



Service Priorities and Programmes
Electronic Presentations

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Training phlebotomists in blood culture taking - impact in relieving physician's workload

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Introduction

Blood cultures are essential in the diagnosis of serious blood stream infections, directing appropriate antibiotic therapy, speed up recovery and lessen patient suffering. According to the American Society for Microbiology and the Clinical Laboratory Standards Institute, overall blood culture contamination rates should not exceed 3% whilst reported contamination rates in hospitals of United States vary ranging from 0.6% to 12.5% (Snyder et al, 2012). Quality specimen depends on proper performance in the process of collection, sufficient volume and appropriate transport. Conventionally blood cultures were taken by clinicians / interns. Having phlebotomists to relieve the workload of medical team during the winter surge period is initiated.

Objectives

(1) To assess the performance of phlebotomists in terms of a) genuine positive blood culture; b) contamination rate; c) Time spent on taking blood culture (2) To calculate the time saved for clinicians.

Methodology

Institute a blood culture team consisting of 5 dedicated phlebotomists, with 4 years or above experience, trial run the program in 8 Medical Wards. Standards and procedural guidelines compiled. 8 weeks in-service training include on-line video viewing, return demonstration, peer practice, clinical supervision on simulated scenario and skill assessment. Clinical reveal is employed in studying the probable contamination. Continuous feedback on blood culture results to phlebotomists as both a means of appreciation and provide insight of improving technique. Audit employed to ensure the compliance.

Result

During the trial period of 50 days, none of the 150 sets of blood culture specimen being rejected or phlebotomy related complications reported. No growth reported in 93% of the samples. 9 (with 1 repeated) positive cultures were detected and recovered with antimicrobial therapy prescribed. Positive samples revealed none likely to be contaminated. During the trial period, the time spent on collecting blood culture averaged 17 minutes, excluding the outlier prolonged in various scenarios like difficult venous access or abrupt disturbance. The extrapolated calculation in the trial period, the time saved for clinicians in other clinical responsibilities is 2250 minutes. In summary, to combat the upsurge of workload with currently shrinking medical manpower, allocate more resources to train phlebotomists to take up the service is recommended.