

**DEPARTMENT OF PHARMACY**

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| **ANTIMICROBIAL STEWARDSHIP PROGRAM** |

**INTRODUCTION:** Antimicrobial resistance is a serious public health problem, which complicates the treatment of individual patients, and creates an unfavorable cycle that leads to use of broader spectrum antimicrobials for empiric therapy. Unnecessary or inappropriate antimicrobial use can result in unwanted consequences including adverse drug reactions, increased antimicrobial resistance, *Clostridium difficile* infections, and costs. Antimicrobial stewardship programs can significantly decrease the inappropriate use of antimicrobials [Schuts 2016].

**PURPOSE:** The purpose of this policy is to define the antimicrobial stewardship program at UW/Valley Medical Center. Antimicrobial stewardship is a multifaceted, multidisciplinary program to promote safe, effective, and efficient treatment of infections to improve healthcare outcomes and minimize microbial resistance at UW Medicine - Valley Medical Center.

**DEFINITION OF TERMS:**

* **ASP**: Antimicrobial stewardship program
* **AMS**: Antimicrobial stewardship
* **CDI**: *Clostridium difficile* infection
* **ID**: Infectious diseases

**POLICY:**

1. **Leadership:** The antimicrobial stewardship program (ASP) will be led by a physician and a pharmacist who are qualified through education, training, or experience in infectious diseases and/or antibiotic stewardship and are appointed by the governing body based on recommendations of medical staff leadership and pharmacy leadership. They will be responsible for stewardship outcomes. Confirmation of appropriate ID/AMS training may be requested on an as needed basis from personnel files.
2. **Antimicrobial stewardship committee:** The ASP program will be overseen by a multidisciplinary team consisting of physician and pharmacy leaders, an infection preventionist, and representatives from the following services: microbiology, nursing, quality, information technology, and the hospitalist staff. Additional members may be included as deemed important for furthering ASP objectives.
3. **Meetings:** The antimicrobial stewardship committee shall meet, at a minimum, quarterly.
4. **Reporting Structure:** A record of meetings by agendas and minutes shall be maintained. Proceedings and actions will be referred to the Pharmacy and Therapeutics committee for review and/or approval.

**RESPONSIBILITIES:**

**Patient care programs**

The ASP will generate programs to promote responsible antibiotic use including, but not limited to:

1. Concurrent review and feedback on antimicrobial use emphasizing:
   1. Antimicrobial de-escalation
   2. Avoidance of treatment duplication
   3. Appropriate bug-drug matching
   4. 72-hour empiric antimicrobial re-assessment
2. Collaborative pharmacy programs:
   1. IV to PO conversions
   2. Dose optimization: pharmacokinetic monitoring of vancomycin and aminoglycosides
   3. Dose adjustment: for renal dysfunction
3. Development and maintenance of treatment guidelines for empiric antimicrobial selection and surgical antibiotic prophylaxis.
4. Antimicrobial optimization programs including procalcitonin for respiratory tract infections and allergy assessment.
5. Review utilization of Electronic Health Record (EHR) tools and microbiology resources.

**Education**

1. Antimicrobial stewards shall use validated references when making therapeutic recommendations to improve individual patient care. Whenever possible primary literature and references should be provided to LIPs in support of these clinical recommendations.
2. Didactic/written information will be distributed via email, newsletters, and verbal presentations.
3. Patients and their families will receive educational material on antimicrobials to promote appropriate use.
4. Completion of annual AMS training via required UW Medicine Staff Refresher Training.

**Outcomes**

ASP outcomes will be measured according, but not limited to the metrics listed below. These data and any opportunities for improvement will be presented annually or as needed to clinical staff and administration.

1. Days of antimicrobial therapy
2. Antimicrobial prescribing patterns
3. Rate of *C. difficile* infection
4. Antimicrobial resistance rates
5. Adherence to ASP interventions
6. Antimicrobial costs

**Continuous Improvement**

The ASP will monitor the literature and hospital utilization and resistance trends for opportunities of improvement on antibiotic utilization. Current programs will be monitored and improved as needed using the above noted metrics.

**REFERENCES:**

1. Barlam T, Cosgrove SE, Abbo LM, et al. 2016. Implementing an antibiotic stewardship program: guidelines by the Infectious Diseases Society of America and the Society for Healthcare Epidemiology of America. Clin Infect Dis; 62(10):e51-77.
2. Centers for Disease Control and Prevention. 2014. Core elements of hospital antibiotic stewardship programs. <http://www.cdc.gov/getsmart/healthcare/implementation/core-elements.html>. Accessed 7/18/16.
3. Dellit TH, Owens RC, McGowan JE, et al. 2007. Infectious Diseases Society of America and the Society for Healthcare Epidemiology of America guidelines for developing an institutional program to enhance antimicrobial stewardship. Clin Infect Dis; 44(2):159-77.
4. National Quality Forum. 2016. Antibiotic stewardship in acute care: A practical playbook. <http://www.qualityforum.org/Publications/2016/05/Antibiotic_Stewardship_Playbook.aspx>. Accessed 7/11/16.
5. Schuts EC, Hulscher M, Mouton JW, et al. 2016. Current evidence on hospital antimicrobial stewardship objectives: a systematic review and meta-analysis. Lancet Infect Dis; 16:847-56.
6. The Joint Commission. 2015. Proposed standard for antimicrobial stewardship in AHC, CAH, HAP, NCC, and OBS. <https://jointcommission.az1.qualtrics.com/CP/File.php?F=F_5tDHGzIVDMHenDn>. Accessed 2/15/16.
7. The Joint Commission. 2016. Prepublication requirements: New antimicrobial stewardship standard. <https://www.jointcommission.org/prepublication_standards_antimicrobial_stewardship_standard/>. Accessed 7/11/16.

**REVIEW / REVISION HISTORY:**

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