

Blood Culture Contaminations: Interventions and Culture Characteristics

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Background/Objective:

Blood cultures are collected in patients with serious illnesses who are at risk of bacteremia. However, some blood cultures are contaminated which may lead to adverse health outcomes for patients such as an increased length of stay and the unnecessary utilization of antibiotics. The emergency department (ED) has been found to be a frequent source of blood culture contamination. We aimed to identify characteristics and consequences of blood culture contamination at IUH Bloomington.

Methods:

Chart review of blood cultures collected at IUH Bloomington in January 2023 was utilized to extract variables including intravenous location and hospital location of blood draw, number and identification of antibiotics given, length of stay, and organisms identified in the blood cultures. Data were securely maintained in REDCap.

Results:

The median length of stay for individuals with contaminated cultures in January was found to be 4 days which was comparable to individuals with negative cultures. Most commonly, contamination occurred from the ED with it being responsible for 33/34 contaminated cultures. The most frequently utilized antibiotic across all groups was vancomycin – with both the positive and contaminated groups having a greater percentage of individuals receiving a course of the antibiotic with a mean course of 3.43 days. The most common contaminant was found to be coagulase negative *Staphylococcus*.

Conclusion and Implications:

Lower rates of blood culture contamination may contribute to lower length of stay and improved antibiotic de-escalation strategy. Identification of culture characteristics may guide future endeavors in infection control policies.