

**PURPOSE:**

Certain tests are deemed to have various outcomes to the patient if the values fall outside of certain criteria. Therefore a "Critical Value" policy is provided to assist clinicians when these values are exceeded.

AFFECTED DEPARTMENTS/SERVICES:

Laboratory

POLICY COMPLIANCE - KEY ELEMENTS:

The following list includes the values of results that are to be considered as life threatening on an immediate basis:

ANALYTE	LOW VALUE	HIGH VALUE	UNITS	FREQUENCY
CHEMISTRY				
Bicarbonate	≤10	≥40	mEq/L	Always
Bilirubin, total (Newborn, 0-30 days)	None	≥15	mg/dL	Always
Calcium	≤6	≥14	mg/dL	Always
Calcium, ionized	≤0.8	≥1.6	mmol/L	Always
Glucose (Newborn 0-7 days)	≤35	≥400	mg/dL	Always
Glucose	≤40	≥500	mg/dL	Always
Lactate	None	≥4	mmol/L	New values only with no repeat calls during same hospitalization
Magnesium	<1	≥8	mg/dL	Always
Phosphorus	<1	None	mg/dL	Always
Potassium	≤2.5	≥6.5	mEq/L	Always
Potassium (Newborn)	≤2.5	≥8	mEq/L	Always
Sodium (Newborn - 16 yrs)	≤120	≥160	mEq/L	Always
Sodium (>16 yrs)	≤115	≥160	mEq/L	Always

ANALYTE	LOW VALUE	HIGH VALUE	UNITS	FREQUENCY
Troponin	None	≥0.5	ng/L	New values with no repeat call within 3 days
COAGULATION				
APTT	None	≥100	sec	Always
PT/INR	None	≥5	INR	Always
HEMATOLOGY				
Blasts in CBC	None	>5	%	New values, no repeat calls within 3 months
Hematocrit	≤19	≥65	%	Always
Hemoglobin	≤6.5	None	g/dl	Always
Platelets	≤50,000	None	/mm ³	New values, no repeat calls within 30 days
WBC	None	≥50,000	/mm ³	New values, no repeat calls within 30 days
ANC	<500	None	/mm ³	New values, no repeat calls within 3 months

	RESULTS
MICROBIOLOGY	
Blood culture	Positive smear or culture
CSF	Positive smear or culture
Acid Fast Bacilli	Positive smear or culture
CSF Cryptococcal Antigen	Positives

THERAPEUTIC DRUGS	HIGH VALUE	UNITS
Acetaminophen	≥70	µg/mL
Carbamazepine	>20	µg/mL
Digoxin	>2.4	ng/mL
Lithium	≥1.5	mEq/L
Phenobarbital	≥50	µg/mL
Salicylate	>30	mg/dL
Valproic Acid	≥150	µg/mL
Vancomycin Trough	>20	µg/mL

RESPONSE TO CRITICAL VALUES

I. INPATIENTS

A. When a Critical value is ready to be verified the following steps are to be taken:

1. Repeat the analysis if result(s) will not be unduly delayed.

2. The technologist will call the unit with the result:
 - a. Verify patient identification using 2 identifiers (patient name, date of birth or MRN)
 - b. Read the value to the nurse.
 - c. State the following, "This is a potential life threatening situation. Please notify the physician immediately."
 - d. Have the nurse read the report back to you. Obtain first and last name of the nurse receiving the critical value.
 - e. If the result has not been verified by repeat, indicate to the nurse that the test will be repeated and that you will call back if there is a significant change in the test result.
 - f. BEFORE VERIFYING RESULTS:
 - Technologist adds a comment using the Comment icon and the 05 call template. Place the comment under the Result Comment tab so that it will be a chartable comment. Document each Critical Result, not just one of a group.
Example: This is a CRITICAL VALUE. Please inform the doctor immediately. Results have been verified by repeat and called to _ at _ by:_.
 - You must enter the full name of the person you are notifying of the the critical result.
 - g. If there is a change upon repeat analysis, call the nurse on the proper floor and clarify with them the correct result.
 - h. Notify the Clinical Pathologist or Pathologist on call if additional problems arise or if you are unable to complete any of the above steps.
 - i. Notification to caregiver of critical results will be performed within 15 minutes of completion of critical results for inpatient.

II. PICK-UP SPECIMEN'S OR OUTPATIENTS

A. If the test is an Outpatient or from the Pickup Service do the following:

1. Repeat the analysis.
2. Technologist completes the "05CSR" template then verifies result. Make sure template is in chartable section. Document each Critical Result, not just one of a group. Technologist may enter Cerner ID for CSR who will be calling information. If no CSR is available to call the critical result, it is the responsibility of the technologist to contact the physician or facility.
3. Obtain the patients phone number from ORV. (Patient phone number is in the demographics, under the name). Find the physician/facility from the Patient Demographics tab, using the Encounter Personnel tab use the view phone tab to find the phone number.
4. CSR (or Technologist) contact's the physician via answering service or pager and documents in ORV using the comments icon. The documentation must include the full name of the provider, date and time of the call. Once the icon is open the comment is placed in the Order Comment tab. Check for other pending test for any additional critical values.
5. When the physician calls back, the Tech or CSR will document in ORV by adding an additional comment to the previous one made. Ask the physician if he wants to be called on any pending tests not available at the time of the call. This will save phoning the physician multiple times.
6. Critical results for outpatients will be called within 30 minutes of result completion.

7. Joint Commission requires physician notification of results defined by policy as "critical."
8. Notify the Clinical Pathologist or Pathologist on call if you are unable to complete the above steps.
9. Remember, documentation of your actions is your best safeguard.

III. WELLNESS SERVICES

- A. Call critical results to Wellness Services during normal business hours, for after-hours critical the call must be placed to ordering physician.
 1. Read the value to the office.
 2. State the following, "This is a potential life threatening situation. Please notify physician immediately."
 3. Have staff read report back to you.
 4. Documentation of call is to follow same format as described in Pickup Specimens section above.

IV. REFERRAL TESTS

- A. Critical results on referral tests will be immediately called to the ordering physician by the laboratory personnel who receives the result. This will usually be a phlebotomist or preprocessor. Appropriate comment is to be entered into the computer using the ORV comments icon.

Referenced Documents

Reference Type	Title	Notes
Documents referenced by this document		
Related Documents	Corporate Policy, Clinical Laboratory Critical Value Reporting	
Documents which reference this document		
Referenced Documents	Critical Results Reporting	Laboratory
Referenced Documents	iSTAT Testing	
Referenced Documents	Anticoagulation Therapy	
Referenced Documents	Warfarin Management	

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