

## 259.259 Critical Value Reporting

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Organization Porter Medical Center

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### Approval and Periodic Review Signatures

Type	Description	Date	Version	Performed By	Notes
Approval	Lab Director	6/5/2024	12.0	<i>Vlada Alexeeva, MD</i> Vlada Alexeeva	
Approval	Lab Administrator	6/4/2024	12.0	Lia McFarline	

Signatures from prior revisions are not listed.

Approvals and periodic reviews that occurred before this document was added to the MediaLab Document Control system may not be listed.

### Prior History

### Critical Value Reporting

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#### Employee Initial Review

Employee's Name	Date of Initial Review by the Employee	Employee's Initials	Employee's Signature
Michelle Brutowski Brutkoski	1/1/11	MI	Michelle Brutkoski
Penny Depew			Penny Depew
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Kathleen Moore	12/23/10	Kem	Kathleen Moore
Liza Pellerin	12/23/10	LHP	Liza Pellerin
Kim Richards	Kim Richards <sup>12/23/10</sup>	KR	Kim Richards
Sue Bergmans,	2/25/10	S	Sue Bergmans
Kris Beaudin,	08/05/10	KB	Kris Beaudin
Christine Cook	12/23/10	CC	Christine Cook
Steve Cooper	05/20/2011	SC	Steve Cooper
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Larry Lawson	12-24-10	LZ	Larry Lawson
Karen Lykins	05/26/11	KSL	Karen Lykins
Beverly Rivers	12/25/2010	BR	Beverly Rivers
Ray Rovi	23 Dec 10	R	Ray Rovi
Dawn Smith	Jan 12 2011	DS	Dawn Smith
Nancy Wolmuth	12/24/10	NW	Nancy Wolmuth
Wendi Turner	12/23/10	WT	Wendi Turner
Brian Lee	5-4-11	BL	Brian Lee





## Critical Values

<b>Purpose</b>	<p>The Critical Value List is a valuable working tool that specifies which tests and ranges of results constitute a critical value, and require immediate notification of the results to the patient's physician. The list has been approved by the pathologist and by the medical staff of UVM Health Network/Porter Medical Center/Laboratory. The critical values list can be found as APPENDIX A of this procedure.</p>
<b>Responsibility</b>	<p><b>It is the responsibility of the technician/technologist to:</b></p> <ul style="list-style-type: none"> <li>• Review and verify patient results in a timely manner.</li> <li>• Notify the Nurse, Medical Assistant, Physician, or Primary Care Giver of the critical value and document in the computer that notification has been done. If an inpatient has been discharged, notify the ordering physician.</li> <li>• Notify the “on call” physician during evening, nights, or weekends. As a courtesy to the 'on call' physician, any information on the original order may be useful (home telephone, diagnosis, address), so have the requisition available when you make the call. If the computer has any prior results on the patient, the physician may also be interested in this information.</li> <li>• Documentation must include the <b>name</b> (first and last name), the <b>credentials</b> and the <b>location</b> of the Nurse, Medical Assistant, Physician, or Primary Care Giver receiving and reading back the results. The date, time, and your name are automatically documented by computer.</li> <li>• <b><i>Be sure the results are read back to you by the person receiving the results.</i></b></li> <li>• <b><i>If notification cannot be completed within 30 minutes, technologist should contact call center again for a second page. If after 2 attempts, there is no response, then they must call the center one more time asking for an additional person on call to be paged. Lab will make three attempts. If after the third attempt, there has been no call back, please reach out to the Emergency Department and explain your situation and ask for their help with getting ahold of the provider or patient. Document in Comm log, all of your attempts and the start time of first phone call to make sure we are in compliance of starting the communication within 30 minutes of receipt of critical.</i></b></li> <li>• <b><i>The exception to this is CSF cell count/differentials. These may take up to one hour to report.</i></b></li> <li>• All critical value notifications will be documented in the computer even if the responsible party is not contacted until the next day.</li> <li>• <b><i>Faxing and/or printing report to physician or department is not sufficient notification of a critical value.</i></b> There is no guarantee that report will arrive or that anyone will look at the report. You must call and notify a responsible party of critical value.</li> <li>• <b><i>If an outside provider is unable to be reached, document the details in the computer using the CommLog function in the LIS and follow the above mentioned steps highlighted in box above.</i></b></li> </ul>

## Critical Values

Procedural Instructions			
	Step	Action	
<b>Procedure for Critical Values</b>	1	If the critical value is obtained on testing performed at UVMHN Porter Medical Center Laboratory, immediately verify the result.	
		<b>If</b>	<b>Then</b>
		Critical value is obtained in <b>Blood Banking(Antibody Screen POS)</b>	<ul style="list-style-type: none"> <li>Repeat the test(s) using either the primary tube or a new aliquot of the patient's sample.</li> </ul>
		Critical value is in <b>Hematology</b>	<ul style="list-style-type: none"> <li>Rerun well-mixed sample and/or make a second slide and review. Analyzer auto reruns.</li> </ul>
	Critical value in <b>Microbiology,Chemistry,Coag</b>	<ul style="list-style-type: none"> <li>Recheck labels, reagents, etc. to verify correct patient sample, correct reagents, etc.</li> <li>It is up to the discretion of Tech and at request of provider, if it is to be repeated.</li> </ul>	
	2	For both critical values obtained on testing performed at UVMHN Porter Medical Center and Reference Laboratories, determine the patient's location for notification and documentation purposes. <b>When calling the critical value, prior to providing caregiver with result, request caregivers full name (first and last) and credentials.</b>	
		<b>If</b>	<b>Then</b>
		Patient is an in-house patient	<ul style="list-style-type: none"> <li>Call the respective in-house department and state you have critical values that need to be called to patient's physician.</li> <li>Results must be given to nursing staff.</li> </ul>
		Patient is an HPHRC resident	<ul style="list-style-type: none"> <li>Notify both the primary care physician and the resident's nurse.</li> </ul>
		Patient has been discharged	<ul style="list-style-type: none"> <li>Notify the ordering/on-call physician.</li> </ul>
		Patient is an outpatient and it is during normal office hours	<ul style="list-style-type: none"> <li>Call office and notify nursing staff.</li> <li>State that the critical values must be brought to the physician's attention immediately.</li> </ul>
	Patient is an outpatient and it is before/after normal office hours	<ul style="list-style-type: none"> <li>Notify the physician on-call.</li> </ul>	
	3	Using the <b>CommLog</b> function in the LIS - record the name (first and last name), the credentials and the location of the Nurse, Medical Assistant, Physician, or Primary Care Giver receiving and reading back the results. The date, time, and your name are automatically documented by computer.	
	4	<p><b>If notification cannot be completed within 30 minutes, technologist should contact call center again for a second page. If after 2 attempts, there is no response, then they must call the center one more time asking for an additional person on call to be paged. Lab will make three attempts. If after the third attempt, there has been no call back, please reach out to the Emergency Department and explain your situation and ask for their help with getting ahold of the provider or patient. Document in Comm log, all of your attempts and the start time of first phone call to make sure we are in compliance of starting the communication within 30 minutes of receipt of critical</b></p> <p><b>The exception to this is CSF counts/differentials. These can take up to an hour to report.</b></p>	

## Critical Values

	Step	Action
<b>References</b>		<ul style="list-style-type: none"><li>• CAP Standards: COM.30000, COM.30100</li></ul>
<b>Appendices</b>		<ul style="list-style-type: none"><li>• Appendix A: Critical Value Chart</li></ul>
<b>Document Author</b>		<ul style="list-style-type: none"><li>• Edited By: Ashley LaBerge, MLS (ASCP)</li></ul>
<b>Revision History</b>		<ul style="list-style-type: none"><li>• Refer to Medialab</li></ul>
<b>Approval Documentation</b>		<ul style="list-style-type: none"><li>• Available upon request</li></ul>

# Critical Values Chart- Page 1

## Appendix A: Critical Values Chart

Testing Area	Alerting Category	Test	Red Category: Complete Alert within 30 minutes	
<b>Blood Bank</b>	<b>Always Red</b>	Compatibility	Any compatibility problems.	
		Transfusion Reactions	Any transfusion reactions indicating incompatibility.	
<b>Chemistry</b>	<b>Always Red</b>  <b>Always potentially life-threatening, even if patient is actively being treated</b>	Direct Bilirubin	0-1 year = $\geq 1.0$ mg/dl 1+ year = $\geq 15.0$ mg/dL	
		Total Bilirubin	Above: 15 mg/dL	
		Carbon Dioxide	Below: 10 mmol/L	
		Creatinine	<u>Critical Value</u>  0-18y: $\geq 3.0$ mg/dL  >18y: $\geq 15.0$ mg/dL  <u>Delta Critical Value</u>  0-18y: $\geq 1.0$ mg/dL higher than previous  >18y: $> 5.0$ mg/dL with no previous value OR 3X higher than the previous OR $> 4.0$ mg/dL and $> 2.5$ mg/dL higher than previous value	
		Digoxin	Above: 2.0 ng/mL	
		Glucose	0-1 Day: Below 40 mg/dL	1 Day to Unspecified: Below 50 mg/dL
			0-1 Day: Above 180 mg/dL	1 Day to Unspecified: Above 500 mg/dL
		Lithium	Above: 1.5 mmol/L	
		Lactate	$>2.0$ mmol/L	
		pH Blood Gases (ALL AGES)	Below: 7.0 Above: 7.6	
		Ionized Calcium Blood Gas	0-6 Months: $<0.8$ or $>1.4$ mmol/L	$\geq 6$ Months: $<0.8$ or $>1.6$ mmol/L
			6 months to 1 YR: Below: 3.0 mmol/L	All other ages: Below: 3.0 mmol/L
		Potassium	6 months to 1 YR: Above: 6.1 mmol/L	All other ages: Above: 6.0 mmol/L
			Below: 125 mmol/L	
		Sodium	Above: 155 mmol/L	

# Critical Values Chart- Page 1

	<b>1<sup>st</sup> Time in a Cardiac Series</b>	<b>Troponin</b>	<b>Above: 60ng/L</b>	
	<b>Always Red</b> Most dangerous when first detected, but providers should have these results as condition is being treated.	<b>Acetaminophen</b>	<b>Above: 100 µg/mL</b>	
		<b>Calcium</b>	<b>0-1 month: Below 6.5 mg/dL</b>	<b>1 month- Unspecified: Below 6.5 mg/dL</b>
			<b>0-1 month: Above 12.0 mg/dL</b>	<b>1-month- Unspecified: Above 11.5 mg/dL</b>
		<b>Magnesium</b>	<b>Below: 1.0 mg/dL</b>	
			<b>Above: 4.8 mg/dL</b>	
		<b>Salicylate</b>	<b>Above: 30 mg/dL</b>	
		<b>Valproic</b>	<b>Above: 150 µg/mL</b>	
		<b>Vancomycin Peak</b>	<b>Above: 50 µg/mL</b>	
	<b>Vancomycin Trough</b>	<b>Above: 25 µg/mL</b>		
<b>Coagulation</b>	<b>Always Red</b>	<b>INR</b>	<b>Above: 3.8</b>	
		<b>PTT</b>	<b>Above: 100 sec.</b>	
		<b>Fibrinogen</b>	<b>Below: 90 mg/dL</b>	
		<b>Heparin Level – UFH</b>	<b>Above: 1 IU/mL</b>	
		<b>Heparin Level – LMWH</b>	<b>Above: 2 IU/mL</b>	

Testing Area	Alerting Category	Test		
Hematology	Always Red	Hemoglobin	Below: 7 g/dl	
		Hematocrit	0-6 months	Below: 25%
			>6 months	Below: 21%
		CSF, Total Nucleated Cells	≥ 100/μL	
		Leukocytes	Below: 1,000 /μL	
		Abs. Neutrophil	Below: <500 /μl	
		Leukocytes	Above: 50,000 /μL	
		Platelets	Below: 21,000/μL Above: 1,200,000/μL	
Blast cells	>20%			
Microbiology	Always Red	Blood cultures	Growth of any organism(s)	
		Gram stain	Positive gram stains from: CSF & Joint Fluid	
Urinalysis	Always Red	Legionella	Positive	
		S. pneumoniae	Positive	
		Urinalysis (Ketones)	3+	
Reference Laboratory Reporting	Always Red	CSF Cultures	Growth of any organism(s)	
		Culture	Growth of Enteric Pathogen	
			Growth of Group B streptococcus from newborns	
			Positive culture for <i>N. gonorrhoea</i>	
			Growth of VRE or MRSA	
		Any Test Deemed Critical by Reference Lab	Any Critical Value called from a Reference Lab	
			Positive HIV WB (new diagnosis)	
			Positive <i>B. pertussis</i> by PCR	
			Positive Acid Fast Stain/ Isolate	
			Positive Parasites in Blood or Feces	
Positive Chlamydia or GC DNA Probes				