

Call-Back Critical Value Levels

When the results of any test fall into the range of “critical test values” listed below, a technologist will call the results to the in- patient’s nursing station, indicating to them that this is a “critical test value” and that the physician must be notified immediately. When a “critical test value” is encountered for an out-patient, the patient’s physician is called by a technologist.

Blood Bank

- Positive DAT on newborns (the nursing unit may be notified instead of the physician)
- Positive results of compatibility test on blood given uncrossmatched.
- Clerical discrepancies or positive results of tests performed for transfusion reactions.
- Presurgical patients with unexpected significant antibodies.
- No compatible units of blood available.
- Significant titers of IgG antibodies in OB patients.
- When ABO group compatible units are unavailable.
- When Rh negative units are unavailable for Rh negative patients.
- Patients crossmatched with least compatible blood.
- If their patient has received a component which subsequently tests positive for HIV or HTLV.

Chemistry

Test		Low	High
Albumin, Serum		<1.0 g/dL	>5.0 g/dL
Bilirubin, Neonatal, Serum		None	>15.0 mg/dL
Bilirubin, Cord Blood		None	>1.5 mg/dL
Bilirubin, Unconjugated		None	>20.0 mg/dL
Blood Gases, Arterial			
pH		<7.2 pH Units	>7.6 pH Units
pCO ₂		<20 mm Hg	>70 mm Hg
pO ₂		<40 mm Hg	None
tCO ₂		<10 mEq/L	>40 mEq/L
Hemoglobin	0-14 days	<8.0 g/dL	>25.0 g/dL
	>14 days	<6.0 g/dL	>20.0 g/dL
Methemoglobin		None	>15%
Blood Gases, Capillary			
pH		<7.2 pH Units	>7.6 pH Units
pCO ₂		<20 mm Hg	>66 mm Hg
pO ₂		<20 mm Hg	>100 mm Hg
Blood Gases, Venous			
pH		<7.2 pH Units	>7.6 pH Units
Calcium, Ionized, Serum or Whole Blood		<0.75 mmol/L	>1.63 mmol/L
Calcium, Total, Serum		<6.0 mg/dL	>13.0 mg/dL
Carbon Dioxide, Serum		<10 mEq/L	>40 mEq/L
Carbon Monoxide, Blood		None	>20.0%
Creatinine, Serum		None	>7.5 mg/dL
Glucose, 2-hr post prandial and Tolerance Test, Plasma or Serum		<40 mg/dL	>500 mg/dL
Glucose, Plasma or Serum	0-30 days	<40 mg/dL	>300 mg/dL
	>30 days	<40 mg/dL	>500 mg/dL
Lactose Tolerance, Plasma		<40 mg/dL	>500 mg/dL
Magnesium, Serum		<1.0mg/dL	>4.5 mg/dL
Potassium, Plasma or Serum	0-2 days	<2.8 mEq/L	>7.7 mEq/L
	2-14 days	<2.8 mEq/L	>6.4 mEq/L
	>14 days	<2.8 mEq/L	>6.2 mEq/L
Sodium, Serum		<120 mEq/L	>160 mEq/L
Sodium, Capillary		<125 mEq/L	>155 mEq/L
T4 (Thyroxine), Free, Serum		<0.1 ng/mL	>6.0 ng/mL

T4 (Thyroxine), Total Only, Serum	<1.1 ug/dL	>25.3 ug/dL
Urea Nitrogen (BUN), Serum	None	>100 mg/dL

Coagulation

Test	Low	High
Activated Partial Thromboplastin Time (APTT), Plasma	None	115 seconds
Fibrinogen, Plasma	<100 mg/dL	None
International normalized ratio (INR)	None	>5.0
Heparin (Anti-Xa)	None	>0.7 IU/mL

Hematology

Test	Low	High
Hematocrit, Blood	<18%	>60%
Hematocrit, Newborn, Blood	<25%	>75%
Hemoglobin, Blood	<6.0 g/dL	>20.0 g/dL
Hemoglobin, Newborn, Blood	<8.0 g/dL	>25.0 g/dL
Platelet Count, Blood	<30 x10 ³ /mm ³	>1000.0 x 10 ³ /mm ³
White Blood Cell (WBC) Count, Blood	<1.0 x10 ³ /mm ³	>50.0 x10 ³ /mm ³
Malarial Preps		Positive

Urinalysis

Test	Low	High
Glucose in newborns	None	Positive
Reducing substances in newborns	None	Positive

Microbiology Critical Values

- CSF – Initial positive Gram Stain, Culture or PCR result
- Blood Culture
 - Initial positive gram stain and any subsequent bottle with different Gram stain
 - BCID PCR result on any positive Blood Culture
- AFB - Initial positive direct smear
- Measles – Positive PCR or IgM antibody
- SARS CoV-2 PCR – Positive
- Any 24-hour CDPHE reportable condition
- Carbapenem Resistant Enterobacteriaceae

Microbiology Urgent Vital Test Results

- Sterile Site Culture (tissue/fluid) - Initial positive Gram stain or culture
- AFB Culture – Initial positive culture with negative direct smear
- Eye Culture – Positive Gram stain or culture
- Fungus Culture – positive from sterile site
- Group A Culture – positive any source
- Identified Organisms
 - Brucella
 - Carbapenem Resistant Acinetobacter spp (CRAB)
 - Clostridium perfringens or C tetani positive culture
 - Pseudomonas aeruginosa Carbapenem Resistant (CRPA)
 - Daptomycin Resistant VRE/MRSA
 - ESBL/R 3rd gen cephalosporin E. coli, Klebsiella, P. mirabilis
 - Listeria
 - MRSA – Oxacillin Resistant S. aureus

- Penicillin resistant *S. pneumoniae*
- *Vibrio non-cholera*
- Vancomycin Intermediate/Resistant *S. aureus* (VISA/VRSA)
- Vancomycin Resistant Enterococcus (VRE)
- *Yersinia non-pestis*
- *C. difficile* Toxin
- Influenza A or B
- Group A Strep PCR
- GI Pathogen Panel (GIP)
 - Positive result on inpatients or patients less than 1 year of age
 - Positive results on outpatients >1 year of age: *Shigella/EIEC*, STEC, *E. coli* 0157, *Salmonella*, *Vibrio*, *Yersinia* or *E. histolytica*
- Respiratory Pathogen PCR – positive result on inpatients
- *Varicella Zoster* – positive PCR