


# RIVERSIDE UNIVERSITY HEALTH SYSTEM – MEDICAL CENTER

Housewide

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<b>Title:</b>  Critical Values Reporting	<b>Effective Date:</b>  7/20/2023	<input type="checkbox"/> RUHS – Behavioral Health <input checked="" type="checkbox"/> RUHS – Community Health Centers <input checked="" type="checkbox"/> RUHS – Hospital Based Clinics <input checked="" type="checkbox"/> RUHS – Medical Center <input type="checkbox"/> RUHS – Public Health <input type="checkbox"/> Departmental
<b>Approved By:</b>    Jennifer Cruikshank CEO/ Hospital Director		<input checked="" type="checkbox"/> Policy <input type="checkbox"/> Procedure <input type="checkbox"/> Guideline

## 1. DEFINITIONS

- 1.1 Critical Value: A diagnostic test/exam result that, if not acted upon quickly, may result in harm to the patient.
- 1.2 Critical Value Report (CVR): Includes critical lab values and other diagnostic test results that require immediate and/or emergent response from a physician or other licensed responsible caregiver. Verbal or telephone reporting of critical values also may be used during procedures where it is impractical for the CVR to be written, such as in surgery or the Emergency Department.
- 1.3 Verbal and Telephone CVR: The oral transmission of CVR results done face to face or over the telephone.
- 1.4 Reporters of Verbal or Telephone CVR: A physician or authorized designated laboratory, diagnostic services, or imaging staff who has reported the CVR result(s).
- 1.5 Receivers of Verbal and Telephone CVR: Persons authorized to accept and communicate critical lab values/test results include; Respiratory Care Practitioners, registered nurses (RNs), Nurse Practitioners (NPs), Pharmacists and other licensed personnel such as medical doctors (MDs), osteopathic doctors (DOs), etc. Individual departments may develop a list of authorized personnel that is more restrictive than this definition but may not develop a list that is less restrictive.
- 1.6 Critical Tests/Exams: Defined as diagnostic tests/exams such as lab tests, blood gas tests, radiology exams, and cardiology diagnostic exams, which require rapid communication of results. Critical Tests and their results may be abnormal or normal.
- 1.7 Stat: Used as a directive to medical personnel during an emergency situation, which means immediately.

## 2. POLICY

- 2.1 All critical values for inpatients must be reported within one hour or less to the ordering physician or the licensed responsible caregiver who will act upon the information within a time frame appropriate to the issue.
- 2.2 All physicians and staff who receive a verbal/telephone communication of critical values will read-back and verify the results to the person reporting the information.
- 2.3 All critical values for all patients must be communicated directly, person to person

### 3. Responsibilities of the Person Reporting the Critical Value Result(s)

- 3.1 The Laboratory Department staff will report critical lab values for patients to the requesting Nursing Unit or Clinic within 10 minutes of testing completion.  
*Note:* Repeat critical values of decreased white blood cells (WBC), neutrophils, and platelets that are on a documented leukopenic inpatient only need to be reported as a critical value once every 24 hours unless requested otherwise by the physician.
- 3.2 The Respiratory Department staff will report critical lab values for patients to the requesting Patient Care Unit, Emergency Department, or Clinic within 10 minutes of testing completion.
- 3.3 Critical results and exams with Unexpected Findings will be reported by the Radiologist, designated Radiology Resident, or on-call Radiologists service within 60 minutes of completion of imaging review, directly to the Provider, Provider Service or Designee. This communication will be documented in the EMR. When verbally reporting a Critical Result, the Radiologist verifies that the ordering Provider/Service understands the results being Communicated. Radiologists can also identify findings that can be classified other than Critical such as unexpected outcomes of moderate, or low acuity. These findings are to be reported as indicated below in section 7.3. The Diagnostic Department staff report critical test values for patients to the requesting Patient Care Unit, Emergency Department, or Clinic within 10 minutes of physician reading.
- 3.4 After receiving a critical value notification, the Patient Care Unit, Emergency Department, or Clinic staff will report it to the physician or other Licensed Healthcare Provider as soon as possible but never more than 50 minutes from having received the notification from the Critical Value reporting department.  
*Note:* In the absence of the ordering physician, the report will be made to the physician or other licensed provider who is currently responsible for the care of the patient.
- 3.5 For verbal or telephonic reporting of critical values, verify the complete order or test result by having the person receiving the critical value “read back” and “verify” the complete test result.
- 3.6 The person reporting the CVR result will document and sign/initial the following information on the departmental/patient records:
- The critical value reported;
  - The name of the person who received the information;
  - That “read-back” verification (RBV) occurred; and
  - Date and time of the communication.

### 4. Responsibilities of the Person Receiving the CVR Result

- 4.1 The person receiving the CVR will:
- Write down the result
  - Verify the identification of the patient by last name and first name and Medical Record Number (MR#);

- c. "Read back and verify" the results to the person reporting;
  - d. Document Critical Value in the medical record as soon as possible; - Reference 8.1
  - e. Contact the physician or other Licensed Healthcare Practitioner responsible for the patient as soon as possible (but in no more than 50 minutes) to report the results; and
  - f. Request a "read back and verify" from the contacted physician or Licensed Healthcare Practitioner receiving the CVR.
- 4.2 The Registered Nurse (RN) receiving the CVR will document the physician notified, the critical value, the read back and verify, the date and time, and initial the entry using:
- a. The Critical Value Reporting form within the Electronic Medical Record (EMR): Flowsheet, Provider Interaction Tab.
  - b. The Orange Critical Value reporting sticker at the Riverside University Health System- Medical Center Arlington campus and during EMR downtime.
- 4.3 The physician or other licensed responsible caregiver receiving the CVR will:
- a. "read-back and verify" the critical value(s); and
  - b. document the result(s) as soon as possible.

Note: In emergency situations, it may not be feasible to write down the critical value result and do a formal "read-back." In these circumstances, a "repeat back" should be performed.

## 5. Exclusions/Clinical

- 5.1 All written communication (including fax transmissions) of critical test/exam results do NOT require read-back verification or repeated documentation of the CVR.
- 5.2 Results of STAT labs and test/exam results are NOT considered a CVR unless they meet criteria established by the hospital.
- 5.3 It is prohibited for an RN or Licensed Healthcare Practitioner to refuse to accept reported critical values.
- 5.4 In the event a physician specifies specific time or value standards different than this policy states, the physician orders will override this policy. (For example, if the order reads: "Call House staff officer (H.O.) within 15 minutes if glucose < 30 mg/dl", the 15-minute time frame must not be exceeded.)

## 6. Outpatient and Discharged Patient Critical Value Reporting

- 6.1 During hospital clinic business hours, the CV reporting department shall report the critical value within 10 minutes of testing completion to a clinic staff member authorized to receive Critical values for the clinic. Excludes Radiology Services.
- 6.2 If the clinic is closed, the CV reporting department shall report the critical value directly to the physician on call for the specific clinic/service identified using the hospital Daily Call Schedule within the 60-minute timeframe for reporting the critical value.

6.3 If the patient is discharged, the CV reporting department shall report the critical value directly to the physician on call for the specific service responsible for the admission using the hospital Daily Call Schedule within the 60-minute timeframe for reporting the critical value.

**7. CRITICAL VALUES**

7.1 **Critical Values – Laboratory – See Attachment 1**

7.2 **Critical Values – Respiratory Services – See Attachment 2**

7.3 **Critical Values Reporting – Radiology Services** - Radiology Services will communicate critical value results to the ordering physician or provider by either direct communication: telephone or face to face conversation and/or electronic communication which can include Epic chat which requires confirming receipt of communication. **Radiologists will document their critical value findings in the Radiology report. Radiology report results and communication will be transmitted to the patient record.** – See Attachment 3

**8. References:**

8.1 The Joint Commission Improve staff communication, NPSG.02.03.01.

8.2 Chain of Command Policy

**9. Attachments**

9.1 Attachment 1: Critical Values Laboratory

9.2 Attachment 2: Critical Values Respiratory

9.3 Attachment 3: Critical Values Radiology Services

**Document History:**

<b>Release Dates:</b> 2/9/2006, 3/21/2006, 4/26/2006, 09/24/08, 03/20/09, 6/7/16, 10/29/2019		<b>Retire Date:</b> N/A	
<b>Sponsored by:</b> Clinical Lab Director		<b>Replaced Policies (in 2019):</b> Policy No. 120 Critical Value Reporting in Diagnostic Imaging Policy No. BGL 011 Reporting of Blood Gas Results	
<b>Date Reviewed</b>	<b>Reviewed By:</b>	<b>Revisions Made Y/N</b>	<b>Revision Description</b>
10/21/2021	CV Taskforce, Regulatory	Yes	Removed section 7, Quality and compliance Monitoring; Added Chain of Command in the reference.
03/21/2023	Director of Clinical Lab Services	Yes	Revised selected Lab Test Critical Values. Revised Section 7.3 to include Radiology Reporting mechanisms of Critical Values. Updated RN CV Reporting workflow in Section 4.2a. Excluded Radiology in Section 6.1 as they report directly to Physician.
04/2023	P&T	Yes	Attachments included
05/24/2023	Nursing P&P	Yes	Minor revisions to 4.1e and 4.1d
06/06/2023	PAC	Yes	Minor revision to 7.3 – Epic Chat confirming receipt
7/13/2023	MEC	No	

Critical Limits	Adults		Nursery	
	LOW	HIGH	LOW	HIGH
Bilirubin, Total Cord	N/A	N/A	N/A	≥2.0 mg/dL
	N/A	N/A	1 day old	≥ 7.5 mg/dL
			2 days old	≥ 11.0 mg/dL
			3 days old	≥ 15.0 mg/dL
			4 days old	≥ 16.5 mg/dL
Glucose (Neonates)(0-30 days)	N/A	N/A	5-30 days old	≥ 17.5 mg/dL
			< 40 mg/dL	>180 mg/dL
<b>CHILD/ADOLESCENT</b>				
			LOW	HIGH
CALCIUM	≤ 6.0 mg/dL	≥ 13.0 mg/dL	≤ 6.0 mg/dL	≥ 12.7 mg/dL
CO2	≤ 10 mmol/L	≥ 40 mmol/L	≤ 10 mmol/L	≥ 40 mmol/L
Glucose (31 Days & Older)	< 50 mg/dL	>750 mg/dL	< 50 mg/dL	> 370 mg/dL
Hematocrit	N/A	N/A	≤ 22 %	≥ 62 %
Hemoglobin	≤ 6.0 g/dL	≥18.5 g/dL	≤ 6.9 g/dL	≥ 22.0 g/dL
K (Potassium)	≤ 2.5 mmol/L	≥ 6.4 mmol/L	≤ 2.5 mmol/L	≥ 5.9 mmol/L
Lactate/Lactic Acid	N/A	≥ 2.0 mmol/L		≥ 3.0 mmol/L
Na (Sodium)	≤ 120 mmol/L	≥ 160 mmol/L	≤ 120 mmol/L	≥ 150 mmol/L
Neutrophils (WBC)	≤ 0.5 x 10 <sup>9</sup> /L	N/A	≤ 0.5 x 10 <sup>9</sup> /L	N/A
Magnesium	≤ 1.0 mg/dL	≥ 6.5 mg/dL	≤ 1.0 mg/dL	≥ 6.5 mg/dL
Phosphorus	≤ 1.0 mg/dL	≥ 8.9 mg/dL	≤ 1.0 mg/dL	≥ 8.9 mg/dL
Platelets	≤ 36 x 10 <sup>9</sup> /L	≥ 910 x 10 <sup>9</sup> /L	≤ 52 x 10 <sup>9</sup> /L	≥ 913 x 10 <sup>9</sup> /L
Procalcitonin		≥ 2.0 ng/mL		
High Sensitivity Troponin	N/A	Female: >53.7 pg/mL Male: >78.5 pg/mL	N/A	N/A
PT INR	N/A	≥ 5.0	N/A	N/A
PTT	N/A	≥ 110 sec	N/A	≥ 110 sec
WBC Count	≤ 2.5 x 10 <sup>9</sup> /L	≥ 50 x 10 <sup>9</sup> /L	≤ 2.5 x 10 <sup>9</sup> /L	≥ 30 X10 <sup>9</sup> /L
Blood Culture	Positive		Positive	
India Ink & Gram Stain	Positive		Positive	
<b>THERAPEUTIC DRUGS</b>				
Acetaminophen	≥ 200 mcg/mL	Carbamazepine	≥ 15 mcg/ml	
Digoxin	≥ 2.5 ng/mL	Lithium	≥ 2.0 mmol/L	
Phenobarbital	≥ 50.0 mcg/mL	Phenytoin	≥ 20 mcg/ml	
Salicylate	≥ 30.0 mg/dL	Valproic Acid	≥ 100 mcg/ml	
Vancomycin Trough	≥ 22.0 mcg/ml			

Parameters	Age	BGART < Low / > High	BGARTw/o < Low / > High	BGCO-ox only < Low / > High	BGCAP < Low / > High	BGVEN < Low / > High	BGCRDA < Low / > High	BGCRDV < Low / > High
pH	<12 Months	7.250/7.500	7.250/7.500		7.270/7.500	7.270/7.500	*****	*****
	>12 Months	7.250/7.550	7.250/7.550		7.270/7.500	7.270/7.500	*****	*****
PCO2 mmHg	<12 Months	20.0/55.0	20.0/55.0		20.0/55.0	25.0/55.0	*****	*****
	>12 Months	25.0/55.0	25.0/55.0		25.0/55.0	25.0/55.1	*****	*****
PO2 mmHg	<12 Months	40.0/100.0	40.0/100.0		40.0/100.0	40.0/85.0	*****	*****
	>12 Months	55.0/250.0	55.0/250.0		55.0/250.0	40.0/85.1	*****	*****
HC03 mmol/L	<12 Months	17.0/30.0	17.0/30.0		17.0/30.0	17.0/30.1	17.0/30.2	17.0/30.3
	>12 Months	12.0/36.0	12.0/36.0		12.0/36.0	12.0/36.1	12.0/36.2	12.0/36.3
BE mmol/L	<12 Months	(-6) / 6	(-6) / 6		(-6) / 6	(-6) / 7	(-6) / 8	(-6) / 6
	>12 Months	(-7) / 10	(-7) / 10		(-7) / 10	(-7) / 11	(-7) / 12	(-7) / 10
SO2 %	<12 Months	85 / 100	85 / 100		85 / 100	50 / 99	*****	*****
	>12 Months	85 / 200	85 / 200		85 / 200	50 / 99	*****	*****
tHb g/dL	<12 Months	20-May		20-May	20-May	20-Jun	20-Jul	20-Aug
	>12 Months	21-Jun		21-Jun	21-Jun	21-Jul	21-Aug	21-Sep
COHb %	<12 Months	(-1) / 8		(-1) / 8	(-1) / 8	(-1) / 9	(-1) / 10	(-1) / 11
	>12 Months	(-4) / 3		(-4) / 3	(-4) / 3	(-4) / 4	(-4) / 5	(-4) / 6
MetHb %	<12 Months	(-1) / 8		(-1) / 8	(-1) / 8	(-1) / 9	(-1) / 10	(-1) / 11
	>12 Months	0 / 3		0 / 3	0 / 3	3-Jan	3-Feb	3-Mar
O2Hb %	<12 Months	65 / 101		65 / 101	65 / 101	66 / 101	67 / 101	68 / 101
	>12 Months	10 / 104		10 / 104	10 / 104	11 / 104	12 / 104	13 / 104
cT02(a) mL/dL	<12 Months	Jan-40		Jan-40	Feb-40	Mar-40	Apr-40	May-40
	>12 Months	Jan-98		Jan-98	Feb-98	Mar-98	Apr-98	May-98

Note: \*\*\*\*\* is No Critical Programmed

Critical Value - Radiology Services - Include but are not limited to the following:

Tension pneumothorax

Aortic dissection/rupture

Aneurysm leak

New Free air under the diaphragm

Spinal cord compression

Pneumothorax on an intubated patient

Acute pulmonary embolus

Ectopic pregnancy with free fluid/hemoperitoneum

New finding of intracranial herniation

Acute or increasing intracranial hematoma