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CLINICAL MICROBIOLOGY

## ***Change in Recommended Blood Culture Collection Volumes for Routine Blood Cultures Collected from Patients Weighing >60 lbs (>27 kg)***

### **Key Messages:**

- For patients with bacteremia/candidemia it is widely appreciated that greater blood volumes result in better pathogen detection and improved patient care.
- The current edition of the Manual of Clinical Microbiology (12<sup>th</sup> edition, 2019), all other current subject area textbooks, and the current edition of the Clinical Microbiology Procedures Handbook (4<sup>th</sup> edition, 2016) **ALL** recommend a minimum blood volume collection of 40 mL (2-sites/2-bottles per site [i.e., 1 aerobic bottle and 1 anaerobic bottle per site]) for **ALL** patients weighing >60 lbs (>27 kg) as the standard of practice.
- Failure to collect blood for anaerobic culture from two separate sites can result in the failure to detect important anaerobic pathogens if present.
- All adult patients and pediatric patients over 60 lbs (27 kg) should have a total blood volume of 40 mL collected for a blood culture (20 mL from 2 separate venipunctures divided into anaerobic and aerobic blood culture bottles).
- Patients with suspected central-line-associated bloodstream infections should have 20 mL collected from the central line or lines in addition to 20 mL collected from a peripheral site in accordance with local central line culture nursing procedures. Both samples **must be collected at the same time or within 1 hour of each other.**
- Please refer to Laboratory Information Manual (LIM) for additional information on sample collection.

### **Why this is important:**

- Many instances of bacteremia/candidemia have pathogen concentrations <1 bacterial/candida cell per mL of blood.
- The collection of, and testing of proper blood culture volumes ensures pathogen culture in infected patients, the identification of that pathogen by the Clinical Microbiology laboratory, the availability of bacterial and candidal pathogens for antimicrobial susceptibility testing, and therefore, the use of optimal anti-infective therapies in patients by care-providers.
- The collection of a minimum blood volume of 40 mL for **ALL** patients weighing >60 lbs (>27 kg) ensures the best quality specimen is collected, ensuring accurate culture results and better patient care.

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