Title: Impact of a 7-Day Automatic Antibiotic Stop Policy at Hannibal Regional Hospital

Background: Antimicrobial resistance is considered to be one of the top global public health threats. Misuse and overuse of antimicrobials is a main driver producing drug-resistant pathogens. Antimicrobial stewardship is defined as the effort to measure and improve how antibiotics are utilized. A 7-day automatic stop policy was implemented at Hannibal Regional Hospital in 2015 in attempt to improve antimicrobial stewardship at the facility.

Objective: The objective of this study was to examine the impact this stop policy had on antibiotic utilization at this hospital and to determine if it was an effective antimicrobial stewardship strategy.

Methods: This project was a single-center, retrospective observational study evaluating antibiotic utilization at Hannibal Regional Hospital. Data was obtained from the electronic health record system as well as antimicrobial stewardship records for fiscal years 2015 through 2024. Fiscal year 2015 represented antibiotic usage prior to policy implementation, while fiscal years 2016 through 2024 reflected antibiotic usage after implementation. Days of therapy was defined as the total number of days that a patient received an antibiotic regardless of dose or frequency. The primary outcome was the change in average days of therapy following policy implementation.

Results: A total of 27,554 patients and 201,191 days of therapy were accounted for over the study period. Average days of therapy per patient decreased from 9.0 days in fiscal year 2015 to 6.6 days in fiscal year 2024, remaining consistently lower than baseline throughout the study period despite increased patient volume.

Conclusion: Implementation of a 7-day automatic antibiotic stop policy was associated with a sustained reduction in antibiotic utilization at Hannibal Regional Hospital.