

CRITICAL RESULTS

POLICY STATEMENT

Physicians rely on accurate and timely responses by laboratorians for abnormal lab values to make critical patient care decisions. The Laboratory has a plan of action to respond to those needs 24 hours a day. To ensure that necessary treatment is rendered to a patient, specific test results are considered to be Alert or Critical Values. Alert or Critical Values will be defined by the Laboratory Medical Director with consultation from the Medical Staff. These values have been established as being among those that should be immediately called to the physician's office or the nursing unit so that the appropriate physician may be notified.

If the Laboratory is unable to contact the appropriate care giver on the first call, the Laboratory will continue to make contact until there is a successful notification. If for some reason the appropriate caregiver is not reached within 60 minutes, the Pathologist on call will be notified. When Alert or Critical results are communicated verbally or by phone the Laboratory will ask for a verification "read back" of the results. Verification of the discussion will include the correct spelling of the caregiver's name, and the lab will also ask for and document credentials of the person accepting the results. This information will be documented in the patient report. The results from any test, of course, should be reviewed with the patient's welfare in mind.

PROCEDURE

BLOOD BANK

Positive transfusion reaction investigation findings, such as positive direct antiglobulin test, discrepancy in ABO/Rh typing, clerical discrepancies, or post transfusion hemolysis, are reported immediately to the Medical Director or on call pathologist. The Medical Director or assigned pathologist will assess the investigation and decide on further course of action

course of action.			
BLOOD GAS			
Blood Gas			
Ph, Arterial, Venous, Capillary	Less than 7.20 or Greater than	7.55	
pO₂Arterial	Less than 50 mm Hg		
Methemoglobin Arterial and Venous	Greater than or Equal to 5%		
Carboxyhemoglobin Arterial and Venous	Greater than or Equal to 20%		
Total Hemoglobin (THb) Arterial and Venous	Less than or Equal to 6.5 g/dL		
Oxyhemoglobin (O2Hb) Arterial and Venous	Less than 85%		
Ionized Calcium (Ca++) Arterial and Venous	Less than 3.2 or Greater than 6.48		
Cord Gas, Arterial/Venous pH	Less than or Equal to 7.1		
Cord Gas, Arterial/Venous or Capillary Base Excess	Less than or Equal to -12		
Sepsis Lactate	Greater than or equal to 4.0 mmol/L		
CHEMISTRY			
Acetaminophen	Greater than or equal to 100 mcg/mL		
Bilirubin, Total	Adults (Greater than or equal	Neonates (Less than or	
	to 15 days): Greater than 40	equal to 14 days): Greater	
	mg/dL	than 15 mg/dL	

^{**}Printed copies are for reference only. Please refer to the electronic document to ensure latest version. **

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Carbamazepine (Tegretol)	Greater than 12 mcg/mL – first time only*	
Carbon Dioxide	Less than 15 mmol/L	
Calcium	Less than 6.6 mg/dL and Greater than 13.9 mg/dL	
Digoxin	Greater than 2.5 ng/mL	
Gentamicin	Random: Greater than or	Trough: Greater than or
	equal to 45 ug/mL	equal to 2.1 ug/mL
	Patients 0-3 days: Less than	Patients 4 days and older:
Glucose	or equal to 44 or Greater than	Less than or equal to 54 or
	or equal to 450 mg/dL	Greater than or equal to
		450 mg/dL
Hepatitis B Surface Antigen	Reactive - Called to Labor and Delivery Only	
Human Immunodeficiency Virus (HIV)	Reactive - Called to Labor and Delivery Only	
HIV Immunoassay or Rapid HIV	Reactive - Called to Labor and Delivery Only	
Lactate	Greater than or equal to 4.0 mmol/L	
Lidocaine	Greater than 6.0 ug/mL	
Lithium	Greater than 1.5 mmol/L	
	Less than 1.0 mg/dL and Great	er than 4.8 mg/dL except for
Magnesium	Labor and Delivery (OB) patien	ts
	Greater than 8.0 for Labor and	Delivery (OB) patients
Phenobarbital	Greater than 40 mcg/ml	
Phenytoin (Dilantin)	Greater than 30 mcg/mL	
Phosphorous	Less than 1.0 mg/dL	
Potassium	Less than 2.8 and Greater than 5.6 mmol/L	
r otassium	Greater than or equal to 7.0 for patients 0 minutes - 1 year	
Salicylate	Greater than 30 mg/dL	
Sodium	Less than 120 or Greater than 155 mmol/L - first time only*	
Theophylline	Greater than 25 mcg/mL	
Tobramycin	Random: Greater than or	Trough: Greater than or
Toblamyem	equal to 45 ug/mL	equal to 2.1 ug/mL
	Greater than 200 ng/L (absolute hs T	
High Sensitivity Troponin T	+ /- 10 ng/L (2-hour delta)	
Thigh Sensitivity Proportion	+/ - 11 ng/L (4-hour delta)	
*Critical values will be called every 48 hours when a	+/ - 12 ng/L (6-hour delta)	
new alert is defined	+/- 12 ng/L (6-nour delta) +/- 20% (2,4 or 6-hour delta %)	
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	Interpretive value = Significant	
Valproic Acid	Greater than 100 mcg/mL	
Vancomycin	Random: Greater than or	Trough: Greater than or
Valicomychi	equal to 60 ug/mL	equal to 25 ug/mL
COAGULATION		
Anti Xa	Greater than 2.0 U/mL	

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Fibrinogen	Less than 100 mg/dL – first time only*		
Partial Thromboplastin Time (PTT)	Greater than 120 seconds		
Prothrombin Time (PT)/INR	Greater than 5.0		
HEMATOLOGY			
White Blood Cells (WBC) Alerts:			
Patients less than 3 days	Less than 2.0 or greater than 50.0, call every 72 hours		
Patients greater than 3 days through 18 years	Less than 1.0 or greater than 50.0, call every 72 hours		
Patients greater than 18 years old	Less than 1.0 or greater than 50.0, call every 72 hours		
Absolute neutrophil count	Less than 0.5, call every 72 hours		
Hemoglobin Alerts:			
Patients less than 12 years old	Less than 7.0 g/dL, call every 72 hours		
Patients greater than 12 years & less than 18 years	Less than 6.0 g/dL, call every 72 hours		
Datients greater than 19 years old	Less than 6.5 g/dL or greater than 20 g/dL, call every 72		
Patients greater than 18 years old	hours		
Platelet Alerts:			
All Ages (Outpatient/ED)	Less than 50 or greater than 1000		
Dationts greatenthan 10 years and (longitions only)	Less than 20, call every 72 hours		
Patients greater than 18 years old (Inpatient only)	Greater than 1,000, call every 72 hours		
Labor & Delivery patients	Less than 50, call every 48 hours		
Patients less than 18 years old	Less than 25, call every 72 hours		
Tatients less than 10 years old	Greater than 1,000, call every 72 hours		
Critical Blast	If blasts are identified on a smear review, a critical is called		
	when blasts are greater than 0%		
Children Blass	Patients <18 years: call every 72 hours		
	Patients >18 years: call every 30 days		
	ROBIOLOGY		
Positive India Ink or Cryptococcal antigen	All		
Legionella antigen (urinary)	All		
Positive AFB culture or smear	first time only*		
Positive culture or gram stain from normally sterile			
body sites (Blood, joint fluid, pleural, synovial, bone	All		
marrow, tissue, CSF, etc.)			
Stool Culture (Enteric) Positive for Salmonella,			
Shigella, Campylobacter, Escherichia coli O157:H7,	All		
Yersinia, or Shiga toxin-producting Escherichia coli, or	1 · ···		
Vibrio			
MDRO-Multiple drug resistant organisms (VRE, CRE,	First isolate per admission on all cultures or PCR -Inpatients .		
ESBL etc.)	only		
Diseases/infections/conditions as listed by the	All		
Missouri Department of Health as a communicable	All		
disease or Bioterrorism agent			

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Positive Giardia/Cryptosporidium Antigen	All	
Positive Respiratory Pathogen Panel	only need to call Bordetella pertussis, Chlamydophila pneumoniae and Mycoplasma pneumoniae -Inpatients only	
SENDOUTS		
Reference Laboratory Results Flagged as Alert Value	All	

DEFINITIONS

*First Time Only – Those tests denoted by "first time only" indicate that a call will be made only for the initial alert (critical) value obtained during each admission. Subsequent alert (critical) values will not be called. Results that fluctuate from alert (critical) to normal back to alert (critical) level will prompt a call by laboratory staff.

RELATED POLICIES, STATUTES OR STANDARDS

All inpatient alert (critical) values will be called to the appropriate licensed personnel. Whenever possible these calls will be made directly to the nurse taking care of the patient. If the primary nurse cannot be reached the floor charge nurse/nurse manage will be notified. Outpatient alert (critical) values and discharged patient alert (critical) values will be called to the physician office. When a physician office is closed the physician will be notified through the appropriate exchange. Critical or alert values for specimens received from sister laboratories will be called directly to those laboratories. Notification to the physician will then belong to the accepting lab.

All alert (critical) values for inpatient newborns will be called to Vocera "Neonatal Critical Labs". The call will be made directly to the neonatal hospitalist. All alert (critical) values for outpatient newborns will be called to the provider listed on the patient's chart.

All alert (critical) values for the Select Medical Team (LTACH) located on the 5th floor main tower of Missouri Baptist Medical Center will be called directly to the Select Medical (LTACH) House Supervisor direct phone at 314-302-9796.

All alert (critical) values for TRISL (The Rehabilitation Institute of St. Louis) located off campus will be called to the TRISL Nursing Station at 636-591-1192. Should someone not be available at the TRISL nurse's station, the TRISL nursing supervisor can be reached at 636-487-2179.

All notifications will be documented. All results must be read back to notifier to verify accuracy. Documentation will include, first initial and last name of person taking results, verification of results, time of notification, initials of person making phone call and credentials of the person taking the call. All information will be documented on the appropriate worksheet and/or in the patient report/electronic record. If unable to contact the appropriate person, contact the department supervisor or Laboratory Medical Director.