**Document Title: Clinical Laboratory Critical Value Notification Policy** 

Author:	Effective Date: Note: The Effective Date is assigned after all approval signatures are obtained	Supersedes Procedure #
Liz Peterdy	13JAN2014	SH.CP.AA.lgp.0049.0011 RR.CP.GL.Adm.0001.0004 PL.CP.GL.Adm.0008.0003 SW.CP.GL.Adm.0004.0004 IO.CP.GL.Adm.0004.0001

Revised By:	Date Revised	Effective (adopted) Date:  Note: The Effective Date is assigned after all approval signatures are obtained
E. Peterdy	31 DEC 2018	08 feb 2019

Approval Signature	Approval Date
	1/23/19
Henry	
Neil Blumberg, MD	1.1.2
WYVY	1/4/19
	, ,
Richard Burack, MD	
	11.118
Tamera Paczos, MD	1 1 1 1 1 1 1
Tamera Paczós, MD	
	1.7110
	111119
Xiaolan Ou, MD, PhD	
an Catoll	15/ Jan /2019
James Corsetti, MD, PhD	0 1

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E. Peterdy	3 DEC 2018	08 Feb 2019

Approval Signature	Approval Date
Jessica Kleiner, MD	
( h /a	1/28/19
ye -	
Dirk Bemold, MD	
DUA Belliold, WID	1/22/19
1/1/6	
Melissa Allen - see attacked	

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# **REVISION HISTORY**

23/May/2013	
20,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Update Critical Value- WBC
16Jan2014	Updated Format, Add Critical Value for Band Counts and Amend Total Billi calling parameters
2Dec2014	Amend Band, Hct and Plt parameters for clarity.
31 Dec 2018	Update to Critical value for Glucose and Magnesium Align Affiliate Policies with SH.CP.AA.lgp.0049. RR.CP.GL.Adm.0001. PL.CP.GL.Adm.0008. SW.CP.GL.Adm.0004. IO.CP.GL.Adm.0004.
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## TITLE: Clinical Laboratory Critical Value Notification Policy

#### I. PURPOSE

The purpose of this document is to define a process to notify appropriate persons of laboratory values meeting the established criteria of an Alert Value for all Lab Sections within the scope of this policy.

### II. POLICY

In order to assist the ordering physician in responding to certain potentially life-threatening outcomes, a group of laboratory test results that merit immediate notification has been identified. This procedure is not intended to cover all clinically serious test results or changes in test results. Therefore, it is essential that the ordering physician take responsibility for following up on all test results in a timely fashion.

Cutoff values for certain laboratory tests (list below) were determined based on the literature and experience. This list is somewhat subjective, but can be modified based on ongoing experience. Given the volume of testing performed in the clinical laboratories and lack of detailed clinical information, it is not possible to set different critical value limits based on clinical setting.

#### III. SCOPE

This procedure is used throughout the following UR Medicine Lab sites with the exception of those identified in the limitation section. Policy is applicable to Strong Memorial Hospital (SMH),-UR Labs Central Laboratory, and UR Medicine Lab owned affiliates, when a laboratory test yields a result that meets established Standard Critical Values, also known as alert or panic values.

#### III. ACRONYMS/DEFINITIONS

Term	Definition
N/A	Not Applicable
Critical Value	A specific result value or level defined as significant to the health and safety of a patient. Attention is not given to differentiating which abnormal results are or are not unexpected in the context of the clinical history, the ordering physician is expected to apply context.
НН	Highland Hospital
IHN	Integrated Health Network
Ordering Physician	A physician with legal authority to request a laboratory test that has initiated a laboratory order.
RC	Red Creek Laboratory
RR	Ridgeland Road Laboratory
URMC	University of Rochester Medical Center

#### IV. RESPONSIBILITIES

Group/Person	Responsibility
Laboratory Manager	Ensures the development of this procedure.
	Reviews and approves this document.
Quality Assurance	Supports the development of this document.
	Review and approval of this document.
Medical Director or	Ensuring that procedures are followed.
Designee	Review and approval of this document.
Technical Staff	Follows the procedures.

#### V. GENERAL GUIDELINES

laboratory computer.

Critical values will be reported according to the following protocol:

- A. The critical value is confirmed according to test-specific protocol. For some tests (see list), the lab computer will be checked and if a similarly abnormal value was reported within the past two days, the repeat critical value will not be treated as an emergency, and will be reported according to our standard protocol (i.e., will not be immediately called).
  Results that are invalidated by an inadequate specimen (i.e. low glucose in a redtop tube over 4 hours; potassium in a hemolyzed sample) will not be reported as a critical value. These tests will be recorded with an appropriate comment in the
- B. The test result will be immediately reported. The laboratory has established a 5 minute turn around time from verified critical result to notification. Deviations will be followed-up as needed.
- C. The responsible provider, inpatient location or private office, is to be called with the results. If the provider is not available, a nurse or other designee can be given the result but should be instructed on the necessity to give this result to the provider in a timely manner.
  - 1. Give result(s) and request a read-back of "what was written down" and document in LIS.
  - 2. If the results are not given to the provider directly (nurse or designee), confirm that the recipient acknowledges the severity of the result and that it should be communicated to the provider within 15 minutes.
- D. When critical results need to be called after hours or when the office is not open, an on-call provider or answering service must be available on a 24-hour basis to take responsibility for receiving the test result.

E. If an answering service is called, the urgency of the result and necessity to give this result to the responsible physician is explained, but the result is not reported and an appropriate call- back number is left. The time and person receiving the call is recorded as an internal comment in the lab information system. The responsibility for contacting the responsible physician rests with the office / answering service but follow-up must be ensured by calling laboratory.

## F. Necessary Components of Calling a Critical Value:

- 1. Clear introduction including name, department, and laboratory (for offsite locations).
- 2. Reason for phone call: Critical Value.
- 3. Patient involved Two identifiers (Name and DOB or MRN).
- 4. Ask for caregiver (doctor, nurse) of patient identified.
- 5. Give result(s) and request a read-back of "what was written down".
- 6. Document transaction in call box, to include:
  - a. name of person who took the result
  - b. date and time
  - c. verification that the read-back was performed.

# G. Clinical Laboratory Critical Value Immediate Notification Test List Chemistry/Hematology Tests

Assay	Critical Value Low Limit	Critical Value High Limit	Call if similar result within 2 days?
Blood Gas			
pH (mm Hg)	7.20	7.60	Yes
pCO2 (mm Hg) arterial only	20	70	Yes
pO2 (mm Hg) adult arterial only	46		Yes
pO2 (mm Hg) newborn < 5 days old arterial only	40	91	Yes
MetHb (%)		30	Yes
COHb (%)		20	Yes
General Chemistry			
Calcium (mg/dl)	6.5	13.0	Yes
Ionized calcium (mg/dl)	3.1	6.3	Yes
Chloride (mmol/l)	80	120	Yes
CO2 (mmol/l)	10	40	Yes

Glucose (mg/dl) newborn 0-1 days	25	200	Yes
Glucose (mg/dl) newborn day 2-7	40	200	Yes
Glucose (mg/dl) adult	50	500	Yes
Glucose, CSF (mg/dl)	37		Yes
Lactate (mmol/l)	_	3.5	Yes
Osmolality (mOsm/kg)	250	325	Yes
Mg (mg/dL)	1.0	4.8	Yes
Phosphate (mg/dl)	1.1	9.0	Yes
Potassium (mmol/l) newborn 0-2 days	2.8	8.0	Yes
Potassium (mmol/l) 3-8 days	2.8	7.0	Yes
Potassium (mmol/l) 9-120 days	2.8	7.0	Yes
Potassium (mmol/l) adult	2.8	6.2	Yes
Sodium (mmol/l)	120	160	Yes
Total Bilirubin (mg/dl) < 1 week	<b> </b>	15.0	Yes
Hematology			
Band count		16% for 1 day old; 11% for all other ages	Yes
Hematocrit (%)	19		No
INR		5.0	No
Malaria smear	-	Organisms +	No
Platelet count (thousand/microl)	19		No
Organisms seen in bld, CSF smear		any	No
WBC (thousand/microl)	-	150	No

Toxicology		1	
Acetaminophen (ug/ml)	 50	Yes	
Alcohols (mg/dl)		**************************************	
Ethanol	 300	Yes	

Methanol		10	Yes
Isopropanol		10	Yes
Acetone		20	Yes
Carbamazepine (ug/ml)		15	Yes
Digoxin (ng/dl)		2.5	Yes
Lithium (mmol/l)		1.50	Yes
Phenobarbital (ug/ml)	an ou	50	Yes
Phenytoin-Dilantin (ug/ml)		40	Yes
Free Phenytoin (ug/ml)	en del	3.5	Yes
Salicylate (mg/dl)	en m	50	Yes
Theophylline (ug/ml)	and the	25	Yes
Valproate (ug/ml)		150	Yes
Blood Bank			***************************************
Hemolytic transfusion reaction	Confirmation by lab analysis		Yes

## VI. LIMITATIONS

Guidelines pertain as appropriate for site specific test menu.

Defer to Highland Hospital Critical Value Policy(ies) for Highland Hospital Location.

## VII. REFERENCES

Policy VI-14 Clinical Laboratory Critical Value Immediate Notification Policy, SH.CP.AA.lgp.0049

# Training or Read/Review Signature Log

Document Title:	Critical Value Notification Policy			
Document Number:	UR.CP.GL.Gen.0004.0001			
Document Type:	□ SOP	Policy	□ Other(specify: Article, Job Aid, Form, SDS revision)	
Brief Description: Update to Critical  Trainer(s): (if applicable, or i	value for Glu		gp.0049.0011) and Align Affiliate Policies	

Your signature below indicates that you have read/been trained and understood the information.

Name (print)	Signature	Date (mmm/dd/yyyy)
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