



# ADMINISTRATIVE POLICY MANUAL

## Subject: Critical Action Values

**Effective Date:** Original Policy written prior to 1996

**Approved by:** VP Medical Affairs, Executive VP/COO and VP Patient Care Services

**Responsible Parties:** Clinical Laboratory Evening Supervisor

**Revised Date:** 1996, 1/99, 11/01, 10/02, 12/03, 1/04, 7/04, 3/07, 10/07, 3/08, 5/08, 6/08, 9/08, 03/10, 1/11, 11/12 and 1/14

### Purpose/Principle:

Communication is a critical component in medicine. This policy defines PRMC’s acceptable standards for reporting Critical Action Results. A Critical Action Result is a Test Result that represents a pathophysiologic state at such variance with normal as to be life-threatening if an action is not taken quickly and for which an effective action is possible.

### PRMC POLICY FOR REPORTING CRITICAL ACTION VALUES:

**Diagnostic department personnel will notify the appropriate Health Care Provider of any Critical Action Value within the time frame established by that department using the script established by that department.**

**During the Critical Action Value notification to relay those results, this information is exchanged:**

- The name and department of the person making the call
- The name and date of birth of the patient who has critical values
- A statement that this is a “Critical Action Value.”
- The full name of the person taking the Critical Action Value
- A read back of the results

**Documentation of phoning the Critical Action Values will be part of the Testing Department’s Report and will include:**

- The full name of the person to whom the report was given
- The time and date that the report was given.

### Addendums:

- PRMC Nursing Department Addendum for Critical Action Values and Criteria for when Critical Action Results Do Not have to be Called
- Laboratory Critical Action Values Addendum
- Point of Care Critical Action Values Addendum
- Echocardiogram, Vascular and EKG Critical Action Values Addendum
- Radiology Critical Action Values Addendum
- Respiratory, Pulmonary, ABG Critical Action Value Addendum

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Printed Name  
Executive VP/COO

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VP, Medical Affairs

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Printed Name  
VP, Patient Care Services

## **PRMC Nursing Department Addendum for Critical Action Values & Criteria for when Critical Action Results Do Not have to be Called**

### **When Nursing Staff is Notified of any Critical Action Value, He/She will:**

- Read back the critical action value to the caller.
- Stat page the physician's office or physician on call within 15 mins of receiving the result.
- Document in the patient's chart the notifying department, date and time of the call, and the critical action value.
- Document all attempts of notifying the appropriate physician in the patient's chart.
- Document in the patient's chart the physician's name, date and time physician received results. Request a read back of the value from the physician.
- If no response after 15 mins, a second attempt is made by the nurse to contact physician using Stat paging, and any published direct telephone numbers (office, home, or cell).
- If after 30 mins no response has occurred, the nurse will inform the Nursing Supervisor of the situation and request assistance.
- The Nursing Supervisor will contact a partner of the physician or a consulting physician for this patient.
- If after 60 mins there is no response, the Medical Director of the Critical Care Unit (if the patient is in critical care), or the Chief of the Division or Department is contacted.
- If unsuccessful after 90 mins, the President of the Medical Staff is notified.

### **Criteria for When the Nurse Does Not have to Call the Doctor with a Critical Action Value:**

- Patient is at end of life with a DNR and is to receive comfort measures only.
- Critical Action Value is a repeat value and LIP (Licensed Independent Practitioner) is aware and treatment is in progress or ordered.
- Critical Action Value is chronic and not expected to improve.
- Patient has protocol or order to treat the value.
- The Newborn Nursery and NICU Units will refer to Hyperbilirubinemia / Phototherapy policy and plot the critical action bilirubin value on the Bilirubin nomogram tool and notify physician as necessary.
- Nurse may gather all expected results prior to contacting the LIP. If additional results are delayed greater than 30 mins, the nurse will contact the LIP with the immediate Critical Action Value. Example: When multiple tests are ordered, for example CBC and Chem8, the nurse may wait for all results from both tests before communicating the results to the LIP (Licensed Independent Practitioner). If additional results are expected to be delayed greater than 30 mins, i.e (tube requires a redraw), the nurse will call the identified resulted Critical Action Value immediately.

## Laboratory Critical Action Values Addendum

Policy Prepared by:	Date:	Departments Sharing Policy: Core Microbiology Pathology Special Chemistry Transfusion Services
Policy Approved by:	Date:	
Lab Director:	Date:	
Policy Adopted by:	Date:	
Original Policy Written:	Date: 1996	
Policy Reviewed by:	Date:	
Policy Reviewed by:	Date:	
Policy Reviewed by:	Date:	
Policy Reviewed by:	Date:	

**Rationale or background to policy:**

Critical Action Values need to be reported to the physician immediately to ensure prompt patient care.

**Policy Statement:**

Using the Inpatient and Outpatient Critical Action laboratory Values Notification Flowcharts, Critical Action Values are phoned to the nurse/physician.

**Implementation of Policy:**

The flowcharts contain required notification timing and scripting for Laboratory Critical Action Values.

**Addendums:**

- Inpatient Critical Action laboratory Value Notification Flowchart
- Outpatient Critical Action laboratory Value Notification Flowchart
- Patient Critical Notification by Laboratory Supervisor/Manager Script Flowchart

### **ANATOMIC PATHOLOGY**

The Pathologist shall verbally communicate to the submitting physician the findings that yield diagnoses that may be **unexpected or otherwise significant upon review of a surgical pathology specimen or any finding that is deemed clinically necessary**. The date and time of the verbal notification should be documented in the comment section of the pathology report. Examples of unexpected findings are malignancy in an uncommon location or specimen type (e.g. hernia sac, intervertebral disc material, tonsils, etc), or in a specimen where the provided history suggests that a malignant diagnosis is not expected or possible ectopic pregnancy (i.e. absence of chorionic villi when clinically expected). In addition, a change in diagnosis from the frozen section diagnosis after review of permanent section must be communicated immediately. Mycobacterial, fungal or other significant infectious organisms identified on special stain or any other significant or unexpected findings as determined by the pathologist.

### **COAGULATION**

Analyte	Age, Condition	Less Than	Greater Than
Fibrinogen		75 mg/dL	
<b>PTT</b>	<b>Greater than 6 months old Less than 6 months old</b>		<b>120 seconds 50 seconds</b>
PT Screen	Greater than 6 months old Less than 6 months old		26 seconds 17 seconds
<b>PT Therapy – INR</b>			<b>5.0</b>

## URINALYSIS

Analyte	Age, Condition	Critical Action Value
Ketones	Less than 6 months old	Positive

## HEMATOLOGY

Analyte	Age, Condition	Less Than	Greater Than
Hemoglobin	≥16 years <16 years	6.0 g/dL 6.0 g/dL	25 g/dL
<b>White Blood Count</b>	<b>≥16 years</b> <b>&lt;16 years</b>	<b>1.0 k/cmm</b> + <b>1.0 k/cmm</b> +	<b>30 k/cmm</b>
Absolute Neutrophil Count		0.5 k/cmm +	30 k/cmm
<b>Platelets</b>		<b>20 k/cmm</b> +	<b>1,000 k/cmm</b> +
Platelets (Nursery)		50 k/cmm	1,000 k/cmm
<b>Spinal Fluid WBC/Diff</b>			<b>10/cmm</b>
Blood Smear			Presence of Blasts ++, Bacteria or Parasites

+ Phoned when 1<sup>st</sup> Critical. Entered one: ".LABCRR"- (Critical result not phoned. Consistent with recent previous results). ".LABOPINI" (Additional verification not performed per OPI Protocol). ".LABOSLIDE" (Slide review not indicated per OPI Protocol). If critical result changes to noncritical and then back to a critical result, the result will then be treated as a new critical result.  
 ++ Call the entire Diff to the physician or the appropriate nursing personnel.

## SPECIAL CHEMISTRY

Analyte	Critical Action Value
CSF Herpes	Positive
<b>CSF Varicella Zoster</b>	<b>Positive</b>
FK506 (Tacrolimus)	Greater than 30 ng/mL
<b>FK506 (Tacrolimus) ≥16 years</b>	<b>&gt;30 ng/mL</b>
FK506 (Tacrolimus) <16 years	≥25 ng/mL
<b>Maternal AFP Screen, Spina Bifida</b>	<b>Positive</b> <sup>+</sup>
Maternal AFP Screen, Down Syndrome	Positive <sup>+</sup>
<b>Maternal Serum Screen 3, Down Syndrome</b>	<b>Positive</b> <sup>+</sup>
Maternal Serum Screen 3, Spina Bifida	Positive <sup>+</sup>
<b>Procalcitonin (LRTI) Initial Level</b>	<b>&gt;0.5 ng/mL</b>
Quinidine	Greater than 5.0 mcg/mL
Reference Lab Tests	Any result noted as a critical by the reference lab. If Special is not staffed, Semi-urgent are not treated as critical results – they are left for the next day.

+ Results do not need to be phoned on weekends/ nights. Enter results. Phone on the next day the office is open. Modify results: ".LABCRIT". Click F2 and Replace the \*\*\* with the full name of the person to whom you phoned the Critical Result.

**Note:** When a tech receives Critical Action Values by phone from a reference lab, he/she will "read back" the result to the reference lab person, and then follow the above procedure for notifying nursing personnel or ordering physician.

## MICROBIOLOGY / SEROLOGY

Analyte	Condition	Critical Action Value
Blood Culture		Positive
<b>Acinetobacter - Multi Drug Resistance - Susceptible to 2 or less classes of drugs</b>	<b>Inpatient</b>	<b>Positive</b>
AFB Fluid Smear or Culture		Positive
<b>CDT</b>	<b>Inpatient</b>	<b>Positive</b>
Chlamydia	Inpatient	Positive
<b>ESBL Positive Gram Negative Rods</b>	<b>Inpatient</b>	<b>Positive</b>
Gonorrhea	Inpatient	Positive
<b>Influenza Antigen</b>	<b>Inpatients, ED Pts not discharged</b>	<b>Positive</b>
KPC Positive Gram Negative Rods	Inpatient	Positive
<b>MRSA</b>	<b>Inpatient, Nursing Home Pts, NonAdmitted ED Pts</b>	<b>Positive</b>
Peritoneal Dialysate Smear/Culture		Positive
<b>Pleural Fluid Gram Stain/Culture</b>		<b>Positive</b>
RSV Antigen	Inpatients, ED Pts not discharged	Positive
<b>Spinal Fluid Smear/Culture</b>		<b>Positive</b>
Stool Culture		Positive Salmonella, Shigella or Enterohemorrhagic E. Coli
<b>VRE</b>	<b>Inpatients</b>	<b>Positive</b>

## TRANSFUSION SERVICES

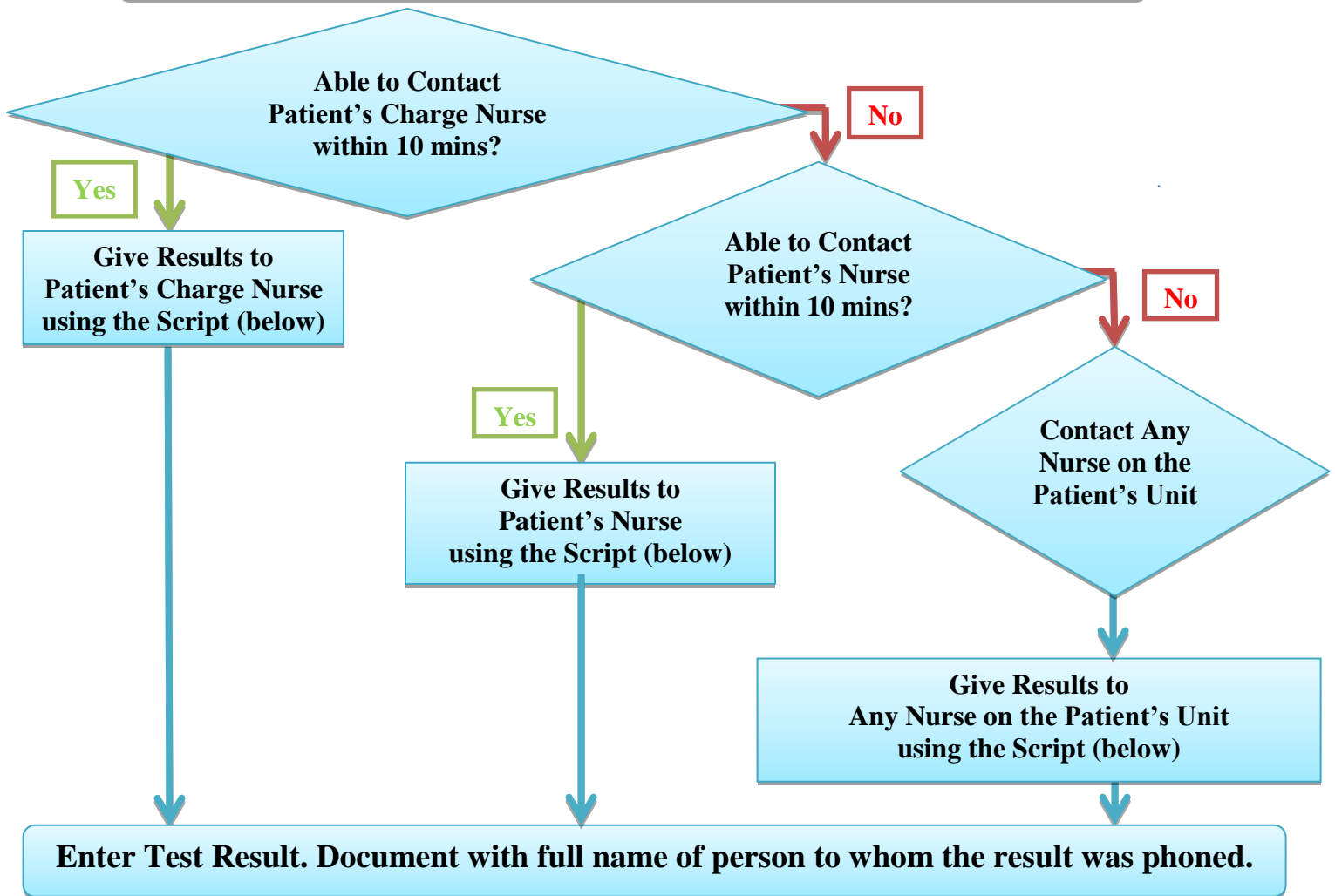
Analyte	Condition	Critical Action Value
ABO Testing	Transfusion Reaction Investigation	Incompatible transfusion
<b>Antibody Screen, Direct Coombs</b>	<b>Transfusion Reaction Investigation</b>	<b>A delayed reaction indicated</b>
Crossmatch, Type & Screen	Any Order	Extended delay indicated
<b>Autologous Blood Product</b>	<b>Problem Reported by Supplier</b>	<b>Not available (The product will not be available due to conditions beyond our control)</b>
Antibody Identification	Multiple or high frequent antibodies	Extended delay indicated
<b>Platelet Pheresis Unit</b>	<b>Unit has been or is being transfused</b>	<b>Bacterial Testing Positive</b>
Blood Product	Ordered for Transfusion	Not available <sup>+</sup>

## CHEMISTRY

Analyte	Age, Condition	Less Than	Greater Than
Acetaminophen			40.0 ug/mL
<b>Alcohol</b>	<b>&lt;16 years</b>		<b>&gt;/=0.200 G%</b>
Amikacin	Peak Trough		35.0 ug/mL 8.0 ug/mL
<b>Ammonia</b>	<b>&lt;16 years</b>		<b>&gt;/=90 umol/L</b>
Bilirubin	5 days to 2 months 4 days 3 days 2 days 0-1 days		>/=15.0 mg/dL >/=14.0 mg/dL >/=13.0 mg/dL >/=11.0 mg/dL >/=7.5 mg/dL
<b>Calcium</b>	<b>Greater than 6 months old Less than 6 months old</b>	<b>6.0 mg/dL 7.0 mg/dL</b>	<b>12.0 mg/dL 12.0 mg/dL</b>
Calcium, Ionized		0.80 mmol/L	1.58 mmol/L
Calcium, Ionized-Pre-Filter		0.80 mmol/L	1.58 mmol/L
Calcium, Ionized-Post-Filter		0.20 mmol/L	0.60 mmol/L
<b>Carbamazepine (Tegretol)</b>			<b>15.0 ug/mL</b>
CO <sub>2</sub>	Greater than 6 months old Less than 6 months old	10 mEq /L (++) 15 mEq /L (++)	45 mEq/L (++) 45 mEq /L (++)
<b>Digoxin</b>			<b>2.0 ng/mL</b>
FK506 (Tacrolimus)	<16 years		>/=25 ng/mL
<b>Gentamycin</b>	<b>Peak - Greater than 6 months old Peak - Less than 6 months old Trough - Greater than 6 months old Trough - Less than 6 months old</b>		<b>12.0 ug/mL 10.0 ug/mL 2.0 ug/mL 1.0 ug/mL</b>
Glucose	CSF	40 mg/dL	
<b>Glucose Fasting and Random</b>	<b>Greater than 16 years Serum, Greater than 4 weeks &amp; &lt;16 years Serum, Less than or equal to 4 weeks</b>	<b>50 mg/dL 50 mg/dL 40 mg/dL</b>	<b>500 mg/dL 400 mg/dL 400 mg/dL</b>
Lactic Acid			>/=3.0 mmol/L
<b>Lithium</b>			<b>&gt;2.0 mEq/L</b>
Magnesium	Not Labor and Delivery & ≥16 years <16 years Labor and Delivery & ≥16 years	1.0 mg/dL 1.0 mg/dL 1.0 mg/dL	5.0 mg/dL 4.0 mg/dL 8.0 mg/dL
<b>Methotrexate</b>	<b>Phone all Results</b>		
Phenobarbital			60 ug/mL
<b>Phenytoin (Dilantin)</b>			<b>25 ug/mL</b>
Phosphorus		1.0 mg/dL	
<b>Potassium</b>	<b>Greater than 6 months old Greater than 6 months old-Hemolyzed Less than 6 months old</b>	<b>2.5 mEq/L (++) 2.5 mEq/L (++) 3.5 mEq/L (++)</b>	<b>6.5 mEq/L (++) 7.0 mEq/L (++) 7.0 mEq/L (++)</b>
Protein, CSF			100 mg/dL
<b>Salicylate</b>			<b>30 mg/dL</b>
Sodium	≥16 years <16 years	120 mEq/L (++) 130 mEq/L (++)	160 mEq/L (++) 155 mEq/L (++)
<b>Theophylline</b>	<b>≥18 years &lt;18 years</b>		<b>20 ug/mL 15 ug/mL</b>
Tobramycin	Peak Trough Random		12.0 ug/mL 2.0 ug/mL 12.0 ug/mL
<b>Troponin</b>	<b>The First Positive</b>		<b>&gt;/=0.25 ng/mL</b>
Uric Acid	<16 years		>/=10 mg/dL
<b>Valproic Acid (Depakene)</b>			<b>150 ug/mL</b>
Vancomycin	Peak Random Trough		50 mcg/mL 25 mcg/mL 30 mcg/mL

(++) When an analyte in the electrolyte battery is a critical action value,  
Call the entire battery to the physician or the appropriate nursing personnel.

## Inpatient Critical Action Laboratory Value Notification



### Guidelines for Entering Documentation of Phoning Critical Result

Click on Comment Column  on Result Row of Critical Result.  
Comment Box will appear.

Enter ".LABCRIT" for all criticals except ".LABPBLC" (Blood culture critical) and ".LABVPRB" (Verigene critical).

Click "F2" and replace the \*\*\* with the full name of the person to whom you phoned the Critical Result.

Click Accept. Click Save.

### Tech Critical Action Value Phone Script

"This is (name) from (department name), is this the charge nurse for (patient's room number)?"

"I have a Critical Action Value on (patient's name) whose DOB is (01/01/2001).

"Could I please have your full name so that I can document this call."

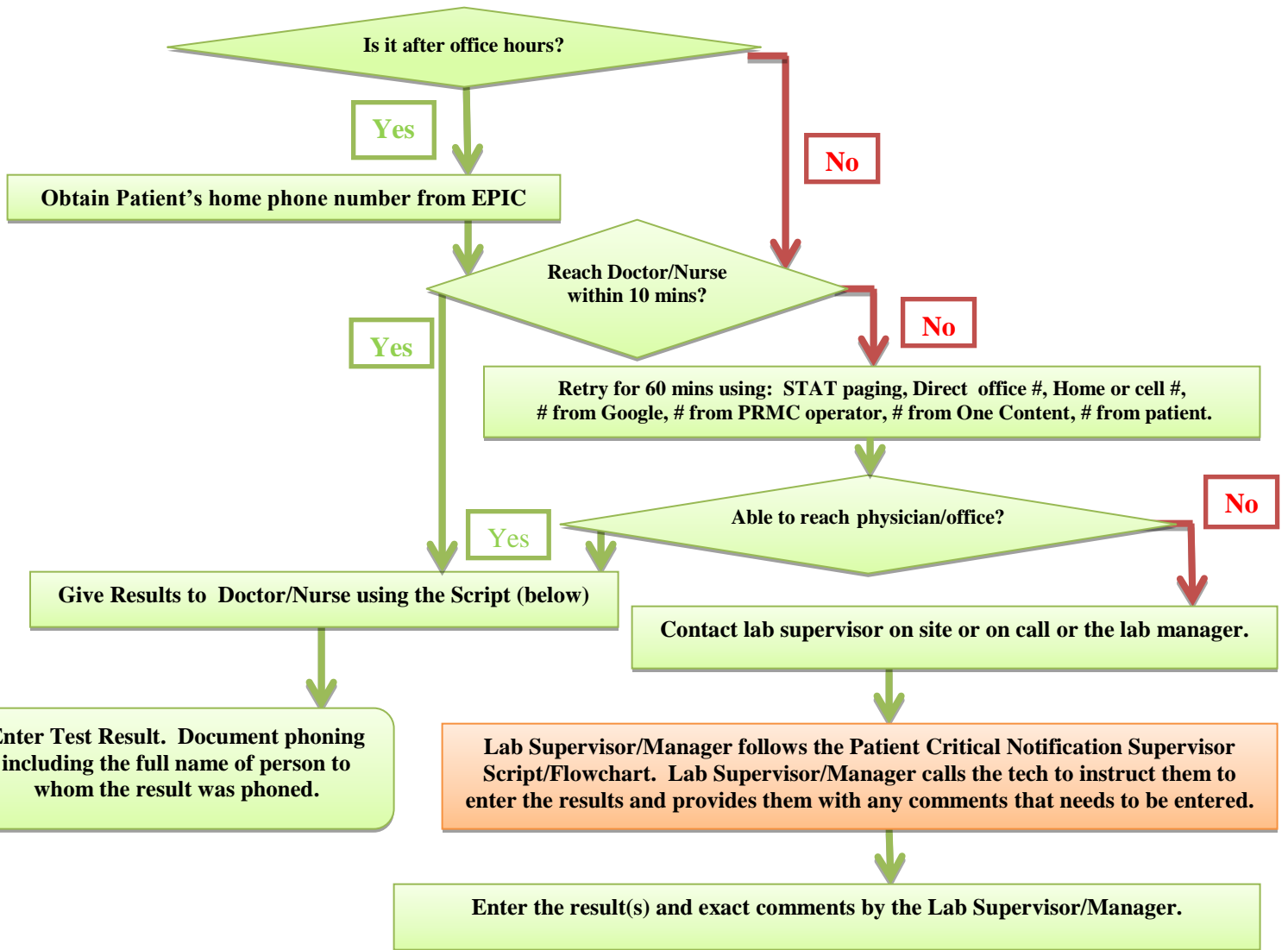
Give the result.

"Please read back the results that I gave you."

"The responsible physician should be notified of this Critical Action Result."

"Thank You."

# Outpatient Critical Action Laboratory Value Notification



## Guidelines for Entering Documentation of Phoning Critical Result

Click on Comment Column  on Result Row of Critical Result.

Comment Box will appear.

Enter “.LABCRIT” for all criticals except “.LABPBLC” (Blood culture critical) and “.LABVPRB” (Verigene critical).

Click “F2” and replace the \*\*\* with the full name of the person to whom you phoned the Critical Result.

Click Accept.

Click Save.

### Tech Critical Action Value Phone Script

“This is (name) from (department name) at PRMC.

I have a Critical Action Value on one of Dr (doctor’s name)’s patients.

The patient’s name is (patient’s name) and their DOB is (patient’s DOB).

“Could I please have your full name so that I can document this call.”

Give the result.

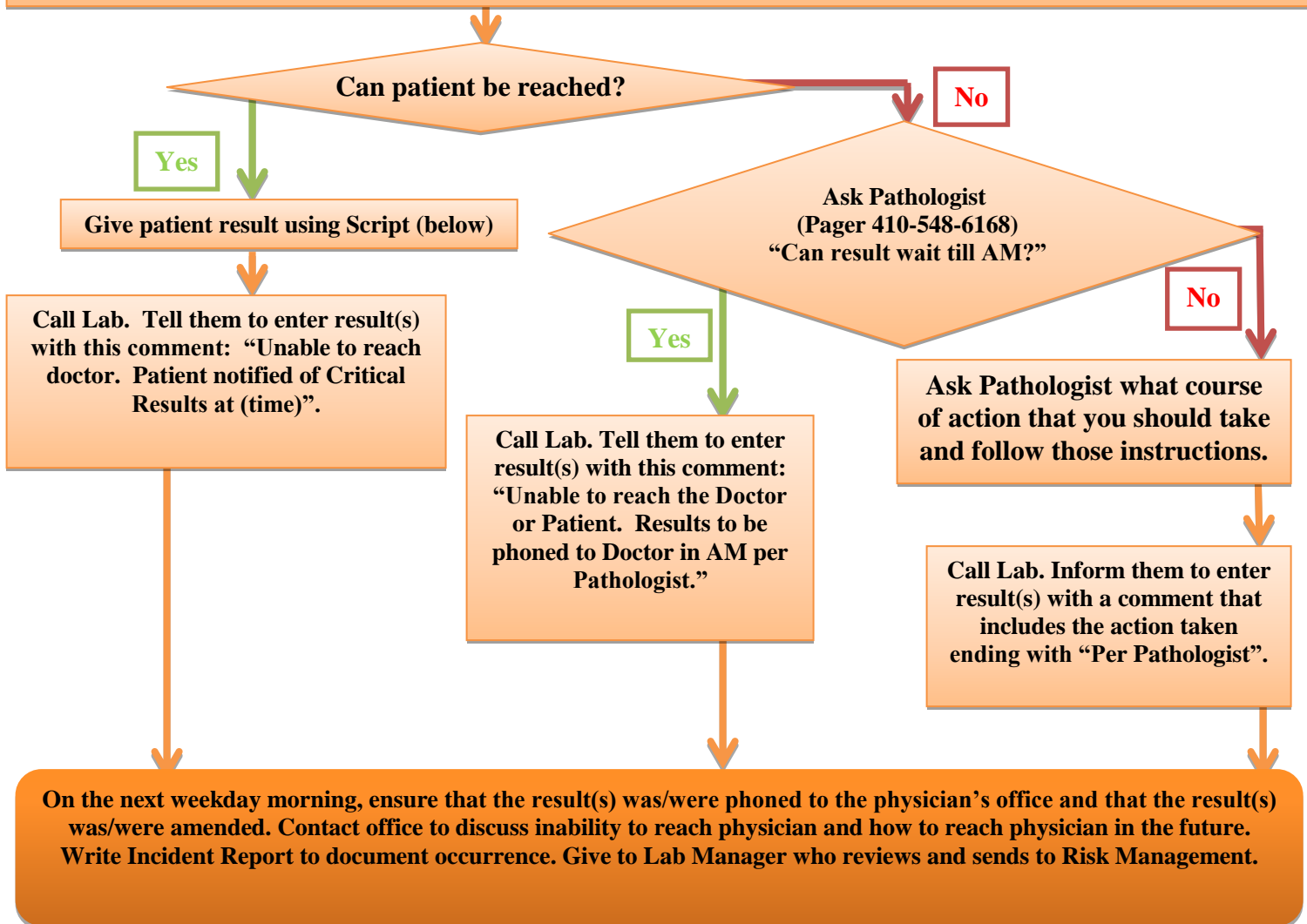
“Please read back the results that I gave you.”

If reporting critical(s) to a nurse: “The physician should be notified of this Critical Action Result.”

“Thank You.”

## Patient Critical Notification by Laboratory Supervisor/Manager Script/Flowchart

Lab Supervisor/Manager receives a call from the Lab stating there is a Critical on an Outpatient and the Physician cannot be reached.



### Supervisor Script for Patient Notification of Critical Action Value

"Hello, my name is (name). I am a Supervisor at the Laboratory at Peninsula Regional Medical Center. You recently had blood tests and the results are now available. The value requires us to call your physician. We have attempted to reach your physician; however, we have been unable to reach him/her. The (Specific Test Name) result is (elevated or low) at (give specific number). Had your physician been available, these results may have prompted a change in your plan of care including changes in the manner in which you take certain medication. If you can contact your physician, I would suggest that you do that. If you are unable to reach your physician, I cannot provide you with specific direction regarding your medical plan; however, I can suggest that you may want to be evaluated by a healthcare provider. If you choose not to do any of these, my last suggestion would be to call the physician's office first thing after they open. I apologize for any concern or inconvenience that this may cause you; however, we want you to know that patient health and safety are always important to us here at PRMC.

**Questions:** Where should I go for evaluation? What kind of healthcare provider should I see?

**Answer:** A community clinic, urgent care facility, or an emergency room

**Questions:** Isn't there a doctor there that I can speak with?

**Answer:** A doctor who does not know you cannot evaluate you over the phone. You need to be seen and examined. You are welcome to come to our Emergency Department here at the hospital to be evaluated by one of our physicians.

**Questions:** What am I supposed to do? What would you do if you were me? Should I wait until my doctor's office opens in the morning?

**Answer:** I understand your concern/frustration/uncertainty; however I cannot provide you with specific direction. That is why I suggest you be evaluated by a healthcare provider to get specific direction to your questions.



## **POC (Point of Care) Critical Action Values Addendum**

<b>Analyte</b>	<b>Age, Condition</b>	<b>Less Than</b>	<b>Greater Than</b>
Blood Gas pH		7.25	7.58
<b>Blood Gas pCO2</b>		<b>20</b>	<b>70</b>
Blood Gas pO2		55	
<b>CO<sub>2</sub></b>	<b>Greater than 6 months old</b>	<b>10 mEq /L (++)</b>	<b>45 mEq /L (++)</b>
Glucose	Greater than 4 weeks	50 mg/dL	500 mg/dL
	Less than or equal to 4 weeks	40 mg/dL	500 mg/dL
<b>Hemoglobin</b>		<b>6.0 g/dL</b>	
Ionized Calcium		0.79 mmol/L	1.57 mmol/L
<b>Lactic Acid</b>			<b>&gt;/= 3.0 mmol/L</b>
Potassium	Greater than 6 months old	2.5 mEq /L (++)	6.5 mEq /L (++)
<b>PT Screen</b>	<b>Greater than 6 months old</b>		<b>26 seconds</b>
PT Therapy - INR			5.0
<b>Sodium</b>	<b>Greater than 6 months old</b>	<b>120 mEq /L (++)</b>	<b>160 mEq /L (++)</b>

## **Echocardiogram, Vascular, & EKG Critical Action Values Addendum**

When a venous study is positive for deep venous thrombosis or a carotid study shows severe carotid stenosis preliminary results are called to the ordering health care provider by the vascular sonographer. Preliminary results of Echocardiograms that demonstrate cardiac tamponade or a large pericardial effusion are called to the ordering health care provider by the echo sonographer. Unconfirmed EKG tracings are placed on the patient chart until replaced by confirmed results.

## **Radiology Critical Action Values Addendum**

The Radiologist will call results considered critical. Once the result is reported, the Radiologist will document the call in the report. Included will be the date and time of result and the name of the nurse or physician reported to (read back verified). The Department of Radiology Preliminary form, Voice Clip on PACS and the final report will serve as documentation. Radiologist calls concerning critical values of patients in the Emergency Department will be made based on immediate need for care.

### **LIST OF CRITICAL VALUES**

This is not a comprehensive list but it is a basic guide. These definitions are not meant to be all-inclusive. The Radiologist shall continue to call findings as deemed clinically necessary.

1. Unexpected pneumothorax
2. Unexplained free air in the Abdomen
3. Intracranial hemorrhage
4. Ng tube in the airway
5. Endotracheal tube in the bronchus
6. Spinal Cord compression
7. Allergic reaction resulting in a code
8. Incarcerated Hernia

# **Respiratory, Pulmonary & ABG Critical Action Values Addendum**

Critical action results can be obtained from the ABG Laboratory (Respiratory/Pulmonary Services).

## **LIST OF CRITICAL VALUES**

### **Arterial Blood Gases**

PH- <7.25- >7.58

PCO<sub>2</sub>- <20- >70

PO<sub>2</sub>- <55

Co-oximetry

O<sub>2</sub>HB <88.0%

COHB > 6.0 % NON SMOKER

>10.0% SMOKER

METHB- > 5.0%

### **Venous Blood Gases**

PH- <7.20 - >7.58

PCO<sub>2</sub>- <15 - >70

PO<sub>2</sub>- <18

Co-oximetry

O<sub>2</sub>HB- < 25.0%

COHB- >6.0%

COHB smoker- >10.0%

METHB- 5.0%

### **Capillary Blood Gases**

PH- <7.24 - >7.60

PCO<sub>2</sub> -<20 ->66

PO<sub>2</sub>- <36