Title:	Critical Value Process		
Department/Service Line:	Laboratory		
Approver(s):	CLIA Director		
Location/Region/Division:	BSWH		
Document Number:	BSWH.LAB.QM.0525.P_V1		
Last Review/Revision Date:	See Signatures	**Origination Date:**	11/2018

SCOPE

This policy applies to personnel in the BSWH Laboratory who perform, result, and report tests.

DEFINITIONS

When used in this document with initial capital letter(s), the following word(s)/phrase(s) have the meaning(s) set forth below unless a different meaning is required by context. Additional defined terms may be found in the BSWH P&P Definitions document.

Critical Results: test results that exceed the normal range, may imply a serious clinical situation for the patient, and could represent life threatening values or place the patient at serious risk if left untreated.

Reporting Timeframe: The time interval between the identification of the critical result and the reporting to a caregiver.

Responsible Licensed Caregiver: The licensed l practitioner who assumes, within their scope of practice and/or working under a medical staff orders and has responsibility for acting upon the critical result.

POLICY

The BSWH Laboratory will develop and implement a system for recognizing, reporting, and documenting critical test results.

PROCEDURE

System Development

- A list of “critical values” is developed by BSWH Laboratory and Pathology Councils in consultation with clinical services and approved by the local hospital Medical Executive Committee.
- The list is published and available to all caregivers.
- Critical results are flagged by the laboratory and hospital information systems (LIS and HIS).

Testing Process

- When a result is identified as being a critical value, the result is validated following laboratory protocol.

General Process Requirements

- Communication by laboratory is initiated immediately.
- The reporting timeframe for critical values is up to 30 minutes.
- Critical value communication is made to a licensed caregiver. In the outpatient setting and for outreach laboratory specimens it may be necessary to report the critical value to non-licensed personnel.

- Unacceptable methods of communication include leaving voice mail or sending a fax without appropriate follow up.
- Laboratories may make exceptions for calling repeat critical values, but these exceptions are approved by the CLIA Director. An example would be a second or third critically low platelet count on oncology patients.
- If a patient is deceased before the critical value is identified and the following is documented in the LIS ("Critical value identified after patient was deceased").
- Documentation of the critical value communication and subsequent read back is required.
- Reference lab defined critical values (not on the BSWH list) are handled as appropriate.
- Point of Care Critical Values
  a. Are communicated to a licensed caregiver by personnel who performed the point of care test.
- Blood Gas Critical Values
  a. May be communicated to a licensed caregiver face to face.
  b. Documentation of this communication is placed in the LIS/HIS.
- When calling the result
  a. State the patient's name and medical record number.
  b. Communicate the value and obtain verbal read back.
- Laboratory Documentation of Critical Value Communication
  a. Document in the LIS or some departments may document directly into the EHR.
  b. Use the one of the comments below for critical values.

"Critical results called to and read back by _____ (insert full name and credentials), insert date/time/initials.

OR

"(Test) called to: (First Name, Last Name, and Title), at (Loc) MM/DD/YY HH:MM by _____ with accurate read back."

Guidelines for Problem Communications

If after multiple attempts, critical value cannot be reported to a caregiver within 30 minutes, release result adding the following comment:

"In process of contacting caregiver following established policy_Tech ID, Date/Time."

General Problems

Verbal Read Back is Not Received or Only Partial Read Back is Received

1. Repeat request for verbal read back with reminder of complete read back criteria.
2. If complete read back is not received, document and escalate to laboratory management.

Verbal Read Back is Incorrect

1. Stop the communication and correct the caregiver's misunderstanding.
2. Proceed with standard communication and documentation.

Caregiver Refuses to Give Full Name

1. Repeat request for caregiver's name with reminder of policy requirement.
2. If full name is not received, document and escalate to laboratory management.

Inpatient

Patient is Not in Expected Location

1. If floor personnel communicate change in patient location, call the patient's current location and communicate the critical value to the current licensed caregiver. Document the call.
2. If floor personnel, including the charge nurse, cannot identify the patient's current location, notify (page) the nursing administrative supervisor immediately. Communicate the situation and the critical value to the nursing administrative supervisor, documenting the communication, as per procedure above.

Immediate Licensed Caregiver is Not Available

1. Ask to speak to the charge nurse. Communicate the critical value to the charge nurse. Document the call.
2. If a nurse or physician is not available to receive the critical value communication, notify (page) the nursing administrative supervisor immediately. Communicate the situation and the critical value to the nursing administrative supervisor, documenting the communication, as per procedure above.
3. Due to the critical nature of these results, it is imperative to move up the chain of command quickly.

Outpatient and Outreach Laboratory Specimens

Note: In the outpatient setting and for outreach laboratory specimens it may be necessary to report the critical value to non-licensed personnel.

1. Briefly research in the LIS and/or HIS to see if patient's medical service/provider has changed or check paper order or requisition (if applicable) to see if correct provider contact information is available.
2. Make at least two documented attempts to locate the correct licensed caregiver and communicate the critical result.
3. If a caregiver cannot be located, contact pathologist or pathology resident -on-call or the laboratory medical director. The pathologist/resident should call back the tech to convey the final communication to appropriate caregiver for documentation into the LIS.

ATTACHMENTS

Critical Values (BSWH.LAB.QM.0525.A1_V1)

RELATED DOCUMENTS

Alert Values (BSWH.LAB.QM.0527.P)

REFERENCES

1. *All Common Checklist,* College of American Pathologists standards.
2. *National Patient Safety Goals*, The Joint Commission, Goal 2: Improve the Effectiveness of Communication Among Caregivers, Requirement 2a.

REVISION HISTORY

Version #	Effective Date	Description of Change	Revised By

Attachment Title:	Critical Values		
Attachment Number:	BSWH.LAB.QM.0525.A1_V1	Last Review/Revision Date:	See Signatures

TEST	*CRITICAL VALUE*
Acetaminophen	> 150 mcg/mL
Acid Fast Culture/Smear on Inpatient	Positive
Alcohol	>400mg/dL
Amikacin, Trough	> 10 mcg/ml
Amikacin, Peak or Random	> 40 mcg/mL
Ammonia	> 120 umol/L
Bilirubin, Total (< 1 day)	>10 mg/dL
Bilirubin, Total (1-3 days)	>14 mg/dL
Bilirubin, Total (4 days - 30 days)	>18 mg/dL
Blood Cultures	Positive
Body Fluid Culture/Gram Stain	Positive
Bone Marrow Culture	Positive
Calcium (< 1 year)	<6.0 mg/dL or >14 mg/dL
Calcium (> 1 year)	<7.0 mg/dL or >13.0mg/dL
Carbamazepine	>12.0 mcg/mL
CO2	<10mEq/L or >40mEq/L
CSF, any Micro Test, gram stain, Cryptococcal Antigen, other antigens	Microorganisms present/Positive
CSF cell counts (> 3 months)	WBC >5 mm^3
Cyclosporine	>550 ng/mL
Digoxin	>2.4ng/mL
Fibrinogen	< 100 mg/dL
Gentamicin, Trough	> 2.0 mcg/mL
Gentamicin, Peak or Random	> 12 mcg/mL
Glucose (< 3month)	< 50 or > 220 mg/dL
Glucose (> 3months)	< 50 mg/dL or > 399 mg/dL
Hematocrit (> 1 month)(NTX only)	< 20.0 % or > 65.0%
Hemoglobin (<1 month)	< 6.0 g/dL or >25.0 g/dL (inpatient) < 8.0 g/dL or >25.0 g/L (outpatient)
Hemoglobin (>1 month)	< 6.0 g/dL or >20.0 g/dL (inpatient) < 8.0 g/dL or >20.0 g/dL (outpatient)
HBsAg	Positive on delivering mothers
Lactate	>2.0mmol/L
Levatiracetam	> 45 mcg/mL
Lithium	> 1.5 mEq/L
Magnesium	< 1.2 mg/dL or >4.9 mg/dL
PCR for HSV, VZV, EBV, CMV, HHV-6 in CSF or from neonatal ICU	Positive

TEST	***CRITICAL VALUE***
pH (blood gas), (< 3months)	< 7.15 or > 7.5
pH (blood gas) (> 3 months)	<7.29 or >7.60
pO2 (<3 months)	<45 mm Hg arterial
pO2 (> 3 months)	<50 mm Hg arterial; <30 mm Hg mixed venous
pCO2 (< 3 months) (arterial, capillary,mixed venous)	< 25 mm Hg or > 70 mm Hg
Carboxyhemoglobin (arterial and mixed venous)	>10%
Methemoglobin (arterial and mixed venous)	>8%
PCR Acid Fast	Positive
Phenobarbital	> 50 mcg/mL
Phenytoin (Dilantin)	> 25 mcg/mL
Phosphorus (< 2 years)	< 1.6 mg/dL
Phosphorus (> 2 years)	< 1.0 mg/dL
Platelet Count	< 40 K/uL or > 1000 K/uL
Potassium (<1 yr)	<3.0 mEq/L or >7.1 mEq/L
Potassium (>1 yr)	<2.9mEq/L or >6.2 mEq/L
PT Prothrombin Time (< 1 yr)	> 50.0 seconds
PTINR	> 4.0
PTT	>100 second
Salicylate	> 40 mg/dL
Sirolimus	>15ng/mL
Sodium (<1 year)	< 125 mEq/L or > 155 mEq/L
Sodium (> 1 year)	< 120 mEq/L or > 160 mEq/L
Stem Cell Culture	Positive
Tacrolimus II (FK-506)	> 17 ng/mL
Theophylline	> 20 mcg/mL
Tobramycin, Trough	> 2 mcg/mL
Tobramycin ,Peak, Random Level	> 12 mcg/mL
Troponin I	> 0.50 ng/mL
Troponin (Lake Pointe and Centennial)	>0.120 ng/mL
Troponin T (Lakeway only)	>0.1 ng/mL
TSH (0-2 weeks)	>20 mIU/L
TSH (2 weeks-3months)	>10 mIU/L
Valproic Acid	> 100 mcg/mL
Vancomycin , Trough and Random	> 25 mcg/mL
Vancomycin , Peak	> 40 mcg/mL
WBC (Inpatients only CTX; all NTX)	<1.0 K/uL or >50.0 K/uL
WBC (Outpatients- CTX only)	<1.0 K/uL or > 25.0 K/uL
Transfusion Medicine	
Immune mediated Hemolytic transfusion reaction findings	
Overt hemolysis with negative serological test results	
Bacterial contamination of a blood component	
Unexpected antibody in a patient receiving emergent or massive Transfusion support	
Inadequate product or supply to fill emergent blood product use order	