

Critical Care Values

Critical care values are test results that are life-threatening to a patient and require an immediate decision by the physician. When a critical care value is obtained in the laboratory, the laboratory employee phones values immediately to appropriate nursing station, unit charge nurse, or physician. Person receiving results is required to read results back to the person calling. At this point, Nursing Service personnel are responsible for relaying this information immediately to attending physician. Information should be written down and include the date and time information was called to nursing station, name of test, test results, and name of the laboratory person who called result. This information should be made a part of patient's chart until the laboratory requisition arrives with the critical care values. Laboratory will document date and time, who was called, and who read back the results on the patient results.

Findings	Possible Effect
Bacteriology	
Positive blood culture	Sepsis
Positive <i>Clostridium difficile</i> Toxin (CDT)	Public health implication or nosocomial infection
<i>Clostridium</i> in a wound culture	Sepsis or gangrene
Positive spinal fluid Gram stain or culture	Meningitis
Positive <i>Mycobacterium tuberculosis</i> smear or culture	Public health implication or nosocomial infection
<i>Shigella</i> culture, <i>Salmonella</i> , and <i>Escherichia coli</i> O157:H7	Public health implication or nosocomial infection
Positive systemic fungus culture	Sepsis or disseminated systemic mycoses
Beta-hemolytic <i>streptococci</i> in throat cultures	Rheumatic fever, rheumatism, heart disease, glomerulonephritis (group A, beta hemolytic)
Positive joint, bone, pericardial, pleural, peritoneal, or thoracentesis fluid	Septic arthritis, empyema pericarditis or peritonitis
Group B streptococci in newborns	Sepsis and death or nursery epidemics
Eye cultures with pure culture of any organism	Serious eye damage or blindness
Presence of malarial parasites	Malaria
Any organism resistant to Vancomycin	Public health implications or nosocomial infection
When any of the above tests results are obtained in the Microbiology Department either as a result of STAT or routine testing, the appropriate person (pathologist, attending physician, Dr. Harris, or nurse) should be notified immediately.	

Critical Care Values (Cont.)

Blood Bank		
When any of the following test results are obtained in the Blood Bank, either as a result of STAT or routine testing, the appropriate person (pathologist, attending physician, or nurse) should be notified immediately.		
Positive results of anti-human globulin test on infant cord blood		
Positive antibody screen and identification—whenever this is due to an antibody such that no units or an inadequate number of units of blood that are negative for the antigen are available in the Blood Bank		
Any incompatible crossmatch result such that no compatible units or an inadequate number of compatible units can be found in the Blood Bank		
Any positive antibody screen result and antibody identifications on prenatal patients or RhoGAM [®] evaluations		
All final results of transfusion reaction investigations		
The presence of or the suspected presence of warm auto-agglutinins or cold auto-agglutinins resulting in problems of identification of the agglutinin or incompatibility in crossmatching		
Test	Low Values	High Values
Chemistry		
Acetaminophen Level (Tylenol [®]), Plasma or Serum		≥120.0 µg/mL
Alcohol, Blood		≥400.0 mg/dL
Ammonia (NH ₃), Blood <1 year >1 year		≥150.0 µmol/L ≥500.0 µmol/L
Bilirubin, Total, Plasma or Serum <1 year		≥15.00 mg/dL
Calcium, Plasma or Serum	≤7.0 mg/dL	≥12.0 mg/dL
Creatinine, Plasma or Serum 0-30 days 31 days-23 months 2-11 years 12-15 years ≥16 years		≥1.5 mg/dL ≥2.0 mg/dL ≥2.5 mg/dL ≥3.0 mg/dL ≥10.0 mg/dL

Critical Care Values (Cont.)

Test	Low Values	High Values
Digoxin, Plasma or Serum		≥4.00 ng/mL
Glucose, Plasma or Serum ≤1 week >1 week	≤25 mg/dL ≤40 mg/dL	≥400 mg/dL ≥400 mg/dL
Lithium, Plasma or Serum		>1.50 mmol/L
Magnesium, Plasma or Serum Labor and Delivery Patient All other patients	≤1.0 mg/dL ≤1.0 mg/dL	≥6.0 mg/dL ≥9.0 mg/dL
Osmolality, Serum	≤190 mOsm/kg	≥390 mOsm/kg
Phenytoin (Dilantin®), Total, Plasma or Serum		≥30.0 µg/mL
Phosphorus, Inorganic (PO ₄), Plasma or Serum	≤1.0 mg/dL	
Potassium, Plasma or Serum	≤2.5 mmol/L	≥6.0 mmol/L
Salicylate, Plasma or Serum		≥50.0 mg/dL
Sodium, Plasma or Serum	≤120 mmol/L	≥160 mmol/L
Troponin T, Plasma or Serum		≥0.300 ng/mL
T4 (Thyroxine), Free, Plasma or Serum <50 years ≥50 years		≥7.77 ng/mL ≥6.0 ng/mL
Valproic Acid (Depakene®), Plasma or Serum		≥120.0 µg/mL
Vancomycin Trough, Plasma or Serum		>20.0 µg/mL
Hematology		
Activated Partial Thromboplastin Time (APTT, PTT), Plasma		≥150.0 seconds
Fibrinogen, Plasma	≤60.0 mg/dL	
Hemoglobin, Blood <7 weeks >7 weeks	≤6.0 g/dL ≤6.0 g/dL	≥24.0 g/dL ≥20.0 g/dL

Critical Care Values (Cont.)

Test	Low Values	High Values
Mixing Studies, Plasma Partial Thrombin Time (PTT) Mixing Study International Normalized Ratio (INR)		≥150.0 seconds ≥6.00
Neutrophils (Absolute)	≤0.5 x 10 ³ /cmm	
Platelet Count, Blood	≤40 x 10 ³ /cmm	≥1,000 x 10 ³ /cmm
Prothrombin Time (PT), Plasma International Normalized Ratio (INR)		≥6.00
WBC Count, Blood		≥100.0 x 10 ³ /cmm
Respiratory		
Blood Gases, Arterial Blood pH (98.6) pCO ₂ (98.6) pO ₂ (98.6) Lactate Carboxyhemoglobin Methemoglobin Sulfahemoglobin O ₂ Hemoglobin Saturation (Measured)	<7.20 <20 mm Hg <50 mm Hg	>7.55 >50 mm Hg >5.0 mmol/L >5.0% >3.0% >3.0%