# Critical Value & Important Called Results Chart;
# UCL & DBQ PA Laboratories

Table  Protocol for Reporting Critical Values/Important Called Results

| Chemistry | Critical Values | Reference Ranges |
|---|---|---|
| **Bilirubin, Total** (infant < 1 month) | ≥ 16 mg/dL | Age dependent |
| **Calcium** | < 6.0 > 13.0 mg/dL | 8.5-10.5 mg/dL |
| **Calcium, Ionized** | < 0.8 >1.60 mmol/L | 1.12-1.32 mmol/L |
| **Carboxyhemoglobin** | ≥ 20% | Non smokers <3%, Smokers <9% |
| **$CO_2$** | < 10 > 40 meq/L | 24-32 meq/L |
| **Glucose** | < 50 > 450 mg/dL | 70-99 mg/dL |
| **Glucose CSF** | < 40 mg/dL | |
| **Glucose (nonfasting) 0-1 month** | < 40 mg/dL > 300 mg/dL | |
| **Lactate** | > 3.9 mmol/L | 0.5-2.2 mmol/L |
| **Magnesium** | < 1.0 > 4.0 mg/dLl | 1.6-3.0 mg/dL |
| **Potassium** | < 3.0 > 6.0 meq/L | 3.5-5.0 meq/L |
| **Sodium** | < 120 > 160 meq/L | 135-145 meq/L |
| **Coagulation** | **Critical Values** | **Reference Ranges** |
| **APTT** | > 100 seconds | 25-37 seconds |
| **INR** | > 5.0 | 0.8 – 1.2<br>2.0-3.0 standard anticoagulant therapy<br>2.5-3.5 high dose oral anticoagulant therapy |
| **Fibrinogen** | < 80 mg/dL | 200 – 393 mg/dL |
| **Hematology** | **Critical Values** | **Reference Ranges** |
| **HGB adult** (> 12 yrs) | < 7.0 > 20.0 gm/dL | Sex dependent |
| **HGB** birth to 15 days | < 12.5 > 22.0 gm/dL | 13.4-19.8 gm/dL |
| **HGB** 15 days to 1 month | < 8.0 > 22.0 gm/dL | 10.7-17.1 gm dL |
| **HGB** 1 month to 12 yrs | < 8.0 > 17.0 gm/dL | Age dependent |
| **Platelet** | < 30 > 1,000 thou/mcL | 140-400 thou/mcL |
| **Platelet** (oncology) | < 10 thou/ mcL | 140-400 thou/mcL |
| **WBC** | < 1.0 > 50.0 thou/ mcL | Age dependent |
| **Absolute Neutrophils** | < 0.5 thou/ mcL | |
| **Toxicology/Therapeutic Drugs** | **Critical Values** | **Reference Ranges** |
| **Acetaminophen** | > 40 mcg/mL | 10-30 mcg/mL |
| **Carbamazepine** | > 15 mcg/mL | 2-10 mcg/mL |
| **Digoxin** | > 2.5 ng/mL | 0.8-2 ng/mL |
| **Lead** (pediatric < 16 yrs) | ≥ 20 mcg/dL | ≤ 4.9 mcg/dL |
| **Lead** (adult ≥ 16 yrs) | ≥ 70mcg/dL | ≤ 4.9 mcg/dL |
| **Lithium** | > 1.5 meq/L | 0.6-1.2 meq/L |
| **Phenobarbital** | > 60 mcg/mL | 10-40 mcg/mL |
| **Phenytoin** | > 25 mcg/mL | 10-20 mcg/mL |
| **Salicylate** | > 40 mg/dL | 15-30 mg/mL |
| **Theophylline** | > 20 mcg/mL | 8-20 mcg/mL |
| **Valproic Acid** | > 125 mcg/mL | 50-125 mcg/mL |
| **Microbiology** | **Critical Values** | **Reference Ranges** |
| **Gram Stain of normally sterile fluids** | Positive | Negative |
| **AFB, culture or stain** | Positive | Negative |
| **Cryptococcal Antigen** | Positive | Negative |
| **Blood or CSF Culture** | Positive | Negative |
| **Normally sterile fluids culture** (pleural, pericardial, peritoneal, synovial) | Positive | Negative |

| Chemistry | Important Called Result | Reference Ranges |
|---|---|---|
| Troponin I (first elevated) | >0.04 ng/mL | 0.00-0.04 ng/mL |
| **Microbiology** | **Important Called Results** | **Reference Ranges** |
| Respiratory Virus Panel; Film Array; PCR | Positive | Negative |
| GI Panel; Film Array; PCR | Positive | Negative |
| Clostridium difficile,; GeneXpert; PCR | Positive | Negative |
| Chlamydia/GC; GeneXpert; PCR | Positive | Negative |
| MRSA, Nasal Screen; GeneXpert; PCR | Positive | Negative |
| Stool Culture | Any enteric pathogen | Negative |
| Ova & Parasite | Any parasite | No parasites seen |
| Giardia/Crypto Screen | Positive | Negative |
| Chlamydia/GC Screen | Positive | Negative |
| The following organisms for ANY culture | Positive | Negative |
| Methicillin Resistant Staphylococcus aureus (MRSA) | | |
| Vancomycin-Resistant Staphylococcus aureus (VRSA) | | |
| Neisseria meningitides (Blood or CSF) | | |
| *Multi-Drug Resistant Organism (MDRO) | | |
| Coccidioides immitis | | |
| Histoplasma capsulatum | | |
| Cryptococcus neoformans | | |
| Blastomyces dermatitidis | | |
| Sporothrix schenckii | | |

**Multi-Drug Resistant Organism (MDRO): 1) Less than 3 susceptible antibiotics, 2) Extended Spectrum Beta-Lactamase (ESBL) positive organisms, 3) Penicillin Resistant Streptococcus pneumoniae.**

**Approved by Mercy Medical Staff Executive Committee on January 12, 2016.**
**Approved by Finley Medical Staff Executive Committee on January 18, 2016**

**Protocol for Calling Critical Values and Important called results.**

**ARUP Critical Results Contact Information for CAP Inspection**

**Mayo Critical Values/Critical Results Policy**

January 2014 (Revised: Lactate, Added: Hgb 15 days – 1 month) L. McGovern, D. Slagel, P. Ellerbeck
March 2014 (Revised: Added Carboxyhemoglobin, & Lead adult) J. Brennan, R. Maiers
June 2014 (Revised: Updated Digoxin & Salicylate units of measure) S. Kopp, R. Stoffel
December 2014 (Revised: APTT Reference Range) L. McGovern
July 2015 (Added Troponin I (first elevated)) L. McGovern, J. Brennan, D. Slagel
August 2015 L. McGovern, S. Hosch, R. Maiers, R. Stoffel (Separated from protocol, Added Important called results, Removed Bacterial Antigen & Blood Culture PCR for MRSA)
February 2016 L. McGovern, P. Ellerbeck (Added Fibrinogen critical value)
April 2016 L. McGovern (Added Glucose nonfasting 0-1 month critical value, Revised Lead reference range)
May 2016 L. McGovern, D. Slagel (Removed osmolality critical values)
May 2016 E. Bartels, L. McGovern (Added MRSA, Nasal Screen, PCR to Important Called Results)
June 2016 L. McGovern, D. Slagel (Glucose Reference Range)
July 2016 S. Hosch/L. McGovern (Added link to ARUP and Mayo critical value reporting documents)
December 2016 L. McGovern (Removed Clinitest; child < 2yrs)
December 2016 R. Stoffel (Revised: Theophylline Therapeutic Reference range)

Pathologist:_____Date: _____

President of MEC – Mercy:_____Date: _____

President of MEC - Finley: _____Date: _____

# Protocol for Reporting Critical Values & Important Called results:

Upon discovery/verification of a critical value or important called result, the technologist who performs the test (or edits the data for upload):

1. Identifies the patient, using their first and last name and birth date, the time the sample was obtained and report the critical value/important called result with the description of low or high if applicable.
   A. If there is a reportable range posted in the written procedure for the analyte and the critical value falls within those limits, report the value. No repeat or special verification procedure is typically warranted.
   B. If the quantitative result is outside the reportable range and/or requires verification, relay as much information about the result as you can without reporting an actual number; i.e., indicate whether the critical value is very "high" or "low" to what might be expected. Tell the recipient of the information that you are in the process of verifying the result and that you will phone back.
2. Call the nursing station or the Dr.'s office (if outpatient) and inform them that you are uploading/reporting a critical value or important called result on a patient. Ask for a registered nurse or other licensed caregiver. If they are not available, another competent individual, such as the unit secretary or physician office staff, can be notified of the critical value/important called result.
   **Note: At Finley you are required to give the result to a licensed caregiver.**
3. Hospital discharged patients:
   A. At Mercy Medical Center-Dubuque and Finley:
      If the patient was a hospital inpatient when the test was ordered, and is now discharged, report the result to the Hospitalist on duty.
   B. At Mercy Medical Center-Dyersville:
      If the patient was a hospital inpatient when the test was ordered, and is now discharged, report the result to the Acute Nurse's Station.
4. Outpatients: Critical value results are called to the ordering provider's office during normal business hours. Refer to "Outpatient Critical Value Notifications" for instructions and information for critical value result notifications after normal business hours.
5. The technologist reporting the critical value or important called result documents the following in Mlab.
   A. His/her initials,
   B. The full name of the person who is taking the call and their location,
   C. The time the call was made.
6. The person who is receiving the call from the laboratory staff will:
   A. Repeat the information that was given,
   B. Relay the information to the appropriate staff (either the ordering physician or a nurse who has been assigned the patient),
   C. Record the information provided by lab staff as dictated by their hospital/office policy. Additional information recorded must include the provider notified, provider notification date/time and action taken.
7. Laboratory verification of a "critical value":
   A. As stated above, some cases require no special verification procedure.
   B. In other cases, however, verification may require a repeat of the test on the same sample along with an appropriate control challenge.
   C. Other circumstances may require collection and assay of another sample or reanalysis bracketed by known normal patient samples.
   D. If uncertain of the verification procedure, consult with the Manager/Supervisor.
8. Reporting critical values in the LIS:
   In addition to the established "Protocol for Reporting Critical Values" all critical results will be identified in the LIS by specifying the critical analyte name followed by a space and adding the comment "critical value" or if circumstances warrant verification of the results, "critical value, results verified" in the analyte comment field.

i. August 2015 L. McGovern, S. Hosch, R. Maiers, R. Stoffel (Added Important called results, and revised 1-6.))
ii. September 2015 L. McGovern (Revised: 1.A.)
iii. November 2015 L. McGovern (Revised: 3.B.)
iv. November 2016 L. McGovern (Revised: 3.added)
v. December 2016 L. McGovern (Revised: 3., 4 added)

Technical Manager: _____Date: _____

Pathologist: _____Date: _____