for Improving Antibiotic Use
  - Used the provided tool kits and education to perform antibiotic time outs and track antibiotic usage
- Established an antimicrobial stewardship team that consisted of the director of pharmacy, two to three pharmacists, lab director, microbiologist, infection preventionist, nurse coordinator and chief quality officer
  - Met monthly and discussed cases of antibiotic use that we had collected using a data collection sheet from AHRQ
  - Fall 2018, Colleen asked if I would be the lead pharmacist on Antimicrobial Stewardship
Becoming a Stewardship Pharmacist

- Joined University of Washington Tele-antimicrobial Stewardship Program (UWTASP), now is the Center for Stewardship in Medicine (UW CSiM)
  - Weekly meetings on Tuesdays at 0900 or 1200 PT
  - Infectious disease related didactics
  - Case presentations and discussions
  - Numerous resources
    - Antibiotic Pocket Guides

- Completed SIDP Antimicrobial Stewardship Certificate-2018 (had previously been completed by three other Gritman pharmacists)

- Completed BPS Board Certification in Infectious Diseases-2019

https://www.uwcsim.org/

https://www.sidp.org/
Antimicrobial Stewardship Program Policy

Antimicrobial Stewardship Program (ASP)

PURPOSE:
This policy will provide a framework and scope of practice for the hospital antimicrobial stewardship program (ASP) to optimize the safe and appropriate utilization of antimicrobials.

POLICY:
Antimicrobial stewardship is comprised of a broad array of interventions including antimicrobial use surveillance, monitoring adverse events, education, design of health information technology and participation in the Medical and Patient Care Committee. These efforts are aimed at maximizing the safe use of antimicrobials, minimizing inappropriate and unnecessary use, and preventing the development of antimicrobial drug resistance.

The key elements of the program include:

- Hospital Leadership commitment: Leadership must dedicate necessary human, financial and IT resources to the program.
- The participation and leadership of a pharmacist with training in infectious diseases and antimicrobial stewardship, with time and resources allotted for work in this area.
- The participation of a hospital affiliated physician(s), preferably with training in infectious diseases and time allotted for work in this area.
- The participation of laboratory personnel, nursing personnel, infection prevention, information systems and administration.
- The team actively engages in education and support of pharmacists, nurses, physicians and other members of the care teams in the use of antimicrobials.
- The team utilizes standardized surveillance methods to monitor antimicrobial drug use and will provide feedback to teams and individuals involved in the prescription and administration

- The participation and leadership of a pharmacist with training in infectious diseases and antimicrobial stewardship, with time and resources allotted for work in this area.

- Created a new position and title as Antimicrobial Stewardship-Infectious Diseases Pharmacist
Antimicrobial Stewardship Program Policy

REFERENCES:


Attachments

Antimicrobial Stewardship Program Charter and Strategic Plan

CDC core elements-small-critical access hospitals.pdf
Challenges

- Physician buy-in
  - Underwent a transition of hospitalists from 2018-2021
  - Had a locum hospitalist that was extremely helpful in getting started
  - Took a few different hospitalists before finding one, now two that are actively engaged in stewardship

- Information Technology buy-in
  - The most difficult to convince
  - Eventually with some helpful pushing from members of admin and CMO
  - Difficult EHR for data collection and no capability to submit data to NHSN

- COVID
AUR Reporting in NHSN: The Search for Clinical Surveillance Software

https://apic.org/professional-practice/practice-resources/choosing-surveillance-technology/

Vendor list

The following vendors have expressed their willingness to provide services and software that will allow clients to link their current healthcare facility computer programs to provide NHSN reporting.

This information is provided as a service to APIC members. This does not constitute an endorsement of these services and APIC makes no guarantees or warranties express or implied. Each facility must determine whether a vendor can meet their needs and which vendor, if any, will provide the services to best match their requirements.

APIC/CDC Technology

Vendor Name

- Atlas Development Corporation
- CareFusion MedMined
- Cerner Corporation
- CKM Healthcare Incorporated
- EpiQuest
- ICNet International Limited
- Intelligent Medical Systems
- Intersystems
- Midas+ Solutions
- Persilvia
- RL Solutions
- Sentri® by Wolters Kluwer
- System Services, Inc. – SSi
- Theradoc
- Truven Health Analytics
- Vecna
- VigiLanz Corporation
AUR Reporting in NHSN: The Search for Clinical Surveillance Software

- Had clinical demos with:
  - Sentri7
  - Theradoc
  - VigiLanz

- In the end, went with VigiLanz
  - Have been able to submit AU and AR data to the NHSN since March 2022

- Use for much more than data submission
  - Data tracking of provider prescribing-> physician report cards
  - Used in quality improvement projects with University of Washington CSiM
Quality Improvement Project: University of Washington Tele-Antimicrobial Stewardship Program (UWTASP)

The Objective of the Cohort:
To locally adapt antimicrobial stewardship strategies and optimize patient care.

Content from: worryworkforce.org/quality-improvement/pdsa
F-ASB Project 2021-2022: PDSA Cycle

- **Plan:** Get buy-in from teams for criteria change of reflex UA to urine culture.
  - Working with pathology, lab, quality improvement, hospitalists, ED and IP.
  - UA to reflex culture-> WBC> 10/ hpf, SQ < 26/ lpf, look at order sets and places where automatic urine culture can be adjusted. Add informational paragraph about ASB.

- **Do:** Collected baseline data from Jan- March 2022 from ED urine cultures that were reflexed and treated with antibiotics.
  - Nurse educator distributed TASP ASB presentations.
  - Abx awareness week 11/2021 distributed material on asymptomatic bacteriuria and treats to ED, MSU, CCU and Lab.

- **Study:** Entered data into RedCap. N=50
  - Identify opportunities to optimize antibiotics
    - Ceftriaxone + levofloxacin combo
    - Unnecessary fluroquinolone use
    - Excessive duration

- **Act:** TBD
IQIC: Intensive Quality Improvement Cohort 2022-2023: University of Washington CSiM and University of Utah

The Objective of the Cohort:

- To locally adapt antimicrobial stewardship strategies and optimize patient care.

AND

- To help validate a national quality metric

What Type of Data do you Need?

- Hospitalization Information
- Demographics
- Co-Morbidities
- Urologic Co-Morbidities (procedures, surgery, catheters, cancer, retention)
- SIRS Criteria and Organ Dysfunction
- Urinary Catheter
- Signs and Symptoms of UTI
- Micro Data
- Antibiotic Information
Who Do I Report To?

- Director of Pharmacy

- Antimicrobial Stewardship Team->

- Have recently re-implemented a Pharmacy and Therapeutics Committee that involves the same people including our physician champion as the chair of the P&T Committee and our Chief Quality Officer

- Quality Improvement/Patient Safety Committee, which involves:
  - Infection Prevention
  - Laboratory
  - CQO, CNO, assistant CNO
  - Risk Management

- The Joint Commission
Helpful Antimicrobial Stewardship Resources

Professional Certification and Training

- SIDP Antimicrobial Stewardship Certificate Program for Acute Care
- MAD-ID Making a Difference in Infectious Diseases
  - https://mad-id.org/antimicrobial-stewardship-programs/
- Basic and Advanced Training

- Board of Pharmacy Specialties
  - Infectious Diseases Pharmacy
  - https://bpsweb.org/infectious-diseases-pharmacy/

Tele-Antimicrobial Stewardship

- University of Washington CSiM
  - https://www.uwcsim.org/about
  - Weekly meeting Tuesdays at 0900 or 1200 PT
  - ID and AMS related didactics
  - Discussions and patient cases
  - Opportunity to submit questions
  - Numerous resources available on website
  - Can track you AMS projects
  - Opportunity for quality improvement-AMS projects

- Intermountain Healthcare - Utah
  - https://intermountainhealthcare.org/services/telehealth/project-echo/antimicrobial-stewardship/
Helpful Antimicrobial Stewardship Resources

Infectious Diseases Resources

- Infectious Diseases Society of America
  - https://www.idsociety.org
- Society of Infectious Diseases Pharmacists
  - https://sidp.org
- ID Stewardship
  - https://www.idstewardship.com/
  - Can also join ID Stewardship
  - Antibiotic cheat sheets
- Sanford Guide
  - Book
  - App
- Surprisingly, Social Media, Twitter - large presence of infectious diseases physicians and pharmacists

Clinical Surveillance Software Resources

- The Association for Professionals in Infection Control and Epidemiology
  - Maintain a vendor list that provides reporting to the NHSN
    - https://apic.org/professional-practice/practice-resources/choosing-surveillance-technology/
- Beckers Hospital Review
  - https://www.beckershospitalreview.com
- Klas Research
Northeastern Health System

- Rural hospital in Tahlequah, OK
  - 98 beds
  - Services include OB, 14 ICU beds, cath lab, CV surgery, orthopedic, outpatient infusion and oncology services
  - Internal and family medicine physician residents

- Seat of the county, Cherokee Nation Capital, 4-year university
  - Over 30% of our population is Native American
  - Roughly 20% of our population live at or below the federal poverty level
Antibiotic Stewardship Program Beginnings

• Call to Action
  • Infectious Disease Society of America guidelines (IDSA)
  • Centers for Disease Control and Prevention (CDC) Core Elements of Antibiotic Stewardship
  • AHRQ Safety Program

• First Steps
  • Antibiogram – responsibility transferred from lab to pharmacy
    • Updates were made to be “provider friendly”
    • Review of local resistance patterns revealed opportunities for improvement
      • Discovered that first- and second-line agents may be ineffective against UTIs
  • Procuring support
  • Establishing framework
Organizing the Team and Engaging Leadership

• Interdisciplinary Team
  • Infection Control Officer, Director of Pharmacy, Pharmacy Clinical Coordinator, Clinical IT for EMR support, Lab Director, our AVP of QA (now VP of QA), physician champion
  • Initiated monthly meetings to discuss foundational elements of stewardship

• Communicating the “Why”
  • Antibiogram insights
  • Upcoming reporting requirements
  • Medicare Conditions of Participation

• Leadership Commitment Letter
Establishing Accountability

• **Antibiotic Stewardship Meetings**
  - Report out to Infection Control Committee and to Board Quality Assurance Committee
  - Board QA Committee reports to the Board of Trustees monthly
  - Review restricted medication use and culture bug/drug use reports

• **Antibiotic Stewardship Policy**
  - Informed by gap analysis
  - Review of CDC Core Elements
  - Goal: To encourage safe, effective and appropriate use of antimicrobial agents
  - Ensuring quality care – surveillance and provider letters
  - Antibiogram update cycle – every six months
  - Pharmacy developed order sets
Outcomes

• Celebrating Success
  • Implementation of antimicrobial stewardship team led to pharmacy-driven protocols for:
    • Restricted medications
    • IV-PO Optimization
  • Changes to prescribing practices have impacted susceptibilities of our common UTI isolates now allowing for resumed use of first- and second-line agents
  • Changes to vancomycin dosing practices have decreased the amount of vancomycin provided per month
  • Utilization of restricted medications has decreased (orders/month) by 20% over the last year

• Challenges
  • EMR challenges
    • EMR cannot provide information required for AUR without significant data manipulation
  • Provider Response
    • Active engagement by providers – willing to change their practices isn’t always easy to get
      • Attending providers will influence practices of your residents
  • Pandemic
Future Directions and Food for Thought

• Next Steps
  • Preparing for reporting requirements
  • Mitigating EMR challenges
  • Turn reporting of data for medication utilization into analysis on compliance with antibiotic guide recommendations

• Key Takeaways
  • Success isn’t a straight line
  • You must engage both the head and heart of your team
  • Gap analyses are you friend, use them often
  • Change takes time
  • There’s always more to be done
1. What strategies do you use to share antibiotic use and resistance data with leadership and other hospital staff? How do you communicate the importance of making ABS data-driven practice changes?

2. What sources of support have you relied on when gaining expertise in ABS best practices? What suggestions would you give to hospitals with limited access to resources?

3. Are there any pearls of wisdom related to starting or maintaining an ABS program that you wish you would have known when you started?

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Questions?
Key Takeaways

• Leverage data to communicate the importance of stewardship to your hospital’s leadership and staff; gather findings from your antibiogram, EHR, and/or laboratory.

• Consider exploring alternative sources of funding such as statewide grants and programs that may be able to support the implementation of an AUR module vendor.

• Tap into peer networking resources such as the HQIC program, colleagues at nearby facilities or universities, UWTASP, IDSA forums and others to ask questions and stay up to date on the latest in stewardship.
Resources from Today’s Speakers

• **The Core Elements of Hospital Antibiotic Stewardship Programs (cdc.gov)**
• Telligen Antibiotic Stewardship Program Gap Assessment
• **Four Moments of Antibiotic Decision Making | Agency for Healthcare Research and Quality (ahrq.gov)**
• **Antibiotic Stewardship Toolkits | Agency for Healthcare Research and Quality (ahrq.gov)**
• Practice resources – APIC
• **Home (sidp.org)**
• Antibiotic Stewardship Policy Example, Antibiogram & More – Northeastern Health System
Upcoming Sessions

Register for the remaining sessions!

- **Pharmacy Expertise and Action**
  - September 19, 2023
  - 12 p.m. CT
  - [Register Here](#)

- **Tracking, Reporting and Education**
  - October 24, 2023
  - 1 p.m. CT
  - [Register Here](#)

Registration link coming soon for National Antibiotic Stewardship Updates occurring on November 9, 2023, 12 p.m. CT
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