

Antimicrobial Stewardship via the Verigene Gram-Positive Blood Culture Nucleic Acid Test

Alton Memorial Hospital

Jesse L. Preston, PharmD Candidate

Mentor: Anna Thuer, RPh

Abstract

Introduction:

Multidrug resistant organisms are a major strain on healthcare systems. These organisms develop through the overuse and misuse of antibiotics. MDROs strain healthcare systems by increasing healthcare costs, length of stay, and severity of infection.

Methods:

A protocol was created based on the Verigene Gram-Positive Nucleic Acid Blood Culture test and implemented at Alton Memorial Pharmacy in September of 2022. Data from adult patients who had blood cultures taken and this test performed were included in this study through retrospective review. Descriptive statistics were used on this data.

Results:

96 isolates were used, 49 before and 47 after, protocol initiation. The Verigene test has an overall accuracy of 97% and the rates of pharmacists recommending and physicians accepting these recommendations were higher after protocol initiation.

Conclusions:

This study showed a correlation between pharmacist recommendations and physician acceptance. This study also shows that the Verigene test is 97% accurate and should be implemented more frequently.

Discussion:

This study was limited due to time constraints and as such the Verigene Gram-negative test was not assessed. There are barriers to therapy de-escalation including patient specific factors, Verigene inaccuracy in polymicrobial infections, and clinical judgement. More investigation into applying the Verigene test to other cultures types needs to be explored.