



St. Luke's Hospital

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Critical Value Reporting

PURPOSE:

Develop written procedures for managing the critical results of tests and diagnostic procedures that address the following:

- the definition of critical results of tests and diagnostic procedures
- by whom and to whom critical results of tests and diagnostic procedures are reported
- the acceptable length of time between the availability and reporting of critical results of tests and diagnostic procedures

SCOPE & RESPONSIBILITY:

The scope includes Laboratory, Radiology, and Primary Life Services (EKG, vascular, echocardiogram and blood gases) in all settings.

PROCEDURE:

- A. Critical results of tests and diagnostic procedures are results that are considered life threatening and whereby any delays in reporting may result in serious adverse outcomes for patients.
- B. A list of tests which may be ordered stat is listed in bold letters under the test column in the critical result criteria.
- C. The turnaround time of a laboratory stat test is one hour from the time of ordering to the time of result verification.
- D. The turnaround time for vascular and echocardiogram stat procedure is 90 minutes from the time of ordering to the time of test completion.
- E. A 10 minutes goal for obtaining STAT EKG's including physician review of the EKG is the routinely adhered to guideline
- F. Holter monitors will be scanned the same day the monitors are returned to Primary Life Services.
- G. Any critical result for a stress test, EKG, Echo, Event and Holter monitors will be reported immediately to the supervising/reading cardiologist and documented per policy in the patient's electronic record.
- H. The Cardiologist will read the critical study. The cardiac technologist is responsible for reporting the critical values to the ordering physician. The date and time of such reporting shall be documented in the medical record.

- I. Any critical results for a non-invasive vascular exam will be reported immediately to the reading vascular physician and documented per policy in the patient's electronic record.
- J. The vascular physician will read the critical study. The vascular technologist is responsible for reporting the critical values to the ordering physician. The date and time of such reporting shall be documented in the medical record.
- K. The turnaround time for a radiology stat procedure is 60 minutes from the completion of exam to the time exam is interpreted.
- L. The result of any test ordered "stat" will be communicated to the ordering physician or designee, even if the result is within normal limits.
- M. The ordering physician or designee is to be notified of any critical test result as defined in this policy or stat test results. The turnaround time for physician notification is 60 minutes from the time the results are available.
- N. Documentation of the notification including time, date and physician receiving the critical value/result must be made as a permanent part of the patient's medical record.

WORK FLOW:

- The individual making the call is responsible for documenting the date and time of call, and the name of the person who receives the results.
- The radiologist shall contact the ordering physician when there is a critical finding and shall document the notification in the final report.
- In the case of outpatient surgery or pre-admission testing patients, the Outpatient Surgery is to be notified during hours of operation. Lab will directly notify the ordering physician when OPS is closed.
- Critical results shall be reported to the nursing unit in the case of inpatients and to the ordering physician in the case of outpatients.
- The primary care nurse is responsible for reporting the critical values to the ordering physician. The date and time of such reporting shall be documented in the medical record.
- The primary care nurse is also responsible for ensuring that the ordering physician is aware of critical values prior to the patient being discharged to another level of care.
- Results of all blood specimens analyzed by Primary Life Services in the Family Birthing Center or during an open heart surgery are treated as critical.
- All critical test results and critical values must be read back by the receiving individual to ensure accuracy.
- Physician notification must be completed as outlined for the following critical values unless previous parameters or protocol orders for treatment have already been written or values are improving with active treatment.

Testing Area	Test <i>(Bolded tests can be ordered as stat.)</i>	CRITICAL RESULTS
CHEMISTRY	Alcohol, serum	> 0.35 g/dL
	Bilirubin	Adults and children > day 3: > 15 mg/dl Neonates day 2: > 12 mg/dl Neonates day 1: > 8 mg/dl
	BUN	> 89 mg/dL,
	Creatinine	High > 5 mg/dl,

Testing Area	Test (<i>Bolded tests can be ordered as stat.</i>)	CRITICAL RESULTS
	Glucose (adult)	High > 399 mg/dL Low < 40 mg/dL
	Glucose, CSF	High > 438 mg/dL Low < 40 mg/dL
	Calcium, total	> 4 months old: < 7.0, > 13.0 mg/dl 0 – 3 months old: < 6.5, > 13.0 mg/dl
	Calcium, ionized	> 4 months old: < 3.13, > 6.33 mg/dl 0 – 3 months old: < 2.55, > 6.33 mg/dl
	Lactic Acid (Lactate)	High > 2.0 mmol/L
	Magnesium	High > 5.0 mg/dl, Low < 1.0 mg/dl,
	Magnesium, ionized	High > 1.53 mmol/L Low < 0.26 mmol/L
	Sodium	High > 160 mmol/L, Low < 120 mmol/L,
	Phosphorus	< 1.1 mg/dL
	Potassium	High > 6.0 mmol/L Low < 3.0 mmol/L
	Chloride	High > 125 mmol/L Low < 75 mmol/L
	Bicarbonate	Low < 10 mmol/L
	Troponin I	High > 0.49 ng/ml,
THERAPEUTIC DRUG MONITORING	Carbamazepine	High > 15.0 ug/ml Low < 2 ug/ml
	Digoxin	High > 2.5 ng/ml
	Gentamicin	Adult Peak or Random > 13 ug/ml Pediatric Peak > 13 ug/ml Neonates Peak > 15 ug/ml Trough > 2 ug/ml
	Lidocaine	> 9 ug/ml
	Lithium	> 1.5 mmol/L
	Napa	> 30 ug/ml
	Procainamide	> 12 ug/ml
	Primidone	> 24 ug/ml
	Phenobarbital	High > 60 ug/ml
	Phenytoin, Free	> 3 ug/ml
	Phenytoin	High > 25 ug/ml Low < 2.5 ug/ml

Testing Area	Test (<i>Bolded tests can be ordered as stat.</i>)	CRITICAL RESULTS
	Theophylline	High > 30 ug/ml
	Tobramycin	Adult Peak or Random >13 ug/ml Pediatric Peak > 13 ug/ml Trough > 2 ug/ml
	Valproic Acid	High > 150 ug/ml
	Vancomycin	Random > 60 ug/ml Adult Trough > 25 ug/ml Pediatric Trough > 25 ug/ml Neonates Trough > 25 ug/ml
TOXICOLOGY	Acetaminophen	High > 50 ug/ml,
	Lead	> 70 ug/dL
	Salicylate	High > 30 mg/dl
	Tricyclic	> 500 ng/ml
HEMATOLOGY	Hemoglobin	High > 20 g/dl Low < 7 g/dl
	Platelets	High > 999,000 per uL Low < 30,000,
	WBC	High > 50,000 per uL, Low < 500 per uL,
	Manual Diff	Blast cells,
COAGULATION	INR	High > 4
	aPTT	High > 100 seconds
	Heparin induced platelet antibody	Positive
BLOOD GASES	pH	High ≥ 7.60 Low ≤ 7.20
	pCO2	High ≥ 70 mmHg Low ≤ 20 mmHg
	pO2	Low < 50 mmHg
	Carboxy-hemoglobin	≥ 5%
MICROBIOLOGY	APT Test	Positive
	CSF AND Body Fluid Stains	Positive
	CSF and Body Fluid Cultures	Positive
	Gram Stain for Gram Negative Intracellular Diplococci from Urethral Discharge	Positive
	Cryptococcal Antigen	Positive
	Parasitic Blood Smear	Positive

Testing Area	Test (<i>Bolded tests can be ordered as stat.</i>)	CRITICAL RESULTS
	AFB smear & Culture	Positive
	Blood Cultures (Gram Stain)	Positive
	Brucella	Positive
	Stool (GI PANEL)	Cyclospora Cayetanensis, Entamoeba histolytica, Adenovirus F 40/41, Norovirus GI/GII, Rotavirus A, Salmonella, Shigella, Yersinia, Campylobacter, Vibrio, E coli 0157:H7, C. Difficile
	VRE/MRSA	Positive
	CRE/ESBL	Positive
	Group A beta hemolytic strep	Positive – contact Infection Control
RESPIRATORY PATHOGEN PANEL	Adenovirus, Influenza A, Influenza B, Human Metapneumovirus, Human Rhinovirus/Enterovirus, Respiratory Syncytial Virus (RSV), Rhinovirus/Enterovirus, Bordetella pertussis, Mycoplasma pneumoniae	Positive
BLOOD BANK	Transfusion Reaction Evaluation	Acute Hemolytic Reaction
RADIOLOGY (New instance only)	CT MRI ULTRASOUND RADIOGRAPHY NUCLEAR MEDICINE	Free air without recent surgery
		New acute intracranial hemorrhage
		Pneumothorax without chest tube
VASCULAR	Carotid studies	80 – 99% stenosis
	Venous exams	Acute or fresh DVT
	Arterial Duplex	Pseudoaneurysm
CARDIOLOGY	Echocardiograms	Pericardial effusion greater than moderate
		Newly diagnosed severe valvular pathology
		New onset valvular vegetation/cardiac masses
		Aortic dissection
	Holter Event Monitors	Abnormal Holter Event monitor EKG showing sustained VT/VF for at least 30 seconds
		Non-sleep related pauses of >5 seconds

Testing Area	Test <i>(Bolded tests can be ordered as stat.)</i>	CRITICAL RESULTS
	Stress Test	Abnormal stress EKG with greater than 3 mm ST depression or persistent ST depression >5 minutes
		New onset persistent chest pain in recovery phase
		ST elevation greater than one mm
	EKG (ADULT)	Ventricular tachycardia > 6 beats in a row
		Bradycardia defined as < 35 beats per minute
		Sustained Tachycardia defined as > 130 beats per minute identified
		Atrial fibrillation/flutter if not previously identified
		Dropped beats of 3 seconds or longer
		2:1 or complete heart block
	EKG (PEDIATRIC)	Newborn – 1 year of age Sinus Bradycardia < 80
		1 – 17 years of age Symptomatic Sinus Bradycardia < 60 (with symptoms)
		New Born – 17 years of age Sustained Tachycardia >200 beats per minute
		Ventricular Tachycardia > 6 beats in a row
		Atrial fibrillation/flutter if not previously identified
		2:1 or complete heart block
		Dropped beats of 3 seconds or longer

Attachments:

No Attachments

Approval Signatures

Approver	Date
Laura Hamid	06/2017
Shaila Fernandes	06/2017

Approver

Date

Mary Matuszak: Laboratory Services Manager 05/2017

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