(A) Policy Statement
The University of Toledo Medical Center will implement, develop, and support an antimicrobial stewardship program (ASP) based on current scientific literature.

(B) Purpose of Policy
Antimicrobial resistance is a public health threat and leads to at least two million illnesses and 23,000 deaths annually in the United States. In September 2014, the President’s Council of Advisors on Science and Technology (PCAST) prepared a report providing recommendations on combating antimicrobial resistance. One of these key recommendations focuses on improving stewardship of existing antibiotics and by 2017 the Centers for Medicare and Medicaid Services (CMS) require hospitals and long-term care facilities “to develop and implement robust antibiotic stewardship programs that adhere to best practices”.

The ASP at the University of Toledo Medical Center will follow best practices to combat antimicrobial resistance and improve appropriate antibiotic use according to the following mission, goals, and objectives.

(C) Procedures
1. **Mission**
   a. Improve the quality of patient care through appropriate use of anti-infective agents

2. **Overall Goals**
   a. Improve patient outcomes
   b. Improve patient safety
   c. Minimize resistance/collateral damage
   d. Minimize cost

3. **Specific Objectives**
   a. Achievement of the goals of the ASP will be monitored and evaluated via specific objectives as outlined in the Antimicrobial Stewardship PMAAR (Plan, Measure, Analyze, Act, Review)
   b. The results of the Antimicrobial Stewardship PMAAR will be reported quarterly to the Antimicrobial Subcommittee then disseminated institutionally via the Pharmacy and Therapeutics Committee
4. **Antimicrobial Subcommittee**  
   a. **Core Members**  
      i. **Executive Owner**  
         1. Chief Medical Officer  
      ii. **Chair**  
         1. Antimicrobial Stewardship Program Director  
      iii. **Secretary**  
         1. Antimicrobial Stewardship Pharmacist  
   iv. **Regular Members**  
      1. Infectious Diseases Physicians  
      2. Pharmacy  
      3. Microbiology  
      4. Infection Prevention and Control  
      5. Quality  
      6. Information Technology  
      7. Critical Care Physician  
      8. Hospitalist Physician  
      9. Surgical Physician  
   
   b. **Responsibilities**  
      i. Develop and implement initiatives to ensure rational and appropriate use of antimicrobial agents and promote data-driven, evidence-based strategies to optimize antimicrobial use  
      ii. Oversee the implementation and utilization of computer-based surveillance tools to track antimicrobial stewardship interventions  
      iii. Review antimicrobial susceptibility rates via annual reports from the clinical microbiology laboratory  
      iv. Review antimicrobial formulary for changes regarding antimicrobial agents as necessary  
      v. Establish mechanisms to effectively assess and measure antimicrobial therapy  
      vi. Improve awareness and knowledge of antimicrobial stewardship through facility-wide educational efforts  
      vii. Provide quarterly report of activities and recommendations to the Pharmacy and Therapeutics Committee  
   
5. **Key Strategies**  
   a. **Prospective monitoring with intervention and feedback**  
      i. Antimicrobial stewardship pharmacist reports (e.g., positive culture results)  
      ii. Reviewed daily with direct interaction and feedback to the prescriber and documentation in pharmacy intervention system  
   b. **Formulary restriction/preauthorization or criteria-monitored antimicrobials**  
   c. **Pathways for empiric use and antimicrobial order forms**  
      i. Evidence-based, customized for local microbiology and resistance patterns  
   d. **Education**  
   e. **Streamlining or de-escalation of therapy**  
      i. Automatic stop dates  
      ii. De-escalation upon culture finalization  
      iii. Reduction in duplicate therapies (e.g., double β-lactam or double anaerobe)  
      iv. Discontinuation of unnecessary or inappropriate antimicrobial therapy
f. Dose optimization
   i. Automatic renal adjustments and pharmacy dosing services
   ii. PK/PD dosing adjustment recommendations
   iii. Pharmacist credentialing/privileging for monitoring/ordering of pertinent labs

g. Parenteral to oral conversion
   i. Automatic IV to PO policy

6. Conclusion
The antimicrobial stewardship program at the University of Toledo Medical Center aims to optimize antimicrobial therapy and minimize unintended consequences due to antimicrobials. Core members of the antimicrobial stewardship team include individuals from the department of infectious diseases, pharmacy, microbiology, infection prevention and control, quality, and information technology. In order to achieve desired outcomes, collaboration and support from hospital administration, medical staff leadership, and local providers is also necessary. Routine evaluation of progress toward overall goals and adjustment of policies and practices will be led by the antimicrobial stewardship program director and reported to hospital administration. This will be achieved in conjunction with other core members of the antimicrobial stewardship team via regularly scheduled antimicrobial subcommittee meetings. Recommendations from this committee will be presented quarterly to the Pharmacy and Therapeutics committee.

References:
2. President’s Council of Advisors on Science and Technology. Report to the President on Combating Antibiotic Resistance. September 2014. [http://1.usa.gov/1qhDgF6]