

## **INCIDENCE OF ACUTE KIDNEY INJURY IN HOSPITALIZED PATIENTS RECEIVING VANCOMYCIN ALONE, VANCOMYCIN PLUS PIPERACILLIN-TAZOBACTAM, OR VANCOMYCIN PLUS CEFEPIME**

Miriam Oguejiofor Amelia Honey. 3213 Finley Avenue, Joplin, Missouri 64804. [Miriam.oguejiofor@mercy.net](mailto:Miriam.oguejiofor@mercy.net)

Piperacillin-tazobactam and cefepime are commonly used in combination with vancomycin for the treatment of various infections including healthcare-associated infections. High vancomycin trough levels have been increasingly observed in lab results of patients on vancomycin and different studies have reported the incidence of acute kidney injury (AKI) in some patients.

This study hopes to answer the following question: Is the incidence of AKI the same, higher, or lower in patients receiving vancomycin alone, vancomycin plus piperacillin-tazobactam, or vancomycin plus cefepime? The primary outcome is the development of AKI (new onset). The secondary outcomes are time to AKI onset and AKI duration.

For this single-center retrospective quality improvement study, adult patients age 18 years and older admitted to both the intensive care unit (ICU) and non-ICU between January 2019 to July 2019, who received either vancomycin alone, V+PT or V+C antibiotics for  $\geq 48$  hours and had two antibiotics initiated within 24 hours of each other and a baseline serum creatinine (SCr) value obtained within 24 hours of admission will be included. Baseline SCr will be defined as patients' SCr values on admission. Data will be obtained from the electronic medical record of the hospital. The Acute Kidney Injury Network (AKIN) criteria will be used to define acute kidney injury based on the serum creatinine component.

The result of the study will be used to implement changes in our hospital in order to ensure patients' safety and proactively prevent adverse effects of medications.

### **Learning Objective:**

- To determine the incidence and rate of acute kidney injury (AKI) in both critically ill and non-critically ill patients receiving vancomycin alone, vancomycin plus piperacillin-tazobactam (V+PT) or vancomycin plus cefepime (V+C) during therapy or within 72 hours after therapy completion.