

John Talili

Mentor: Elizabeth Cady, PharmD, BCPS; Maithili Deshpande, PhD.; Natalie Tucker, PharmD, BCPS

Title: *Comparing the efficacy of serum vancomycin concentrations of pharmacist-driven versus infectious disease physician-driven dosing of vancomycin*

Purpose. The study assessed the percentage of time vancomycin troughs were within range and the average number of vancomycin levels ordered per day of vancomycin therapy between infectious diseases (ID) physicians and pharmacists within an institution.

Methods. This retrospective chart review included patients who were at least 18 years old and treated with vancomycin. The study period was from March 19, 2018 to August 5, 2018. Institution protocol states that all vancomycin is to be dosed and monitored by a pharmacist, unless the patient is under the care of the ID consult service. A chi-squared test was used to analyze the primary endpoint. The Student's t-test was used to analyze the secondary endpoints.

Results. A total of 151 vancomycin levels were drawn. Pharmacists drew 65 vancomycin levels with 29 levels within range (45%). Infectious diseases physicians drew 86 levels with 42 levels within range (49%) ($p = 0.61$). For the average number of vancomycin levels per day drawn, pharmacists (0.62) and infectious diseases physicians (0.51) were similar with no statistical difference ($p = 0.65$).

Conclusion. This retrospective chart review observed no statistical difference between pharmacists and ID physicians in terms of the percentage of time vancomycin troughs were within range and the average number of vancomycin levels ordered per day of vancomycin therapy. A larger study must be conducted to optimally assess outcomes and to determine if pharmacists or ID physicians are more effective at dosing and monitoring vancomycin.