LOS ANGELES COUNTY DEPARTMENT OF HEALTH SERVICES
HARBOR-UCLA MEDICAL CENTER

SUBJECT: ANTIMICROBIAL STEWARDSHIP PROGRAM **POLICY NO.** 325K

CATEGORY: Provision of Care	**EFFECTIVE DATE:** 3/15
POLICY CONTACT: Jennie Ung, PharmD	**UPDATE/REVISION DATE:**
REVIEWED BY COMMITTEE(S): Pharmacy and Therapeutics	

PURPOSE:
To provide guidelines for establishing and maintaining an effective multi-disciplinary Antimicrobial Stewardship Program to reduce the risk of healthcare-associated infections per **NPSG-07.03.01** and to establish compliance with current and future laws including **California SB-1311.**

DEFINITIONS:
Antimicrobial Stewardship: The optimal selection, dosage, and duration of antimicrobial therapy that results in the best clinical outcome for the treatment or prevention of infection while limiting toxicity to the patient and limiting subsequent resistance.

Antimicrobial Stewardship Team (AST): The multidisciplinary team with a minimum of an Infectious Diseases (ID) physician as well as a clinical ID pharmacist. Other team members that may participate in rounds include pharmacy students, house staff (such as residents and fellows), nurse practitioners, and medical staff or other healthcare providers.

Co-director of Antimicrobial Stewardship Program: Composed of one ID physician and one clinical ID pharmacist. Directly and indirectly, supervises the evaluation and guidance of antimicrobial use based on the best available data and the unique needs of the patients at this institution. This will include the empowerment of primary providers with knowledge necessary to improve prescribing habits as well as limiting unnecessary and inappropriate antimicrobial use. This will occur with both frequent direct interactions on rounds and formal and/or informal didactic sessions.

POLICY:
The Antimicrobial Stewardship Program will utilize a multidisciplinary, programmatic, prospective, interventional approach to optimizing the use of antimicrobial agents prescribed for patients treated at Harbor-UCLA Medical Center. In concert with the Infection Prevention and Control Committee, Adult and Pediatric ID Division, and clinical pharmacy staff, the stewardship program will provide ongoing review of ordered

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APPROVED BY:

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therapeutic regimens and recommendations to prescribers to improve the appropriate use of antimicrobials and optimize patient safety and promote cost containment by:

1. Optimizing the use of antimicrobials to:
   - Reduce excessive broad-spectrum antimicrobial use
   - Reduce excessive duration of antimicrobial use
   - Reduce and/or eliminate redundant antimicrobial therapy
   - De-escalate or escalate antimicrobial therapy when appropriate
2. Adjusting empiric antimicrobial coverage based on risk factors and local resistance patterns
3. Managing drug-drug and drug-disease state interactions with antimicrobial
4. Minimizing antimicrobial-related adverse effects (e.g. C. difficile diarrhea, acute kidney injury, etc.)
   - Avoid unnecessary toxicity based on patient-specific parameters (e.g. renal dosing
5. Selecting cost-effective antimicrobial therapy without compromising efficacy and/or safety
6. Transitioning to oral formulations when clinically appropriate

The Committee shall meet at least quarterly, shall maintain a permanent record of its proceedings and actions taken, and shall submit at least a quarterly report (meeting minutes will suffice for this purpose) to the Pharmacy and Therapeutics Committee on its activities and recommendations.

Membership: Committee core members will include at least the following:

1. Two (2) members from the Division of Infectious Diseases
2. One (1) member from the Division of Pediatric Infectious Diseases
3. One (1) member from Nursing
4. One (1) member from Pharmacy Services
5. Infection Prevention and Control Specialist(s)
6. Clinical Microbiologist or Microbiology Staff Member(s)
7. Chief Medical Officer of Harbor-UCLA Medical Center or his/her appointee

PROCEDURE:

1. <u>Appropriate selection of antimicrobials based on currently available data</u>
   a. Utilize local resistance patterns (e.g. antibiogram and other available data) and available risk factors to develop local guidelines
   b. Evaluate adherence to current available guidelines
   c. Monitor for appropriate use of surgical prophylaxis
   d. Review periodically to evaluate adherence to the above

2. <u>Antimicrobial agent formulary restriction/addition</u>
   a. Antimicrobials that require approval from Infectious Diseases
      - Specific antimicrobials that are not routinely required for clinical care or have a significant risk of toxicity
      - Formulary restricted antimicrobials may be approved by Infectious Disease physicians and Antimicrobial Stewardship Team Clinical ID Pharmacists(s).
   b. Review of novel antimicrobials to determine the clinical need for use in our population

3. <u>Dose optimization of antimicrobial agents</u>
   a. PK/PD-based approach when applicable

- E.g. Peak/MIC ratio (aminoglycosides), T>MIC (beta lactams), Troughs or AUC:MIC-guided (vancomycin)

b. Indication-based approach
- Meningitis (e.g., Ceftriaxone 2gm q12hr)
- Febrile neutropenia (e.g., Cefepime 2gm q8h)
- Combination therapies for multidrug-resistant organisms when appropriate

4. Clinical Interventions and review by Antibiotic Stewardship Team including but not limited to:
   a. Recommend appropriate therapeutic substitutions in discussion with primary team
   b. Review of patients on broad-spectrum coverage on a regular basis
      - Review of clinical data and available laboratory data
      - Therapy review discussion with a primary team
      - Adjustment of duration to limit course of antimicrobials
   c. Recommend IV-to-PO conversion when clinically appropriate.
   d. Recommend surgical prophylaxis protocols per best practices when available including
      - Appropriate timing and duration of surgical antibiotic prophylaxis
      - Appropriate antibiotic(s)
   e. Guide with type and duration of antibiotic treatment for pneumonia and other infections

5. Available Pharmacy-directed Dosing Protocols
   a. Vancomycin per pharmacy upon request by primary teams for patients 16 years of age or older
   b. Aminoglycosides available per request by primary teams
   c. Renal dosing protocol per pharmacy and upon request by primary teams

6. Education and feedback
   a. Directed feedback to providers
   b. Development of core items to improve provider prescribing habits
   c. Formal and/or informal in-service presentations to medical staff, pharmacists, nurses, house staff, and other providers as needed

7. Management of providers who repeatedly fail AST recommendations
   a. Collaborative attempts to discuss with physician directly:
      f. All recommendations will be communicated with the provider either via direct discussion, electronic medical record, text pages, or phone call.
      g. If recommendations are not acknowledged and provider does not communicate with AST regarding rationale, repeated attempts to reach the primary team will be made so they are aware of the recommendations and to explain the purpose of the AST.
   b. Repeated failure to implement recommendations will result in the following possible actions:
      - Directed repeat discussion with provider to understand their resistance to comply with recommendations and to provide further guidance from an AST member.
      - Formal ID consultation.
      - Direct verbal discussions with provider from either Antimicrobial Stewardship Co-directors, ID physicians, or clinical ID pharmacists.
      - In cases in which either prescribing patterns or prescribing on an individual case is inconsistent with recommendations by the AST, despite the above steps being taken, the Antimicrobial

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Stewardship Co-directors will bring the matter to the attention of the provider's Division Chief or Department Chair and Pharmacy and Therapeutics Committee Co-Chairs

Reviewed and approved by:
Medical Executive Committee 03/2022

Beverley A. Petrie, M.D.
President, Professional Staff Association