

R365

Publication Only

Diagnostics, other than Molecular: Diagnostic/laboratory methods (other than molecular)

Time for change: investigation of blood culture

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Summary:

Aimed at microbiology professionals, clinicians and commissioners, B37 – 'Investigation blood culture' sets auditable turnaround time standards for each stage of the microbiological investigation of blood cultures.

Abstract:

Blood culture is considered to be the 'gold standard' investigation for the detection of micro-organisms in blood and is essential for microbiological diagnosis of bacteraemia, fungaemia and many infective conditions. Around 20% of sepsis cases are associated with bacteraemia; in severe sepsis, each hour of delay in appropriate antibiotic treatment results in an increase in mortality. Antibiotic resistance is the most frequent cause of ineffective empirical treatment. Early identification and antibiotic susceptibility of isolates provides valuable diagnostic information on which appropriate antimicrobial therapy can be based, reducing morbidity and mortality, and improving patient care and reducing healthcare costs.

To optimise the clinical utility of blood culture results, the interval between sample collection and reporting results should be kept to a minimum. B37 – 'Investigation of blood culture for organisms other than *Mycobacterium* species" is intended as a general resource for professionals in microbiology, clinicians and healthcare commissioners, and aims to assist laboratories to decrease turnaround times (TAT) by breaking down the blood culture process and setting TAT standards for each stage. The process can be subdivided into pre-analytical, analytical and post-analytical processes, all of which should be completed within the recommended time frame. The TATs also provide commissioners of healthcare services with a benchmark standard for microbiological investigation TATs for local clinical and public health care packages. Once implemented, the standards are auditable and can be used to evaluate service provision. These standards are designed to emphasise the critical nature of the blood culture specimen to patient management; they do not assume that the pathology service needs to invest in specific equipment, but encourage the optimal use of the resources already in place.

Critical Control Points in Blood Culture Investigation

