



Antimicrobial Stewardship Provider Orientation Packet

Intended audience:
Providers

Author	Julie Teske, PharmD.
Service area	Pharmacy
Phone	920-433-8105
E-mail	Julie.Teske1@hshs.org
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ANTIMICROBIAL STEWARDSHIP OVERVIEW

Learning overview

- This information for providers is designed to meet The Joint Commission Antimicrobial Stewardship Standard MM.09.01.01, Element of Performance #2.
- “The hospital **educates staff and licensed independent practitioners** involved in antimicrobial ordering, dispensing, administration, and monitoring about **antimicrobial resistance and antimicrobial stewardship practices**. Education occurs upon hire or granting of initial privileges and periodically thereafter, based on organizational need.”

Antimicrobial use (and misuse) in hospitals

- 30-50% of antibiotic use in hospitals is unnecessary or inappropriate.
- Antibiotic overuse contributes to the growing problems of *Clostridium difficile* infection and antibiotic resistance in healthcare facilities.
- Improving antibiotic use is a medication-safety and patient-safety issue.

Impact of antimicrobial resistance

- Antibiotic exposure is the single most important risk factor for the development of *Clostridium difficile* associated disease (CDAD).
 - Up to 85% of patients with CDAD have antibiotic exposure in the 28 days before infection.
- Getting an antibiotic increases a patient's chance of becoming colonized or infected with a resistant organism.
- Increasing use of antibiotics increases the prevalence of resistant bacteria in hospitals.

Chang HT et al. *Infect Control Hosp Epidemiol* 2007; 28:926–931

Patel G et al. *Infect Control Hosp Epidemiol* 2008;29:1099-1106

Talon D et al. *Clin Microbiol Infect* 2000;6:376-84

Antimicrobial stewardship

- Antimicrobial stewardship is defined as a rational, systematic approach to the use of antimicrobial agents in order to achieve optimal outcomes.
- “Optimal outcomes” include those of the **patient** (achievement of cure, avoidance of toxicity, and other adverse effects) and of the **larger population** (avoidance of emergence or propagation of antimicrobial resistance).

Antimicrobial stewardship programs

- Monitor and, when necessary, change antimicrobial prescribing practices at a health care institution.
- Limit inappropriate antibiotic use while optimizing the selection, dose, duration, and route of therapy.
- Seek to improve outcomes for individual patients
 - Optimize treatment of infectious process(es)
 - Minimize risk of complications of therapy
 - Reduce length of stay
- Seek to improve outcomes for the larger population: reduce antimicrobial selection pressure to limit antimicrobial resistance.

CDC Core Elements of Antimicrobial Stewardship

- Our Antimicrobial Stewardship Program follows the CDC Core Elements of Antimicrobial Stewardship.
 - Leadership Commitment: Dedicating necessary human, financial and information technology resources
 - Accountability: Appointing a single leader responsible for the program outcomes.
 - Drug Expertise: Appointing a single pharmacist leader responsible for working to improve antibiotic use
 - Action: Implementing at least one recommended action, such as systemic evaluation of ongoing treatment need after a set period of initial treatment (i.e. “antibiotic time out” after 48 hours)
 - Tracking: Monitoring antibiotic prescribing and resistance patterns
 - Reporting: Regular reporting of information on antibiotic use and resistance to doctors, nurses, and relevant staff
 - Education: Educating clinicians about resistance and optimal prescribing

EWD Antimicrobial Stewardship

- Our Goals
 - Guide Antibiotic use to improve patient outcomes while limiting adverse effects, unnecessary or inappropriate treatment and the development of resistance within our community.
- Strategies:
 - Initiatives selected based on facility needs across the division
 - Antimicrobial review
 - Renal dose adjustments, IV to PO conversions, Kinetic monitoring.
 - Review of culture mismatches and de-escalation opportunities
 - Guidelines and order sets
 - Order sets for pneumonia, C difficile, sepsis and more.
 - Guidelines/Algorithms for UTI, CAP, Covid-19 etc.
 - Education
 - Providers, Pharmacists, Nursing, and other hospital staff

A Provider's Roll- How you can help

- **Every time you order an antibiotic**

1	Order recommended cultures before antibiotics are given, and start drugs promptly.
2	Make sure indication and expected duration are specified in the patient record.
3	Reassess within 48 hours and adjust antimicrobial order if necessary or stop if indicated.

Antimicrobial Stewardship Information

- Antimicrobial Stewardship requires multidisciplinary collaboration and support to achieve our goals. We would love to share more information with you!
- See information on our Sharepoint Site:
<http://moss.wer.hshs.org/sites/ss/teamsites/ewdas/default.aspx>
- Contact a member of our team
 - Dr Sarah Lulloff Sarah.Lulloff@hshs.org
 - Dr Ted Collison Ted.Collison@hshs.org
 - Julie Teske PharmD Julie.Teske1@hshs.org

Summary and key points

- There is strong correlation between antibiotic prescribing patterns and antibiotic resistance.
- Appropriate use of antimicrobial agents can improve patient outcomes and reduce hospital costs.
- Your participation and partnership in antimicrobial stewardship is vital to the success of the hospital's mission to deliver quality patient care.

Additional Resources

- **Infectious Diseases Society of America (IDSA) Practice Guidelines**
https://www.idsociety.org/IDSA_Practice_Guidelines/
- **Get Smart for Healthcare** (Centers for Disease Control and Prevention)
<https://www.cdc.gov/getsmart/healthcare/index.html>
 - Antimicrobial stewardship and antimicrobial resistance resources