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IMPORTANT UPDATE!

TO: All NH physicians

FROM: Deanna Danskin, Microbiology Quality Resource Technologist

DATE: 9 July 2018

RE: Blood culture best practices - ordering guidelines

CC: Dr. R. Dumont and Dr. K. Heydarzadeh-Azar, NH pathologists, and Dr. A. Hamour, infectious diseases physician

Blood culture on adults and children older than 14 years old should always be ordered in sets of 2:

- 2 sets are necessary to distinguish potential contaminants from true positives; this information is critical to ensure appropriate treatment, and avoid the mis-use of antimicrobials
- 2 sets ensures a greater volume of blood is collected, which is the single most important factor in recovery of microorganisms in the blood
- 2 sets are required as per the NH Adult Sepsis Protocol (11-111-5102)
- 2 sets means 2 concurrent collections from 2 different venipuncture sites, ≥ 5 minutes apart
- If a blood culture must be drawn from an indwelling line, a second set must be drawn by venipuncture from a peripheral site.
- Single set ("X 1") collections are inadequate for investigating bloodstream infections in adults and children older than 14 years old, and represent a poor-quality collection
- clinical circumstances, and published clinical practice guidelines
- For infective endocarditis multiple sets is appropriate; two sets collected right away, a third set after 1 hour and a fourth set after 2 hours.

Additional cultures should not be done for 48 hours. Follow up cultures before 48 hours should only be done for patients with infective endocarditis (acute or chronic) or *Staphylococcus aureus* bacteremia.

Blood culture on children younger than 14 years requires a single collection, from a single venipuncture. Ordering a single set is appropriate for this patient demographic.