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|  | **Critical Values and Result Correction**  **CL-CH126** | **Dept:** | Clinical Core Lab-  Chemistry Section |
| **Effective Date:** | Aug. 6, 2016 |
| **Revised Date:** |  |
| **Contact:** | Clinical Core Lab-  Chemistry Management |
| **Name & Title:** Gregory J. Pomper, MD  CLIA Laboratory Medical Director | | **Date:** |  |
| **Signature:** | | | |

1. **General Procedure Statement:** 
   1. **Scope:** To provide laboratory testing personnel with instructions for performing

laboratory procedures of calling critical values and result correction as deemed appropriate by industry practices and regulatory agencies to assist in quality patient care.

* 1. **Responsible Department/Party/Parties:** 
     1. Procedure owner: Clinical Core Laboratory Management-Chemistry
     2. Procedure: Clinical Core Laboratory Personnel
     3. Procedure prepared by: Elma Wilson / Emily Dockery
     4. Supervision: Clinical Core Laboratory Management-Chemistry

Clinical Core Laboratory Specialist and Designees

Medical Director Clinical Chemistry

1. Implementation: Clinical Core Laboratory Management-Chemistry

Clinical Core Laboratory Specialist and Designees

Medical Director Clinical Chemistry

1. **Definitions:**

a) Critical Value: is a value that may require rapid clinical attention to avert significant patient morbidity or mortality.

b) Corrected Result: is any change in a previously reported value.

1. **Procedure:**

# CRITICAL VALUES

If the patient results exceed the limits below, the floor has to be notified on the phone of the results. Check to make sure the proper sample handling was done to eliminate reasons for the critical value, example: drawing from arm with IV. These values should be called to the charge nurse or responsible physician. Identify the patient by name and medical record number. Append a comment to the critical value with the name to whom the result was called, the date and time of the call, “read back” of the result given and any other appropriate comments into the LIS system to ensure that the proper procedure was followed. See the department of Pathology Critical Value Policy for more information.

**Different ways to contact providers or caregivers for questions or criticals:**

1. Call number on the requisition if provided.
2. If after hours in-network clinic, call the after-hours Critical Value Line at 6-7344.
3. If after hours Outreach locations refer to the spreadsheet located on the Share Point website.
   1. http://ishare.wakehealth.edu/wfdxlab/QuickReferenceExcelDocs/Forms/AllItems.asx
4. Call the floor if it is an inpatient.
5. Try the PAL line.
6. Call Physician “on call”
7. After 3 tries, call Pathology on call.
8. Cannot contact any of the above, page Dr. Pomper or Dr. Palavicino, or Dr. Fadeyi.

Chemistry list of Critical Values:

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| **Assay** | **Lower Limit** | **Upper Limit** | **Comments** |
| Sodium | < 120 meq/L | >160 mEq/L |  |
| Potassium | < 3.0 meq/L | > 6.0 mEq/L |  |
| CO2 | <10 meq/L | >40 mEq/L |  |
| Glucose | < 50 mg/dL  <45 mg/dL  for 0-7 days old | > 600 mg/dL  >300mg/dl (peds) |  |
| Calcium | < 6.0 mg/dL | > 11.5 mg/dL |  |
| Phosphorus | < 1.0 mg/dL | >12.0 |  |
| Bilirubin, Total |  | >18.0 | Newborns only  (0 days – 1 month) |
| Magnesium | < 1.0 mg/dL | >6.0 |  |
| Acetaminophen |  | > 20.0 ug/mL |  |
| Carbamazepine |  | > 20 ug/mL |  |
| Digoxin |  | >2.0 ng/mL |  |
| Phenobarbital |  | > 40.0 ug/mL |  |
| Phenytoin |  | > 40.0 ug/mL  >20.0 ug/mL(peds) |  |
| Salicylate |  | > 30.0 mg/dL |  |
| Theophylline |  | > 30.0 ug/mL |  |
| Valproic Acid |  | > 150.0 ug/mL  >120ug/Ml (peds) |  |
| Amikacin | TR >10.0 mg/dL | Peak > 30.0 mg/dL | Outpatient only |
| Gentamycin | TR >2.5 mg/dL | Peak >10.0 mg/dL | Outpatient only |
| Tobramycin | TR >2.5 mg/dL | Peak >10.0 mg/dL | Outpatient only |
| Vancomycin | TR >25.0 mg/dL |  | Outpatient only |
| Lactic Acid |  | >4.0 mg/dL |  |
| Lithium |  | >2 mmol/L |  |

When critical results are communicated, a “read-back” of the results is requested and documented via the Laboratory Information System. Critical results must be reported within 30 minutes after results are available. It has to be done in a timely manner. First and last name of person receiving the result is required. First name alone is not acceptable.

A QA report will be generated the following day of all critical values. The Manager or designee checks if there are critical results that were missed and not called and start investigation.

# CORRECTION OF LABORATORY VALUES

In the event that a result reported by the Clinical Chemistry Laboratory must be corrected, the following protocol will be followed.

1. The corrected result will be entered into the EPIC/BEAKER LIS. At this time the LIS appends a correction statement onto the result. The physician or charge nurse will be notified by telephone of the correction. The result will then be modified so that a free text comment is added stating that the physician or nursing station was notified along with the time of the telephone call. Document the time and date called and name of person notified who read-back the values.
2. The BEAKER LIS SYSTEM generates a "Daily Corrected Component Lab Results" and this shows all corrected results for the previous day. This report is checked daily by the Manager or designee.

All corrections must be reported in a timely manner.

**Possible reasons for correction:**

* Corrected after retesting
* Corrected due to QC investigation
* Corrected result due to user error
* Instrument malfunction
* Results entered on wrong patient
* Test done on wrong patient
* Test done on wrong specimen
* Results removed at request of physician for cancellation

1. **Review/Revision/Implementation:**
   1. Review Cycle: 2 years
   2. Office of Record: Department of Clinical Core Laboratory-Chemistry
   3. All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.
   4. All reviewed procedures and procedures with minor revisions can be signed by the designated section medical director.
2. **Related Procedures:**
3. **References, National Professional Organizations, etc.:**
4. **Attachments:**
5. **Revision Dates:**

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| **Review Date** | **Revision Date** | **Signature** |
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