

Title: Impact of pharmacist intervention with rapid blood culture identification (BCID) results in antibiotic stewardship

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Introduction: It is important to reach optimization as quickly as possible for antimicrobial therapy. BCID devices are molecular assays that can detect and identify multiple organisms based on associated syndromes. BCID devices can identify an organism in approximately 1 hour presenting the possibility of decreasing the time to organism identification, the time to de-escalation, and the time to optimization of antimicrobial therapy. This project was designed to determine the effectiveness of pharmacist implementation of BCID results toward antimicrobial stewardship.

Methods: This study was determined to be exempt from institutional review board. Mercy Hospital in Joplin, Missouri is a 240-bed community hospital. The process being studied involved blood culture draws, total of 4 bottles. If a bottle showed growth, then it was placed into the BCID. The results were then called to the pharmacy by lab. Pharmacy was responsible for notifying the physician of the result with recommendations on antimicrobial therapy. All patients 18 years or older, with positive blood cultures identified by the BCID while inpatient from July 2019 to October 2019 were included in the study. The same method was used again from January 2020 to April 2020 after presenting the data to pharmaceuticals and therapy committee. Exclusions were as follows: results called to nursing, palliative or hospice patients, patients who expired on the day of or before the results, pathogens not on the panel, patient who did not receive empiric antibiotics at admission, patients with no de-escalation after the BCID result, multi-organism bacteremia, and full outpatient treatment. The primary outcome of the study was time from identification call to the first antibiotic de-escalation.

Results: Pending

Conclusions: Pending