SUNY DOWNSTATE MEDICAL CENTER

DEPARTMENT OF PATHOLOGY

POLICY AND PROCEDURE

☒ UNIVERSITY HOSPITAL OF BROOKLYN ☒ BAY RIDGE

Subject: LABORATORY CRITICAL VALUE RESULTS

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Policy No.: LAB-7

No. of Pages (including this page): 9

Original Issue Date: 11/93

Supersedes: 02/10

Effective Date: 02/11

NYS CLEP Standards: REPORTING S6
CAP Standards:
JC Standards:

Issued by: Regulatory Affairs
Related Policies: **(PTSAF-14)**Timeliness of Critical Test Results
(PTSAF-9) Documentation of Verbal Telephone orders

Review Date	Revisions		Director	Designee	Comments / Revisions
	No	Yes			

Discontinuation Date: _____

I. PURPOSE

To provide expeditious reporting of **Critical Value Results**.

II. DEFINITION:

Critical Value Results: Laboratory results with abnormal findings or with values above or below established normal ranges and criteria are reported for immediate action by the Clinician**.**

III. POLICY

Critical Value Results must be verified for patient identification, acceptability of quality control and according to laboratory section policy.

Critical Value Results must be reported expeditiously by the technologist to the ordering physician or service assigned physician, or to a physician extender or a nurse (NOT the Clerk) in order to alert the staff.

The laboratory technologist will record in the LIS report comment area that a telephone report was given, the date and time of the report, and the person who received and read-back the report.

IV. RESPONSIBILITIES:

CLINICIANS, ER, AOD, & Pathology staff and Nursing.

V. PROCEDURES/GUIDELINES:

- **DURING THE DAY:**

1. The Laboratory staff calls the physician in the ED, clinic or nursing station where the patient is being seen, if unsuccessful,

2. The physician is paged on his/her personal beeper, if unsuccessful,

3. The Laboratory staff calls the nurse in charge or designee and gives the result.

4. Same as #3 under evening.

5. The report recipient must write down and verbally repeat the result as a “Read Back”. The report recipient will fill out the “Write-Down / Read Back” label and place the label in the Progress Notes of the medical record.

- **IN THE EVENING:**

1. Page the requesting physician noted in the patient’s laboratory record. If there is no answer within **15 minutes, then go to step 2 below**.

2. Call the page operator to determine the Fellow-on-call or the physician covering the service. Page this physician; if no response in **15 minutes**, go to step 3 below.

3. Page the Pathology resident for the Clinical section. If the Pathology resident is unavailable to resolve the problem, then the Emergency Room physician and Nursing Supervisor on duty will be notified if all previous efforts failed.

- At some point in time the AOD may send a letter to the patient, if all else fails.

4. Document your actions in the comments section of the patient's electronic laboratory medical record.

5. **Resident Procedure for Critical Values**

   - Rarely laboratory personnel will call the Pathology Resident on Call because they were unable to reach the physician of a patient who has a Critical Test / Critical value result.

   - Those results that Pathology Residents will be called to expedite are those that the laboratory personnel has tried to call the physician listed as the attending physician on the laboratory test request at least twice over the last 30 minutes.

   - When the resident is contacted, the resident should do the following:

     - Determine if the critical value requires immediate notification. If it does not and can wait until the morning (i.e. a small number of blasts in the blood of a patient previously known as a patient with leukemia), then retry contacting the attending physician. If the resident is unsuccessful in contacting the attending physician, then continue as below.
     - If patient's critical test / critical value requires immediate action, contact house-staff physician on call for the service that saw the patient and together try to contact the physician or the physician covering the patient.
     - If the on-call house-staff physician and the on-call pathology resident cannot locate the physician who ordered the test, or the physician on call for that physician, call the Attending Physician in the Emergency Department. This physician should then seek additional information on the patient, and may seek additional information such as the patient's demographic and medical information. Based on the information available, the physician in the Emergency Department will determine what the appropriate action is.
     - On the next working day, the resident will provide the Laboratory Administration office the resident on call problem form, and an investigation of the origin of the problem.
     - The Laboratory Administrator will then refer this issue to the Hospital's Quality Improvement Department for Corrective Action. If the cause of the problem resides with a physician, the Laboratory will notify the Chairman of the Department providing care for the patient.
     - These cases must be reviewed by a Pathologist attending the Pathology Residents' On-Call Conference.

6. **Following are the Laboratory's Critical Value:**

   <u>Blood Bank</u>

   Cord Specimens: Positive direct antiglobulin test (direct coombs).

   Routine Specimens: Positive direct and indirect antiglobulin test (direct and indirect coombs).

   Obstacles regarding procurement of compatible blood/blood components for transfusion.

   Maternal titers of significant red cell all antibodies during pregnancy.

Results of a life threatening transfusion reaction workup.

Failure to call for Rh immune globulin for eligible patient, within 72 hours following known or possible exposure to Rh positive red cells.

Cardio thoracic patients who have a cold agglutinin.

Reference laboratory results, for example, of significant red cell antibodies or autoimmune status.

Serology

Preliminary Positive HIV Expedited Maternal/Neonatal.

Microbiology

A. Report expeditiously as Critical Values when the following test are positive, or the following isolate are found:
Rapid antigen detection:
(+) Crytococcus Antigen
(+) Bacterial Antigen in CSF (includes: Group B strept, H. Flu B, - pneumococcus, meningococcus)
Latex (includes: Group B strept. H. Flu B, pneumococcus, meningoccus)
Clostridium Difficile Toxin A
Preliminary Positive blood culture
Preliminary Positive CSF smear/culture
Group A Strep (Pediatrics – Throat Culture)
Bordetella Pertussis
Stool Culture positive for Enteric Pathogens
Cryptococcus Neoformans
Corynebacterium Diphtheria
Dimorphic Fungi (Histoplasma, Coccidioides, Blastomyces, Paracoccidiodes)
Neisseria gonorrhea
Donor Organ Transplant Culture
(+) Influenza Antigen A & B and/or (+) culture

B. Report expeditiously as a Critical Value every instance of a positive smear and/or culture from a patient:

Mycobacterium Tuberculosis, AFB, Mycobacterial species.

Chemistry

	Low	High	Units
Amikacin	---	35	ug/mL
Amylase (Serum)	---	500	U/L
Bilirubin-neonate	---	15	mg/dL
BUN	---	100	mg/dL
Calcium (Ionized)	0.8	1.8	mmol/L
Calcium, total	7	12	mg/dL
Calcium-neonate	6	12	mg/dL
Carbon dioxide (bicarbonate)	10	36	mmol/L
Chloride	70	120	mmol/L
Creatinine	---	10	mg/dL
Creatinine-neonate	---	1.5	mg/dL
Creatinine Kinase (CK)	---	400	U/L
CSF Protein-neonate	15	150	mg/dL
Cyclosporinel	---	500	ng/mL
Digoxin	---	2.5	ng/mL
Gentamicin (peak)	---	12	ug/mL
Glucose (Adult)	40	450	mg/dL
Glucose CSF	35	---	mg/dL
Lactate acid	---	3.0	mmol/L
Lithium	---	1.6	mmol/L
Blood Lead	---	---	>15 µg/dL
Magnesium	1.0	5.0	mg/dL
Magnesium-neonate	1.0	2.9	mg/dL
pH-arterial	7.20	7.60	
pCO_2-arterial	20	60	mmHg
	Low	High	Units
PO_2-arterial	50	---	mmHg
Phenobarbital (serum)	---	55	ug/mL
Phenytoin (Dilantin)	---	30	ug/mL
Phosphorus	1.0	8.0	mg/dL
Potassium	3.0	6.0	mmol/L
Procainamide + NAPA	---	30	ug/mL
Salicylate	---	40	mg/dL
Sodium (except cord blood)	120	155	mmol/L
Sodium-neonate	125	145	mg/dL
Tacrolimus FK506	---	30	mg/mL
Cardiac Troponin I	---	0.4	ng/mL
Theophylline	---	25	ug/mL
Tobramycin (peak)	---	12	ug/mL
Valproic acid	---	150	ug/mL
Vancomycin (Adult)	---	50	ug/mL

Exception:

Specimens from patients undergoing dialysis are brought to the attention of the clinical laboratory staff on a daily basis.

Pre-Dialysis serum values of creatinine that are above 10 mg/dL and BUN above 100 mg/dL are not considered critical and such values do not mandate a call to inform the responsible physician.

Hematology

	Low	High	Units
CSF Cell Count-neonate	---	0.05	k/µL
Hematocrit	15	60	%
Hematocrit-neonate	36	68	%
Hemoglobin (adult	5	20	g/dL
Hemoglobin (Neonate)	10	23	g/dL
Platelets	30	900	k/µL
Platelet Count-neonate	100	400	k/µL
WBC	2	35	k/µL
WBC-neonate (0-24 hrs)	9.00	34.00	k/µL
WBC-neonate (1-7 days)	5.00	34.00	k/µL
WBC-CSF	---	0.010 ($10/MM_3$)	k/µL

- New findings of the presence in the peripheral blood of blasts, bacteria or sickle cells.
- The presence of malignant Cells or Microorganisms in CSF or other body fluids.
- Presence of blood parasites (Malaria, Babesia or Miocrofilaria)

Exception:

Specimen results with previous critical values reported (within 48 hours) are not called to clinicians. Reports in LIS are documented as “KNOWN PATIENT”.

Coagulation

	Low	High	Units
INR		6.0	
APTT		70 sec	
Fibrinogen	100		mg/dL
D-Dimer	.05		mg/mL

Urinalysis

	Low	High	Units
Reducing sugars (infants)	---	+	
Ketones & Glucose		Pos Ketones & 3+Glucose	

Presence of RBC Cast, Bacterial cast, Cellular cast, Fatty Cast or Granular Casts.

Exception:

Specimen results with previous critical values reported (within 48 hours) are not called to clinicians. Reports in LIS are documented as "KNOWN PATIENT".

Cytology

Critical Test – Cytopathology:

- Immediate specimen adequacy assessment on deep-organ FNA, such as CT-guided FNA.

Critical Results (Critical Diagnoses/Critical Values) – Cytopathology:

- Significant disagreement between immediate interpretation and final FNA diagnosis.
- Unexpected malignancy.
- Bacteria or fungi in CSF cytology in immunocompromised or immunocompetent patients.
- Pneumocystis, fungi or viral cytopathic changes brochoalveolar lavage (BAL), bronchial washing or brushing cytology specimens in immunocompromised or immunocompetent patients.
- Fungi in FNA of immunocompromised patients.
- Herpes in Pap smears of near term pregnant patients.

Reporting Critical Results /Critical Diagnoses/Critical Values

All critical results will be reported to the authorized provider by attending pathologist signing out the critical diagnosis via telephone, or pager. The communication is documented in the Cytopathology report noting date, time and to whom the results were given.

REPORTING CODE O

Code O cases are also reported to patients' physician or midwives. Document as for abnormal smears. Keep documented Code O copies in Code Book.

SATELLITE FACILITIES REPORTING

REPORTING CRITICAL VALUES TO SATELLITE PHYSICIANS

THROOP SATELLITE: SUITE AE

DURING OFFICE HOURS: M.T.W.F 9:00 AM – 5:00 PM TH, 12 PM – 8 PM

Call the Satellite at Ext. 6200 or 6201

AFTER HOURS: During the Week - Page the Ordering Physician through the UHB Page Operator

Weekends: Friday at 5:00 PM thru Monday 9:00 AM
Page the On-Call Physician for the Troop Satellite Satellite

IF NO RESPONSE: Page the Pathology Resident on Call

MIDWOOD SATELLITE: SUITE AF

DURING OFFICE HOURS: M.T.W.F 9:00 AM – 5:00 PM TH, 12 PM – 8 PM

Call the Satellite at Ext. 8920 or 8921

AFTER HOURS: During the Week - Page the Ordering Physician through the UHB Page Operator

Weekends: Friday at 5:00 PM thru Monday 9:00 AM
Page the On-Call Physician for the Midwood Satellite

IF NO RESPONSE: Page the Pathology Resident on Call

FHS SATELLITE: SUITE 0

Dr. Hanna Aghabi, Medical Director
Dr. Steven Liverpool Dr. Joseph Quist
Dr. Pamela Sass Dr. Gloria Achara

DURING OFFICE HOURS:	Mon. Tues. Thurs.	9:AM-8:PM
	Wed. Fri.	9:AM-5PM
	Saturday	9:AM-1PM

PAGE THE ORDERING PHYSICIAN through the UHB Page Operator

ALL OTHER HOURS OR, IF ORDERING PHYSICIAN DOES NOT RESPOND:

PAGE THE FAMILY PRACTICE RESIDENT ON CALL

VI. ATTACHMENTS

Write Down / Read Back Labels

VII. REFERENCES:

CAP Laboratory Accreditation Program June 2009; NYSDOH Laboratory Standards Jan 2008, JCAHO Standards 2009