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**MEMORANDUM**

**TO: MUMC Pediatricians, MUMC Clinical Managers and Educators, HHS ER physicians, Residents, Tracey Carrier, Michelle Somers**

**FROM: Dr. D. Goldfarb and Dr. D. Yamamura**

**CC: Microbiologists/Infectious Diseases physicians, J. Korver, D. Boychuk, J. Lappan**

**RE: New Recommendations for Pediatric Blood Culture Collection effective March 11, 2015**

**DATE: March 9, 2015**

The HRLMP microbiology laboratory has developed a new protocol for pediatric blood culture collection which provides recommendations for **weight-based blood volume** and **indications for addition of anaerobic culture**. An audit of blood culture practices at McMaster Children’s Hospital performed by Dr. D. Goldfarb showed that a substantial majority of pediatric blood cultures collected had sub-optimal blood volume. Given that blood volume is the most important predictor of pathogen yield, low blood volumes will result in a significant number of falsely negative blood culture results.

**Table 1: Blood culture collection for pediatric patients**

Patient weight (kg)	Meditech Order Entry	Aerobic culture only		Meditech Order Entry	Aerobic and Anaerobic culture Required			
		Total volume (ml)	Bottle type		Total volume Aerobic	Bottle type	Total volume Anaerobic	Bottle type
≤1	CBLINF	0.5-1.0	YELLOW	CBLINF+ AN	0.5	YELLOW	0.5	ORANGE
1.1-2		1.5-2.0	YELLOW		1.0	YELLOW	1.0	ORANGE
2.1-5		2.0-4.0	YELLOW		2.0	YELLOW	2.0	ORANGE
5.1-12.7	CBLPED	5.0-7.0	ONE GREEN	CBLPED+ AN	4.0	ONE GREEN	3.0	ORANGE
12.8-36.3		14-20	TWO GREEN (7-10 ml each)		7-10	ONE GREEN	7-10	ORANGE
36.4-45		20	TWO GREEN (10 ml each)		10	ONE GREEN	10	ORANGE
>45	CBL	Always collect two sets from two separate sites: 1 <sup>st</sup> set: 10 ml GREEN + 10 ml ORANGE and 2 <sup>nd</sup> set: 10 ml GREEN + 10 ml ORANGE						

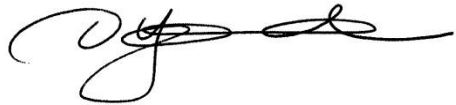
Anaerobic culture in addition to aerobic culture is indicated for the following:

- intraabdominal or pelvic infection, necrotizing enterocolitis in neonates
- mouth/neck infection, including septic thrombophlebitis (e.g. Lemierre's)
- necrotizing soft tissue infection or infected bite wounds
- immunosuppressed host
- prolonged fever of unknown origin with negative aerobic cultures
- >45 kg

The physician must indicate on the order sheet if anaerobic culture is required.

For more information refer to the documents on the Laboratory Test Information Guide on the hospital intranet.

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

A handwritten signature in black ink, appearing to read 'D. Yamamura', with a long horizontal flourish extending to the right.

Dr. D. Yamamura, MD, FRCPC  
Head of Bacteriology and Mycology