UnityPoint Health METHODIST PROCTOR PEKIN **CARE COORDINATION**	Page # 1 of 7	Section: Provision of Care	Policy #: BB-08
	Approved by CNO:		Date: 3/14/18 Review by: 3/14/19
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	Joint Commission Standard: PC		CAP STD: 30000

SUBJECT: POLICY GUIDELINES for LABORATORY CRITICAL RESULTS

I. POLICY:

All laboratory testing personnel and nursing staff will report critical results for appropriately ordered tests and incidental findings.

II. PURPOSE AND STANDARD:

To provide guidelines for timely reporting and documentation of patient clinical test values (ordered or incidental findings), which may require immediate medical attention.

III. POLICY SCOPE:

This Policy applies to UnityPoint Health Methodist/Proctor/Pekin hospitals and any of its employees and/or members of the medical staff engaging in the procedures described herein.

IV. GENERAL INFORMATION:

A. The laboratory recognizes that certain test values may be of immediate importance in patient management. Critical tests results are understood to be any resultant test values/levels/interpretations where delays in reporting have the potential for causing serious adverse outcomes for patients.

B. These test values are referred to as critical results and will be communicated immediately. If in preliminary status, the tech will call the final result as soon as available.

1. Inpatient results must be phoned to a Registered Nurse or LPN, who in turn will notify the physician.

2. Laboratory staff will notify the physician associated with outpatient and Reference Laboratory specimens by going through the hospital operator or calling the physician or office directly.
3. Laboratory staff will phone criticals from screening programs to the Physician in charge of the health screening program.

C. Critical test list and thresholds will be reviewed and verified at least on an annual basis by the medical directors of the laboratories and the Medical Executive committees to allow for additions and deletions from the list, and/or changes to the test values deemed critical.

D. The physicians have requested that patients' home phone numbers be available.
1. Physicians at home or taking call do not have access to the patient phone number which makes locating their patients difficult.

V. PROCEDURE:

A. General guidelines for Critical Results
1. Each laboratory section has an established list of critical results.
2. A verified critical result will be phoned STAT either:
   a. directly to the attending physician or
   b. to the Nurse responsible for the patient
3. The physician/nurse must read back the results to ensure that verbal results were heard correctly and to verify accuracy.
4. Documentation of critical result reporting will be performed in the Laboratory Information System (LIS) to include:
   a. First and Last name of medical staff contacted
   b. Time contacted
   c. First and last name of technologist phoning results.
5. Documentation of a critical result which is an incidental finding will be accomplished by footnoting in the LIS:
   a. Critical Result
   b. First and Last name of nurse/physician phoned to & read back by
   c. Date/Time phoned
   d. First and last name of technologist phoning results.
6. The laboratory is not required to repeat critical results prior to reporting and calling results to providers. Technologists/Technicians will verify the specimen and patient are correct and evaluate the specimen integrity (HIL indices). If the tech determines the testing needs to be repeated based off their technical expertise, they have the right to repeat.
7. Health screening critical results will be called to the physician who is overseeing the health screening program. Refer to Health Screening section of this policy for additional information.

B. Procedure for contacting medical staff
1. INPATIENTS * (reported within 10 minutes)
   a. Phone the patient's floor/unit and ask to speak to a Nurse (nursing protocol requires RN or LPN to take critical results)
   b. Report the critical result to the Nurse, have the nurse read the result back and obtain nurse's name with his/her assurance that the patient's physician will be notified. If the nurse or Licensed Independent Practitioner (LIP) cannot be reached, utilize the Chain of Command.
   c. Document in LIS using the critical result template, or when footnoting critical use terminology "phoned to and read back by":
      1) Critical Result
      2) First and last name of the nurse/physician phoned to & read back by
      3) First and last name of technologist phoning results.
      4) Date/Time phoned

   *EXAMPLE: Critical glucose phoned to & read back by Sally Jones, RN, phoned by Jan Smith at 0135
   d. The individual receiving the information and reporting to the responsible LIP must document the notification in the medical record.
      An SBAR note should be made to record notification to the provider of critical test result(s) and patient interventions, including interventions taken from protocols.

2. REFERENCE LAB CLIENTS AND OUTPATIENTS (reported within 40 minutes)
    a. During office hours:
        1) Phone the physician's office during hours that the office is likely to be open.
        2) Give results to physician, nurse or lab personnel. Document in LIS using the critical result template, or when footnoting critical use terminology "phoned to and read back by":
            a) Critical Result
            b) First and last name of the nurse/physician phoned to & read back by
            c) First and last name of technologist phoning results.
            d) Date/Time phoned
    b. After office hours:
        1) Obtain the patient's home phone number before phoning the hospital operator. The patient's phone number may be obtained from EPIC or the LIS. (Phone results without patient's phone number when computer is down.)
        2) Phone the hospital operator or after hour answering service and ask him/her to locate the physician or physician-on-call. Leave message that a critical report needs to be phoned to the physician; leave full name, department, and phone number with operator. Operator will page the physician for you.
        3) Leave a message with the front desk that you have a call in to the physician. Alert techs in area that you are expecting a call from the physician concerning a critical result.
        4) If physician does not return call within 30 minutes, contact the operator again. While holding call, have the operator phone the physician's home phone (sometimes physicians' pagers are being recharged or turned off).
        5) Document in LIS using the critical result template or when footnoting critical you use terminology "phoned to and ready back by":
            a) Critical Result
            b) First and last name of the nurse/physician phoned to & read back by
            c) First and last name of technologist phoning results.
            d) Date/Time phoned

        EXAMPLE: Critical glucose phoned to & read back by Dr. Red Book; test phoned by Jane Smith at 0135.

        6) In the event that the attending medical staff cannot be reached or will not accept responsibility for the critical result, the technologist should notify the pathologist. The pathologist will also attempt to reach the attending physician. If that fails, the pathologist will contact the patient with the results and send the patient to the emergency department if indicated.

C. HEALTH SCREENINGS OR RISK ASSESSMENTS
    1. Critical values will be called to the physician who is overseeing the health screening program.
    2. After office hours, the technologist will contact by phone the patient's physician list on the requisition.
    3. If the patient's physician cannot be reached, – the pathologist on-call should be notified. The pathologist on call will make additional attempts to contact the physician or will call the patient.
    4. The technologist will footnote the follow-up steps taken to report the critical result in LIS.

VI. MONITORING CRITICAL LAB TEST RESULTS FOR QUALITY IMPROVEMENT PURPOSES
(Refer to Critical Test Results Selected for Periodic Monitoring Table):

A. Periodic monitoring of selected critical test results shall be performed.
    1. Turn-around time for critical test results notification from laboratory to nurse if LIP not directly notified by the person performing the test.
    2. Turn-around time from critical test results notification from person receiving test results to responsible LIP.
    3. Identify and correct any communication process breakdowns, issues at the department or patient care unit level.

TABLE OF CRITICAL RESULTS (3 pages)

TEST	LOW	HIGH
CO_2	< 10 mmol/L	> 50 mmol/L
Bilirubin – Newborn		≥ 15 mg/dl
Calcium	< 6.0 mg/dl	> 12.0 mg/dl
Glucose – CSF	< 20 mg/dl	
Glucose - Plasma Child/Adult	< 50 mg/dl	>500 mg/dl
Glucose - Plasma Newborn	< 30 mg/dl	≥300 mg/dl
Hemoglobin – Carboxy (CO; Carbon Monoxide)		≥ 15.0 %
Hemoglobin - Plasma		≥ 4.0 mg/dl
Ionized Calcium	< 2.8 mg/dL	>6.4 mg/dL
Iron		≥ 500 ug/dl
Magnesium Magnesium –OB	≤ 0.5 mg/dl	≥ 5.0 mg/dl ≥ 8.0 mg/dl
PCO_2 - Arterial or Capillary	< 20 mmHg	> 70 mmHg
pH - Arterial or Capillary	< 7.2 units	> 7.6 units
PO_2 - Arterial	< 40 mmHg	
Potassium -	<3.0 mmol/L	>6.0 mmol/L
Potassium - Capillary	<2.5 mmol/L	>7.0 mmol/L
Sodium - Serum	<120 mmol/L	>155 mmol/L
Troponin		>0.045 ng/ml

TEST	LOW	HIGH
Acetaminophen – 4 hours after ingestion		≥ 160 ug/ml
Carbamazepine		≥ 15 ug/ml
Dapakene (Valproate)		≥125 ug/ml
Digoxin (Lanoxin)		> 2.5 ng/ml
Dilantin (Phenytoin)		0–12 weeks: ≥20 ug/ml > 12 weeks: ≥40 ug/ml
Ethanol		≥300 mg/dl
Gentamycin: Trough Peak		 N/A > 12.0 ug/ml
Lithium		≥ 2.0 mmol/L
Methanol		≥ 30 mg/dl
Phenobarbital		≥ 40 ug/ml
Salicylate		≥ 40 mg/dl
Theophylline		≥ 25 ug/ml
Tobramycin: Trough Peak		 NA ≥ 12.0 ug/ml
Vancomycin: Trough Peak		 ≥ 30 ug/ml ≥ 60 ug/ml

TEST	LOW	HIGH
Absolute Neutrophil Count	<0.50 th/mm^3	
Act. Partial Thromboplastin Time		≥ 127 seconds
Blood Culture	Positive gram-stain from positive blood culture bottle or positive Biofire	
CSF	Positive gram-stain culture, or Biofire	
CSF Count		≥10 or more WBC/mm^3
Fibrinogen	<100 mg/dL	
Hematocrit – Whole Blood	<21%	
Hemoglobin -Whole Blood	< 7.0 g/dL	
Peripheral Smear		≥ 5% blasts
Platelet Count	< 20.0 th/mm^3	
Prothrombin Time Activity		INR ≥ 4.5
Urine Glucose/ Reducing Sugars in Newborns		>0.1 g/dl (Trace)
Urine Ketones in Newborns		>5 mg/dl (Trace)
White Blood Cells	< 2.0 th/mm^3	31 days – adult >30.0 th/mm^3 7 days – 30 days >40.0 th/mm^3 0 – 7 days >45 th/mm^3
Malaria – peripheral smear or antigen test	Positive for parasites	Positive for parasites

CRITICAL RESULTS SELECTED FOR PERIODIC MONIITORING

LAB*	CRITICAL RESULT	DEPARTMENT TIME FRAME FOR PERFORMING TEST	TIME TO NOTIFICATION OF NURSE OR OTHER LICENSED CARE GIVER	TIME TO NOTIFICATION OF LICENSED INDEPENDENT PRACTIONER
Child/Adult- Plasma Glucose	≥ 500 mg/dl	45 Minutes	10 Minutes	30 Minutes
Bedside Glucose	< 50 mg/dL	As ordered		30 Minutes
Hemoglobin	< 7.0 g/dL	45 min	10 min	30 Minutes
INR (Ordered as PT/INR)	≥ 4.5	45 Minutes	10 Minutes	30 Minutes
STAT Potassium-Venous-Serum (Excluding Potassium Point of Care Testing)	< 3.0 mmol/L > 6.0 mmol/L	45 Minutes 45 Minutes	10 Minutes	30 Minutes