UWTASP

tele-antimicrobial stewardship program

January 9th, 2024

Agenda

- ❑ “Checking the Boxes for ASP”
- Data December follow-up
- Case question

Why Antimicrobial Stewardship?

- Rising global threat
- Increased morbidity and mortality
- Limited treatment options
- Impact on routine medical procedures
- Economic burden
- Global spread and travel-related risks
- Agricultural practices and environmental impact
- Lack of incentives for new antibiotic development (limited tech solutions)
- Need for global collaboration
- Need for public awareness and behavior change

Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis

Antimicrobial Resistance Collaborators*

Lancet 2022; 399: 629–55

Published Online
January 20, 2022
https://doi.org/10.1016/
S0140-6736(21)02724-0

On the basis of our predictive statistical models, there were an estimated 4·95 million (3·62–6·57) deaths associated with bacterial AMR in 2019, including 1·27 million (95% UI 0·911–1·71) deaths attributable to bacterial AMR.

Escherichia coli, followed by Staphylococcus aureus, Klebsiella pneumoniae, Streptococcus pneumoniae, Acinetobacter baumannii, and Pseudomonas aeruginosa

The burden of antimicrobial resistance in the Americas in 2019: a cross-country systematic analysis

Antimicrobial Resistance Collaborators

The Lancet Regional Health - Americas 2023;25: 100561

Published Online 8 August 2023

https://doi.org/10.1016/j.lana.2023.100561

We estimated 569,000 deaths (95% UI 406,000–771,000) associated with bacterial AMR and 141,000 deaths (99,900–196,000) attributable to bacterial AMR among the 35 countries in the WHO Region of the Americas in 2019.

The six leading pathogens (by order of number of deaths associated with resistance) were *Staphylococcus aureus*, *Escherichia coli*, *Klebsiella pneumoniae*, *Streptococcus pneumoniae*, *Pseudomonas aeruginosa*, and *Acinetobacter baumannii*.

- Our goal is to improve patient care by changing how people make decisions about testing, diagnoses, and treatment

Clinical Infectious Diseases

VOICES OF ID

IDSA Infectious Diseases Society of America

hivma hiv medicine association

OXFORD

Put the Fluoroquinolone Down and No One Gets Hurt

Emily L. Heil

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"I believe that stewardship desperately needs a culture change. An overhaul on the way antimicrobial stewardship is perceived is essential if we want to have a sustainable, engaged, and fulfilled stewardship workforce. Maybe it starts with something as simple as semantics. Antibiotics aren't restricted but protected. The official dictionary definition of stewardship is "the careful and responsible management of something entrusted to one's care"

Key Components of ASP

- Surveillance: Monitoring antibiotic usage and resistance patterns
- Education: Training healthcare professionals on responsible antibiotic use
- Policy and Guidelines: Establishing protocols for antibiotic prescription
- Intervention: Implementing strategies to optimize antibiotic use
- Reporting: Regularly sharing data on antibiotic consumption and resistance

Core Elements 1 and 2: Leadership Commitment/Accountability

- Designate a physician (e.g.,CMO) in the C-suite or individual that reports to C-suite to be accountable for the outcomes of the antibiotic stewardship
- Approve a policy for the creation and/or expansion of the antibiotic stewardship program to include all core
- Integrate stewardship activities into ongoing quality improvement and/or patient safety efforts in the hospital (e.g., efforts to improve sepsis management)
- Create a reporting structure for the stewardship program to ensure that information on stewardship activities and outcomes is shared with facility leadership and the hospital board (e.g., semi-annual stewardship update at the board meeting).
- Issue a formal board-approved statement on the importance of the antibiotic stewardship program and include in the hospital's annual report.
- Issue a statement from the hospital leadership (e.g., medical, pharmacy and nursing) to all providers and patients highlighting the hospital's commitment to improving antibiotic use.
- Support training for hospital stewardship leaders on antibiotic stewardship through on-line or in-person

❑ Core Elements 1 and 2: Leadership Commitment/Accountability

- ❑Is the C-suite involved and aware?
- ❑ASP policy written?
- ❑ASP is part of QI and Patient Safety
- ❑On the agendas?
- ❑ Is there a statement of support from the hospital board? Have you reported out to them?
- ❑Has there been a message from te C-suite supporting your program?
- ❑Is hospital leadership providing support for ASP training for team members?

Core Element 3: Drug Expertise

- Appoint a pharmacist leader, ideally someone who is on-site either full- or part-time. Consider having stewardship as part of the job description or service contract of the pharmacist leader and ensure that leaders have dedicated time to spend on developing and maintaining a stewardship
- Appoint a physician leader to provide physician support to the antibiotic stewardship program, ideally someone who is on-site either full- or part-time.
- Offer access to training courses on antibiotic stewardship to help develop local expertise
- Seek additional expertise by joining multi-hospital improvement collaboratives or through remote consultation (e.g. telemedicine).

❑ Core Element 3: Drug Expertise

- ❑ Pharmacist leader with dedicated FTE and time
- ❑ Physician leader
- ❑ Offer access to training courses on antibiotic stewardship to help develop local expertise
- ❑ Seek additional expertise by joining multi-hospital improvement collaboratives or through remote consultation (e.g. telemedicine)

Core Element 4: Action

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Core Element 5: Tracking

- Submit antibiotic use and resistance through CDC NHSN AU and Resistance (Alternative approach (if NHSN AU Option not feasible): Calculate defined daily dose (DDD) per WHO ATC DDD Guidelinesexternal icon[15] for top 5 commonly used antibiotics (e.g., ceftriaxone, azithromycin, vancomycin, piperacillin-tazobactam, and fluoroquinolones).This can be useful in tracking antibiotic use over time at a given hospital. Note that the DDD metric has limitations in pediatricsexternal icon.)[16]
- Monitor adherence to facility-specific treatment recommendations (see above in Action) for CAP, UTI and SSTI. If feasible, consider tracking adherence to treatment recommendations per provider.[1]
- Monitor the performance of antibiotic time-outs to see how often these are being done and if opportunities to improve use are being realized during time-outs.
- Perform a medication use evaluation to assess courses of therapy for selected antibiotics (e.g., piperacillin-tazobactam, carbapenems, vancomycin, fluoroquinolones) to see if there are opportunities to improve use.
- Monitor how often patients are converted from intravenous to oral therapy and assess to see if there are missed opportunities to convert.
- Assess how often patients are prescribed unnecessary duplicate therapy (e.g., two antibiotics to treat anaerobes).

❑ Core Element 5: Tracking

- ❑CDC NHSN AU and Resistance or DDD if AUR not possible
- ❑Monitor adherence to facility-specific treatment recommendations
- ❑Perform a MUE to assess courses of therapy for selected antibiotics to see if there are opportunities to improve use.
- ❑IV to PO assessment
- ❑Dual anaerobic treatment
- ❑Discharge antibiotics
- ❑Urine cultures and/or tx of ASB
- ❑Azithromycin use

Core Element 6: Reporting

- Prepare regular reports on the measures being tracked related to antibiotic Include these data as a standing report to key stakeholders within the facility, e.g., pharmacy and therapeutics, patient safety/quality, medical staff leadership/committees, and hospital board.
- If feasible, share provider-specific reports with individual clinicians
- Distribute data and key messaging through staff newsletters and emails.

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- ❑ If feasible, share provider-specific reports with individual clinicians
- ❑ Distribute data and key messaging through staff newsletters and emails.

Core Element 6: Education

- Integrate regular (e.g., monthly or at least quarterly) updates on antibiotic stewardship and resistance into communications tools with particular focus on interventions related to CAP, UTI and SSTI (e.g., blogs, website, intranet, and employee newsletters).
- Provide targeted in-person or web-based educational presentations and messages to key provider, pharmacist and nursing groups at least annually (e.g., staff meetings for sections).
- One-on-one provider education/coaching (e.g., academic detailing).
- Incorporate antibiotic stewardship education into orientation for new medical, pharmacist and nursing staff and required annual provider educational programs.
- Incorporate antibiotic stewardship into (re)credentialing education
- Ask the patient-family advisory committee for input on patient education material.
- Develop stories to share how patients' lives are affected by complications of antibiotic use (e.g. *C. difficile* infection).
- Include information on antibiotics in patient education materials.

❑ Core Element 5: Education

- ❑ Publish on blogs, website, intranet, and employee newsletters
- ❑ Provide targeted in-person or web-based educational presentations and messages to key provider, pharmacist and nursing groups at least annually
- ❑ Get out of the office and meet the prescribers
- ❑ Get on orientation schedule
- ❑ (Re)credentialing education
- ❑ Patient education material
- ❑ Educating the community

10 GOLDEN RULES FOR OPTIMAL ANTIBIOTIC USE IN HOSPITAL SETTINGS

1. Enhancing infection prevention and control
2. Prescribing antibiotics when they are truly needed
3. Prescribing the appropriate antibiotic(s) at the right time
4. Administering antibiotics in adequate doses and routes
5. Initiating, as soon as possible, targeted treatment based on the results of culture and susceptibility testing
6. Using the shortest duration of antibiotics based on evidence
7. Achieving source control by identifying and eliminating the source of the infection or reducing the bacterial load
8. Supporting surveillance of HAIs and AMR, monitoring of antibiotic use, consumption, and the quality of prescribing
9. Educating staff and improving awareness
10. Supporting multidisciplinary ASPs and enhancing collaboration of healthcare professionals from various disciplines

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