259.259 Critical Value Reporting

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Approval and Periodic Review Signatures

Type	Description	Date	Version	Performed By	Notes
Approval	Lab Director	2/3/2026	22.0	Jason D. Brazelton, MD Jason Brazelton	
Approval	Reviewed by Laboratory Manager	1/28/2026	22.0	Lia McFarline	

Signatures from prior revisions are not listed.

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

Prior History

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
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Beverly Rivers	12/25/2010	BJR	BJR
Ray Rovi	23 Dec 10		
Dawn Smith	Jan 12 2011	DS	Dawn Smith
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Linda Hampton	9/5/12	L.H	Linda Hampton
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22.0	Approved and Current	Major revision	1/23/2026	2/3/2026	Indefinite

Critical Value Reporting

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Critical Value Reporting

GENERAL

PURPOSE

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 and UVMH Porter Medical Center Laboratory. The critical values list can be found as APPENDIX A of this procedure.

RESPONSIBILITY

It is the responsibility of the technician/technologist to:

- Review and verify patient results in a timely manner.
- Notify the physician or appropriate clinical individual of the critical value immediately and document in the computer that notification has been made. ***COM.30000***
- If an inpatient has been discharged, notify the ordering physician.
- 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.
- Documentation must include the **name** (first and last name), the **credentials** and the **location** of the Physician, or appropriate clinical individual receiving and reading back the results. The date, time, and your name are automatically documented by computer. ***COM.30100***
- ***Be sure the results are read back to you by the person receiving the results.***
- All critical value notifications will be documented in the computer even if the responsible party is not contacted until the next day.
- Faxing and/or printing report to physician or department is not sufficient notification of a critical value as 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.

Critical Value Reporting

PROCEDURE

1. If the critical value is obtained on testing performed at UVMH Porter Medical Center Laboratory, perform the following steps:

If	Then
Critical value is obtained in **Blood Banking (Antibody Screen POS)**	• Repeat the test(s) using either the primary tube or a new aliquot of the patient's sample.
Critical value is in **Hematology**	• Rerun well-mixed sample and/or make a second slide and review. Analyzer auto reruns.
Critical value in **Microbiology, Chemistry, Coag. or Urinalysis**	• Recheck labels, reagents, etc. to verify correct patient sample, correct reagents, etc. • It is up to the discretion of Tech and at request of provider, if it is to be repeated

2. For both critical values obtained on testing performed at UVMH Porter Medical Center and Reference Laboratories, determine the patient's location for notification and documentation purposes. If the provider works at two different locations, confirm the ordering department prior to making the phone call. When calling the critical value, prior to providing the appropriate clinical individual with result, request their full name (first and last) and credentials.

If	Then
Patient is in-house and non-ED patient	• Call the respective in-house department and state you have critical values that need to be relayed to patient's physician. • Results must be given to appropriate clinical individual.
Patient is admitted to the ED	• Follow the closed loop critical reporting workflow in Appendix B.
Patient is an HPHRC resident	• Notify either the primary care physician or the appropriate clinical individual.
Patient has been discharged	• Notify the ordering/on-call physician
Patient is an outpatient, and it is during normal office hours	• Call office and appropriate clinical individual. • State that the critical values must be brought to the physician's attention immediately.
UVMMC Hematology Oncology	• Call the office and give critical result information to the appropriate clinical individual or patient access designee.
Patient is an outpatient, and it is before/after normal office hours	• Notify the physician on-call.

3. Using the **CommLog** function in the LIS - record the name (first and last name), the credentials and the location of the physician or clinical individual receiving and reading back the results. The date, time, and your name are automatically documented by computer.

4. If notification cannot be completed within 30 minutes, the lab technologist shall follow these steps:

    a) Contact call center again for a second page.
    b) If after 2 attempts, and there is no response, then call the center one more time asking for an additional person on call to be paged.
    c) Lab will make three attempts. If after the third attempt and there has been no call back, reach out to the Emergency Department. Explain the situation and ask for their help with getting ahold of the provider or patient.
    d) **Document all attempts in the Comm log 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.** *NOTE: The exception to this is CSF cell count/differentials – may take up to 1 hr. to report*.

REFERENCES

- CAP Standards: COM.30000, COM.30100
- UVMH Epic Tip Sheet: Emergency Department Critical Result Follow-Up

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REVISION HISTORY

- Refer to MediaLab

APPENDICES

- Appendix A: Critical Values Chart
- Appendix B: Closed Loop Critical Reporting

Critical Value Chart

APPENDIX A: Critical Values Chart

Department	Test		Critical – call within 30 minutes	
Blood Bank	Compatibility		Any compatibility problems.	
	Transfusion Reactions		Any transfusion reactions indicating incompatibility.	
Chemistry	Acetaminophen		All Ages: ≥150.0 µg/mL	
	Conjugated Bilirubin (Bc)		0-18 yrs	≥1.0 mg/dL
			18 yrs to unspecified	>15.0 mg/dL
	Calcium		0-1 month	< 6.5 or > 12.0mg/dL
			1 month to unspecified	< 6.5 or > 11.5 mg/dL
	Carbon Dioxide		<10 or >40 mmol/L	
	Creatinine		0-18 yrs	≥ 2.0 mg/dL
			18 yrs to unspecified	≥15.0 mg/dL
	Creatinine: Delta Critical Value		0-18yrs	≥ 0.3 mg/dL higher than previous
			>18yrs to unspecified	• 5.0 mg/dL with no previous value • 3X higher than the previous (If previous is >1.5mg/dL • > 4.0 mg/dL and > 2.5 mg/dL higher than previous value
	Glucose (Serum/Plasma)		0-1 day	<40 or >80
			0 up to 7 days	< 40 or > 180 mg/dL
			7 days up to 18 yrs	< 50 or > 300 mg/dl
			18 yrs up to unspecified	≤ 55 or > 500 mg/dL
	Glucose *Gestational Tolerance test		0 up to 18 yrs	< 50 or > 300 mg/dl
			18 yrs to unspecified	<55 or >500 mg/dL
	Lithium		>1.5 mmol/L	
	Magnesium		≤ 1.0 and >4.8 mg/dL	
	Potassium		< 3.0 or ≥6.0 mmol/L	
	Salicylate		> 30 mg/dL	
	Sodium		< 125 or > 155 mmol/L	
	Total Bilirubin		1 month to unspecified	>15 mg/dL
	Troponin		> 0.034 **Courtesy call for first elevated value in a series.	
	Unconjugated Bilirubin (Bu)		0 to unspecified	> 15.0 mg/dL
	Valproic		0-18 yrs	≥ 125 µg/mL
			18 yrs to unspecified	> 150 µg/mL
	Vancomycin Trough		>25 µg/mL	
RapidPoint	Lactate		> 2.0 mmol/L	
	Sodium		<125 or >155 mmol/L	
	Potassium		<3 or ≥6 mmol/L	
	pH Blood Gases	Whole Blood Arterial Capillary	0-7 days	<7.2 or >7.5
			7d – 6mo	
			≥6mo	<7.2 or >7.55
		Whole Blood Venous	0-6mo	<7.2 or >7.5
			≥6 months	<7.2 or >7.55
		Cord Arterial/Venous	N/A	≤7.1
	pCO2 - whole blood arterial/venous/capillary		0-18 yrs	<20 or >70 mmHg
	Ionized Calcium		0-6mo	< 0.85 or >1.6 mmol/L
			6 mo-18yrs	< 0.80 or >1.45 mmol/L

Critical Value Chart

			≥18 yrs	<0.80 or >1.60 mmol/L
	Base Excess - Cord Arterial/Venous		≤-10	
	TCO2 – whole blood		<10 or >40 mmol/L	
	Carboxyhemoglobin (COHb)		> 15%	
Hematology	Hemoglobin		Less than 7mg/dl	
	Hematocrit		0-6 months	< 25 %
			6 months to unspecified	< 21 %
	WBCs		< 1.0 or >50.0 K/cmm	
	Absolute (ABS) Neutrophil count (ANC)		< 0.50 K/cmm	
	Platelets		< 21 or > 1200 K/cmm	
	Blasts		>20 %	
	CSF TNC		≥100 /cmm	
Coagulation	INR		≥ 5.0	
	PTT		> 100 sec.	
	Fibrinogen		< 90 mg/dL	
	Heparin Level – UFH		> 1.0 IU/mL	
	Heparin Level – LMWH		> 2.0 IU/mL	
Urinalysis	Ketones		3+ (large)	
Microbiology	Blood Cultures		Growth of any organism	
	Fluid Gram stains (CSF)		Growth of any organism	
	CDIF PCR		BOTH Toxigenic CDIF Positive and 027, NAP1, BI strain Positive	
Send Out tests	CSF Gram stains/Cultures		Growth of any organism	
	Mycobacteria TB Complex PCR		Positive	
	Plasmodium (all species) in Blood parasite exam (PBEX) or BinaxNow antigen		Positive	
Point of Care	NOVA Glucometer (0-24 hrs)	Glucose	Refer to Newborn Hypoglycemic Protocol	
	NOVA Glucometer (1- 8 days)	Glucose	<40 mg/dL OR >180 mg/dL If < 30 confirm via lab draw within 1 hour	
	NOVA Glucometer (>/= 8 days to Adult)	Glucose	<50 mg/dL OR >500 mg/dL If > 500 confirm via lab draw within 1 hour	
	Coagucheck XS	INR	≥ 5.0, send to main lab for confirmation	
	Hemocue	Hemoglobin	>7.0 g/dL, confirm result if requested	
	Clinitek Status+	Urine - Ketones	3+ or 4+	
	Lead Care II	Lead	≥ 45 µg/dL	

Critical Value Chart

APPENDIX B: Closed Loop Critical Reporting

PURPOSE

The purpose of the closed loop critical reporting system is to minimize phone interruptions and improve communication with Emergency Department (ED) providers. After the laboratory final verifies a critical result, a notification is sent to the provider and displayed on the ED track board. Lab staff monitor critical results on the Outstanding list in Epic.

If the patient is a non-ED patient or ED Boarder, the Closed Loop system **will not be followed**. It is important to note that outstanding lists cannot be personalized with color, as it will interfere with this workflow. *This workflow does not apply to critical results that are preliminary verified (i.e. positive blood cultures, gram stains, etc.)*

PROCEDURE

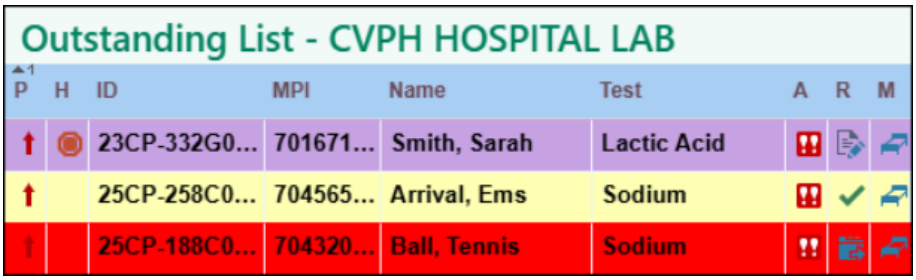
1. Critical result crosses to the lab outstanding list. If the patient qualifies for the closed loop critical reporting workflow (ED patient, non-boarder), the result will have a purple background.

2. The technologist is to final verify the result. The final verification sends a notification to the provider.

3. After the result is final verified, the test will remain on the outstanding list with a yellow background.

4. If the provider acknowledges the result, it falls off the outstanding list. If the provider does not acknowledge the result within 15 minutes, the test bar will turn red and require a follow-up phone call to the appropriate clinical individual. When calling the critical value, prior to providing the appropriate clinical individual with result, request their full name (first and last) and credentials. Document call in the Comm Log.

COLOR KEY



Purple = New critical result posted (from analyzer or manual entry).
- Notification not yet sent to ED provider.
- Lab staff must final verify result.
- Clicking final verify sends notification to provider and care team.

Yellow = Notification sent.
- No lab action required.
- Provider has 15 minutes to acknowledge.

Red = More than 15 minutes without acknowledgment.
- Lab staff must follow up and document call in the Comm Log.