

# Preliminary Evaluation of Vancomycin vs Probiotic Prophylaxis in Patients at Risk for C. diff

## **Abstract**

### Purpose

*Clostridium difficile*, or C. Diff, is a bacteria that can cause colitis, resulting in uncontrolled diarrhea that can cause hospitalization and even death if not properly treated. As of 2018, the US was estimated to have 500,000 infections annually, and as many as 30,000 deaths associated with C. Diff. While the degree of severity can vary, the cost of treating C. Diff infections is estimated to exceed \$4.8 billion per year. C. Diff infection is precipitated mainly by disturbances to the normal human gut flora, such as antibiotic treatment, however, it is a preventable infection, and current prophylaxis consists of oral vancomycin once or twice daily. There is also some evidence supporting the use of certain strains of probiotics for the prevention of C. Diff, but more data is needed to evaluate the use of probiotics in this disease. The purpose of this study is to determine which, if any, probiotic strains are effective for C. Diff prophylaxis, and how these strains compare with traditional Vancomycin prophylaxis strategies.

### Methods

This study was a retrospective cohort study analyzing inpatient patient data from the University of Kansas Medical Center ranging from 2017 to 2020. Patients were included if they were exposed to antibiotic therapy that could precipitate C. Diff infection, such as systemic vancomycin, clindamycin, oxazolidinones, or cephalosporins, and if they had taken oral vancomycin or probiotics. All patients included were at least 18 years old. Descriptive statistics will be used to assess patient demographics and medication use. Analyses were run using SPSS v.27. This study was approved by the University of Kansas Medical Center Human Research Protection Program.

### Results

Research in Progress

### Conclusion

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