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MEMORANDUM

DATE: April 7, 2015
TO: MUMC Pediatricians, MUMC Clinical Managers and Educators, HHS ER physicians,
FROM: Dr. J. Pernica, Dr. F. Smaill, Dr. D. Yamamura
CC: Microbiology Laboratory, Dr. M. Loeb, Dr. C. Lee, J. Lappan
RE: **Guidelines for Ordering Pediatric Anaerobic Blood Cultures**

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The microbiology laboratory has recently implemented new recommendations for pediatric blood cultures based on weight based volumes. Details can be found on the Laboratory Test Information Guide, at <http://www.ltig.hrlmp.ca/>

This memo serves to clarify guidelines for ordering anaerobic blood cultures.

- For children weighing MORE than 45kg, a set of blood cultures routinely includes both an aerobic and an anaerobic bottle.
- For children weighing LESS than 45kg, there must be a **specific medical order** for an anaerobic blood culture when blood cultures are ordered.

There are a number of clinical settings where anaerobic blood cultures are indicated including:

- Intra-abdominal or pelvic infection
- Necrotizing enterocolitis in neonates
- Head and neck infections, including septic thrombophlebitis (e.g. Lemierre's syndrome) and sinusitis
- Necrotizing soft tissue infection
- Infected bite wounds and penetrating injuries
- Immunosuppression (e.g. febrile neutropenia)
- Prolonged fever of unknown origin with negative aerobic cultures.

When anaerobic cultures are indicated, it is very important to ensure the TOTAL recommended volume of blood based on the child's weight has been collected and used to inoculate the bottles. It is worth noting that a number of bacterial species grow well in both the aerobic and the anaerobic bottle, including most Enterobacteriaceae and Staphylococcus species.

Guidelines for Ordering Pediatric Anaerobic Blood Cultures

For children weighing LESS than 45kg where there is suspicion of a central line infection as well as indications for anaerobic culture, three samples will need to be collected, including one from the central line, and the total recommended volume of blood should be divided amongst the three bottles.

For children LESS than 45 kg that meet the clinical criteria for anaerobic culture, **physicians must indicate on the orders to “*perform blood cultures + anaerobic cultures*”** to facilitate appropriate collection and order entry into meditech.

For any questions, please contact Dr. D. Yamamura (ext 46111) or the microbiologist on call via paging.