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Title: *Impact of Intravenous to Oral Antimicrobial Therapy in Community-Acquired Pneumonia*

Abstract

Purpose: Intravenous (IV) to oral antibiotic conversion in community-acquired pneumonia (CAP) is a common pharmacy-driven intervention in antimicrobial stewardship programs. Previous studies have shown that the transition from IV to oral antibiotic therapy is equally efficacious and can reduce length of hospitalization by up to two days. The purpose of this study is to evaluate the impact of an institutional IV to oral antibiotic conversion protocol.

Methods: A single-center, retrospective chart review was conducted to evaluate inpatients between the ages of 18-89 who were admitted with CAP between July 14, 2018 to February 28, 2019. Patients were excluded if they had a recent hospitalization, bacteremia during hospitalization, and/or pre-existing medical conditions or medications that could cause immunosuppression. Electronic health records were reviewed to evaluate the length of hospitalization, antibiotic therapy, de-escalation of antibiotics, and patient demographics.

Results: A total of 130 patients were included in this study, 63 in the IV to oral group and 67 in the IV only group. Patient demographics were similar with no statistically significant differences between groups. Median length of stay was 122 hours and 94 hours for the IV to oral group and IV only group, respectively (P=0.33). The secondary outcome for 30-day hospital readmissions was not found to be statistically significant (P=0.33).

Conclusion: This study found no difference in hospital length of stay when comparing IV only to IV to oral antibiotics for CAP treatment. Most IV to oral conversions occurred >24 hours after meeting institutional criteria to switch. A prompter IV to oral antibiotic conversion may contribute to a decrease in hospital length of stay.