

Critical Values YVMC Lab	

I. Critical Values Laboratory

Chemistry Tests	Low	High
Sodium	<120 mmol/L	>160 mmol/L
Potassium	≤2.5 mmol/L	≥ 6.4 mmol/L
Calcium	<6.1 mg/dL	>12.9 mg/dL
CO2	≤9.0 mmol/L	>40 mmol/L
Glucose	≤ 40 mg/dL	≥ 500 mg/dL
Glucose (Neonates)	≤ 40 mg/dL	≥ 200 mg/dL
Magnesium	<1.0 mg/dL	>4.7 mg/dL
Phosphorus	< 1.3 mg/dL	> 8.0 mg/dL
Troponin I		> 0.30 ng/mL
Digoxin		> 2.2 ug/mL
Gentamicin Trough		> 2.0 ug/mL
Gentamicin Peak		> 12.0 ug/mL
Salicylate		> 30 mg/dL

Hematology Tests	Low	High
WBC	< 1,000X10 ⁹ /L	> 30,000X10 ⁹ /L
WBC (Pre-op)	< 2,000X10 ⁹ /L	> 20,000X10 ⁹ /L
Hemoglobin	< 6.0 gm/dL	> 20.0gm/dL
Hematocrit	< 18%	> 60%

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Hematocrit (Pediatric)	< 20%	> 75%
Platelet count	< 25 X 10 ⁹ /L	>1,000 X 10 ⁹ /L
CSF WBC (>13y)		> 5/uL
CSF WBC (Neonates)		>30/uL
CSF WBC (1m-1y)		>20/uL
CSF WBC (>1-13y)		> 10/uL
CSF	Presence of malignant cells or blasts	
Body Fluids	Presence of malignant cells or blasts	
WBC Differential	Presence of circulating blasts or new diagnosis of malignancy	
Peripheral Smear	Suspected parasites are present	

Coagulation Tests	Low	High
Protime (INR)		> 5.0
PTT		> 124 seconds
PTT Pre-op		> 38 seconds
Fibrinogen	< 100 mg/dL	

II. Blood Bank Critical Lab Values

- A.** Positive Antibody results other than prenatal Anti-D.
- B.** Incompatible Crossmatch
- C.** Transfusion Reactions, and the Pathologist's interpretation of transfusion reactions.
- D.** Inventory Limitations and turnaround times to get additional blood and blood components.
- E.** ABO/RH type changes for the administration of blood units except for O Neg units and RH Neg units to RH positive recipients.
- F.** Result errors with the potential of affecting patient care.
- G.** Transfusion of unsafe or inappropriate blood products.
- H.** Positive Fetal Screen test indicating potential large fetal-maternal hemorrhage.

The current version of this policy can be viewed on The Source. Printing is discouraged.

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- I. Positive Direct Coombs (DAT) in newborn indicating Hemolytic Disease of the Newborn.
- J. Anticipated significant reporting delays.

III. Microbiology Critical Lab Values

- A. Positive blood culture
- B. Positive spinal fluid, gram stain and/or culture
- C. Positive stool culture for Salmonella, Shigella, Campylobacter or E.coli 0157.
- D. MDRO's
 - 1. MRSA- Methicillin resistant Staphylococcus Aureus
 - 2. VRE- Vancomycin Resistant Enterococci
 - 3. CRE- Carbapenem Enterobacteriaceae
 - 4. ESBL's
 - 5. MDR Pseudomonas
 - 6. MDR Acinetobacter
- E. Group A streptococcus (in sources other than throats)
- F. Pseudomonas isolated in an eye culture.
- G. Any observed resistance to current patient antibiotic therapy by the pathologic bacterial organism.
- H. Positive Blood parasite smear
- I. C. difficile

IV. Critical Values Microbiology Epidemiology / Infection Control

- 1. Outpatients – Only called during normal business hours (inpatients called to clinical area 24/7)
 - a. Positive stool for Giardia
 - b. Culture or PCR positive for *Neisseria gonorrhoea*
 - c. PCR positive for *C. trachomatis*
 - d. Positive MRSA surveillance screen

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2. Inpatients (notify clinical area and IP on call per AMION)

a. PCR Positive for *B. Pertussis*

A. Arterial Blood Gases

Arterial Blood Gases	Low	High
PCO2 (arterial)	< 20 mmHg	> 70 mmHg
PCO2 (venous/capillary)		> 55 mmHg
PO2	< 40 mmHg	
PH (arterial)	< 7.20	> 7.60
PH (venous/capillary)	< 7.20	
HCO3	< 12 mmol/L	> 40 mmol/L
Arterial Cord Gas pH		pH < 7.1

I. References

Joint Commission NPSG.02.03.01