

Lifespan Affiliate Policy
The Miriam Hospital
Administrative Manual

Subject:
Managing Critical
and Urgent Test Results

File Under: MS-22 and PS-01

Issuing Department:
Administration

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Page 1 of 7

Approved By:

(Director)

(Executive)

I. Purpose

This Policy is designed to enhance patient safety by establishing guidelines for managing Urgent Tests and verbally transmitted Critical Results of laboratory, radiology and cardiology tests. The objective is for Urgent Tests to be expeditiously obtained and processed, and that those results as well as other Critical Results are promptly communicated and actively verified.

To establish guidelines and criteria for the notification of the ordering or alternate (covering) practitioner (MD, OD, PA or NP), authorized to act on the test results being reported whenever a Critical Result is obtained on any diagnostic procedure or test within the institution. This communication should be documented, along with the times the Critical Result was obtained and the time the result was conveyed to the ordering or covering practitioner. The individual receiving the information is expected to "Read Back" the result along with the pertinent patient demographic information, including the patient's full Name and Date of Birth.

II. Eligibility:

All Ordering Physicians, Nurse Practitioners, Physician Assistants, Nursing Staff, and Diagnostic testing staff including but not limited to: Laboratory, Radiology, Cardiology, and Respiratory involved in testing which could generate a Critical Result or Urgent Test Result.

III. Definitions:

Urgent Tests are those tests that require prompt action for obtaining, processing, and communicating the result of the test. (See Section V).

Critical Results are those results that require prompt communication, acknowledgement and medical decision-making (See Section VI).

IV. Policy:

Each eligible department, as defined above, shall have a Policy and Procedure that outlines the specific issues relevant to their operation. As part of this policy, all individual performing departments will identify and maintain a list of all results, which will be considered “critical”. The hospital has established tiers of critical results. The most urgent of these are considered “Critical Red” results and will be treated as outlined below.

If a Critical Result is obtained, that result must be communicated to the ordering or alternate practitioner within 60 minutes from the time the result is obtained. An intermediate communication to an “authorized agent” may occur, but a second communication from the authorized agent to the ordering or alternate practitioner must take place within the above-specified timeframe. The authorized agent will be the Nurse responsible for the care of the patient or if that individual is not available, the Charge Nurse on that Unit.

The Call Center maintains the “on call” schedules for all Medical Services and can provide departments with appropriate coverage information if the ordering practitioner is no longer on duty. This resource can be utilized for the prompt communication of all inpatient Critical Results and/or Urgent Test Results, when needed.

Once the result is communicated to the responsible ordering or alternate practitioner or authorized agent, the recipient of the information should write down the patient’s full name and date of birth, the Critical Results or Urgent Test Result, and read back that information to the notifying department.

Each individual reporting department is responsible to identify a mechanism in their specific procedures which address the scenario where neither the ordering and/or alternate practitioner can be reached in the specified timeframe. The goal of this mechanism is to ensure that appropriate treatment is not delayed.

V. Urgent Tests:

Urgent Tests are tests that require prompt actions for obtaining, processing and communicating the result of the test. The required time-frame for obtaining, processing and reporting the test result is within three hours. The urgent tests for The Miriam Hospital are the following:

1. Frozen sections from any setting.
2. Methotrexate levels.

VI. Critical Results:
LABORATORY:

RED CATEGORY

Immediate clinical action required (< 1 hr)
Finding with immediate impact on patient care

Hematology	Anticoagulants (<i>Decision to change dosage should be made promptly</i>) INR > 5 PTT > 135 seconds, Notify RN if RN in charge of protocol Fibrinogen < 100 mg/dL, First incidence of Extremes of blood count that have significantly changed (Stable counts of extreme values should not be alerted) HGB < 7.0 g/dL and then again if <5.0 g/dl HCT < 21% and then again if <15% >1,000,000 or <20,000 and then again <10,000 or < 150,000 with > 50, 000 decrease Bacteria in sterile body fluids
Microbiology	<i>All Positive results of the following:</i> Blood cultures Gram stain, CSF, blood, joint fluid Clinical smears and/or tests with microorganisms, from sterile sites Acid-fast smears Rapid testing or stat direct fluorescent antibody, ie: Pneumocystis species, Influenza, Respiratory syncytial virus GC Culture/GC/Chlamydia probes from the eye and/or infants from any source Enteric pathogens - inpatients only Rapid antigen detection of Cryptococcus
Chemistry	<i>In all situations</i> Glucose < 55 or > 400 mg/dL Phosphorous < 1.0 mg/dL Potassium < 3.0 or > 6.0 mEq/L Sodium < 125 mEq/L
Transfusion	Positive gram stain on a blood component associated with a transfusion reaction. Positive direct coombs test or hemoglobinemia in a post transfusion reaction specimen, where the pretransfusion direct coombs test is negative or hemoglobinemia is not present in the pretransfusion specimen.

**Critical Test Result
ORANGE CATEGORY**

Prompt clinical action (6 – 8 hours) is required
to avoid serious adverse outcomes

Hematology

New diagnosis of hematologic malignancies
Positive blood smear for parasites
WBC > 50,000 or an absolute neutrophil count of <500
Blasts on smear
Reticulocytes 0% in anemia

Chemistry

Ammonia > 100 umols/L
Amylase > 250 u/L
Bicarbonate (TCO2) < 12 or > 40 mEq/L
Calcium < 7 or > 11.5 mg/dL
Chloride < 85 or > 120 mEq/L
Cortisol AM < 2.0 ug/dL
Cortisol PM < 2.0 ug/dL
Iron > 300 ug/dL
Lactic Acid > 3.9 mEq/L
Magnesium < 0.7 or > 2.3 mEq/dL
Neonatal Bilirubin > 15 mg/dL
Sodium > 150 mEq/L
T4 < 2.0 or > 18.0 ug/dL
TP > 12.0 g/dL

First incidence of:

Albumin < 1.5 g/dL
BUN > 65 mg/dL
Creatinine > 5.0 mg/dL

Toxicology

First incidence of:

Acetaminophen > 50 ug/mL
Carbamazepine > 20 mcg/mL
Carboxyhemoglobin > 15%
Digoxin > 2.5 ng/mL
Dilantin > 40 ug/mL
Ethanol > 400 mg/dL
Gent (Pre) > 5 mcg/mL
Gent (Post) > 12 mcg/mL
Lithium > 1.6 mEq/L
Phenobarb > 80 mcg/mL
Procainamide + NAPA > 30 ug/mL
Quinidine > 7.0 ug/mL
Salicylate > 40 mg/dL
Theophylline > 30 ug/mL
Valproic Acid > 200 mcg/mL

Vanco (Pre) > 20 mcg/mL
Vanco (Post) > 80 mcg/mL

Microbiology – All positive results of the following: gonorrhea, Chlamydia and herpes on those less than 14 years of age.

Reference Lab as reported by reference lab

YELLOW CATEGORY

Timely and reliable clinical notification required (1-3 days)

Finding that merits rapid detection and evaluation for corrective action

Hematology	Positive sickle cell on blood smear in previously unknown patient
Pathology	New malignancies in surgical pathology excluding basal cell and squamous cell Carcinomas of the skin
Transfusion	Newly discovered positive antibody screen or new antibody detected in the context of a previous transfusion.
Microbiology	<i>First incidence of:</i> VRE/MRSA screen C. Difficile toxin

ABG Blood Gas Lab – RED Critical Values:

pH <7.2 or >7.5

pCO₂@ > 70mmHg

PO₂ < 50mmHg

tHB <8, or Cardiac Bypass tHB <6g/dL

MetHB > 3%

RADIOLOGY- RED Critical Abnormal Results:

1. Tension pneumothorax
2. Unsuspected significant hemorrhage
3. Critically misplaced tube or catheter
4. Acute pulmonary embolism
5. Infection related soft tissue gas

6. Unexplained pneumoperitoneum
7. Ischemic bowel
8. Ectopic pregnancy
9. Midgut volvulus
10. Testicular torsion
11. Acute intracranial process
12. Acute cord compression
13. Acute DVT

CARDIOLOGY:

EKG - The following EKG results are considered Critical Results:

- New ST elevation of 1mm or more in 2 contiguous leads
- New ST depression of 2mm or more from baseline in 2 contiguous leads
- High grade AV block with a ventricular response rate less than 40bpm
- Sustained V-Tach with rate greater than 150bpm, greater than a 10sec duration
- Severe Hyperkalemia: as evidenced by the appearance of a sine wave, loss of P waves, widening of QRS complex, abbreviation of the QT interval, or T waves assuming a peaked appearance.

Exemptions include patients in the coronary care unit since they are already receiving the highest level of care by a cardiologist.

Echo - The following Echo results are considered Critical Results:

- Tamponade
- Acute VSD – post MI
- Aortic dissection
- Obstructive (clotted) prosthetic heart valve
- Pseudoaneurism
- Papillary muscle rupture – post MI

Stress Lab - The following electrocardiographic stress testing changes from a baseline EKG or previous stress test are considered Critical Results:

- Horizontal ST segment depression greater than 2.0 mm in more than 1 lead associated with symptoms indicative of cardiac ischemia
- Up-sloping ST segment depression greater than 2.5 mm in more than 1 lead accompanied by symptoms indicative of cardiac ischemia
- Horizontal or down-sloping ST segment depression greater than 1.0 mm in more than 1 lead during the 1st stage or persisting beyond 8 minutes into recovery accompanied by symptoms indicative of cardiac ischemia
- The presence of complex ventricular activity of multi-focal VPBs, ventricular couplets, ventricular tachycardia, or ventricular fibrillation, complete heart block
- Increase in systolic blood pressure of over 210 during exercise and immediately post exercise

- Increase in ventricular ectopy associated with an increase in heart rate
- Inability of heart rate and blood pressure to rise appropriately during exercise
- A drop in blood pressure greater than 10 millimeters of mercury during exercise

Cross Reference: Administrative Policy: Patient Safety-02
Critical Test Reporting

J/Patient Safety/Communication of Criticals Policy 3/31/08