



HEALTH HOLDING

HAFER ALBATIN HEALTH
CLUSTER
MATERNITY AND
CHILDREN HOSPITAL

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|--------------------------|---|-------------------------|---------------|
| Department: | Laboratory and Blood Bank | | |
| Document: | Multidisciplinary Policy and Procedure | | |
| Title: | Critical Laboratory Results Reporting and Documentation | | |
| Applies To: | All Laboratory, Blood Bank Staff and Nursing Staff | | |
| Preparation Date: | January 12, 2025 | Index No: | LB-MPP-184 |
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1. PURPOSE:

- 1.1 To provide a standardized method to define, and document the immediate reporting of laboratory results, which exceed the defined critical range.

2. DEFINITONS:

- 2.1 **Critical Result:** Are those results that may require rapid clinical attention to avert significant patient morbidity and mortality and should be immediately notified to treating physician to take immediate and appropriate action.

3. POLICY:

- 3.1 It is the policy of the laboratory to notify the ordering location of any laboratory results which are so far from the reference range that they indicate a potentially dangerous condition requiring immediate attention by the clinician.
Critical laboratory results are always reported by telephone. In accordance with CBAHI requirements, it is required that we request a read-back of results to ensure that the results were properly noted by the recipient.

4. PROCEDURE:

- 4.1 **Identification of results that should be reported as critical :** See Appendix 7.1 - Critical Results / Range Lists Test results that fall into the defined critical range must be subjected to result verification process before notifying to the treating physician or ward nurse in-charge by telephone.
- 4.2 **Identification of the notified party:**
 - 4.2.1 Inpatients - to ordering physician or to in-charge nurse of inpatient unit
 - 4.2.2 Outpatients - to ordering physician
 - 4.2.3 ED - to ordering physician / nurse on duty.
 - 4.2.4 Identification of the means of communicating the critical results.
- 4.3 **The patient's full name and Medical Record Number (MRN)** should be used as the patient identifier when communication critical results to responsible care -givers. Room and bed numbers are NOT to be used to identify patients.
 - 4.3.1 Description of the sequence of conveying the result and read back:
 - 4.3.1.1 The following script shall be used when communicating critical results :
 - 4.3.1.1.1 Hello, this is (staff name and ID number) calling from the (section) Lab.
 - 4.3.1.1.2 I have a critical result for patient with Name and MRN _____.
 - 4.3.1.1.3 The critical result is for (test). The result is _____.
 - 4.3.1.1.4 Please repeat back to me the result I have given you.
 - 4.3.1.1.5 May I have your Name and ID number? Thank you for your help".

4.4 **Documentation of critical results notification event:** Verbal communication of critical results must be documented in the Lab. Log Book or data format as per sectional policy, and include the following information:

- 4.4.1 Name of the staff member reporting the result;
- 4.4.2 Name of the staff member receiving the result;
- 4.4.3 Date and time of the notification.;
- 4.4.4 Documentation of "read-back";
- 4.4.5 Identification of the notifying person (name of the staff member reporting the result);
- 4.4.6 Identification of the notified person (name of clinical staff member receiving the result).

5. MATERIAL AND EQUIPMENT:

- 5.1 Critical Result/ Range List.
- 5.2 Critical Result report.

6. RESPONSIBILITIES:

- 6.1 The responsibility of implementing and ensuring compliance with this Policy and Procedure lies with the Laboratory Department, Nursing Affairs, Clinical Services and Medical Director. Responsibility for updating and archiving this policy rests with the Laboratory Department.

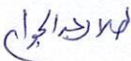
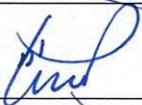




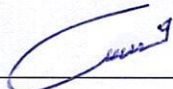
7. APPENDICES:

- 7.1 Critical Result / Range

8. REFERENCES:

- 8.1 STANFORD University Medical Centre - Pathology and Laboratory Medicine – Critical / Panic Values, 2011 - 2012
- 8.2 Department of Laboratory Medicine – Panic values, 14 Jun 2000
<http://depts.washington.edu/labweb/test/panic.html>)
- 8.3 Gribbles Pathology, 1996 (<http://www.gribbles.com.my/quality2.html>)
- 8.4 Shands Jacksonville, 11 Oct 2011 ([www.hscj.ufl.edu/resman/manualpdfs/LAB-critical tests](http://www.hscj.ufl.edu/resman/manualpdfs/LAB-critical%20tests))

9. APPROVALS:

| | Name | Title | Signature | Date |
|---------------------|-------------------------------|------------------------------------|---|------------------|
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| Reviewed by: | Mr. Abdulelah Ayed Al Mutairi | QM&PS Director |  | January 16, 2025 |
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Appendix 7.1: CRITICAL RESULT / RANGE:

Kingdom of Saudi Arabia
Hafar Al Batin Health Cluster
Maternity and Children Hospital



المملكة العربية السعودية
التجمع الصحي بحفر الباطن
مستشفى الولادة والأطفال

CRITICAL RESULT / RANGE

| TEST | < less than (Low) | > greater than (High) | Units |
|---|-------------------|-----------------------|------------|
| CLINICAL CHEMISTRY | | | |
| Ammonia (children) | -- | 109 | umol/L |
| | | 152.7 | µg /dl |
| Amylase | -- | 1000 | U/L |
| Albumin (children) | 17 | 68 | g/l |
| | 1.7 | 6.8 | g/dl |
| Bilirubin(New Born) | -- | 256.5 | umol/L |
| | | 15.0 | mg/dl |
| Calcium | 1.25 | 3.25 | umol/L |
| | 6.0 | 13.0 | mg/dl |
| Calcium (children) | 1.62 | 3.17 | umol/L |
| | 6.5 | 12.7 | mg/dl |
| Blood Glucose | 50 | 500 | mg/dl |
| | 2.78 | 27.8 | mmol /L |
| CSF Glucose | 20 | -- | mg/dl |
| | 1.11 | -- | mmol L |
| Potassium | 2.0 | 6.5 | mmol/L |
| Potassium (for Patients known to be on dialyses) | -- | 7.0 | mmol/L |
| Potassium for neonate | 2.8 | 7.8 | mmol/L |
| Magnesium | 0.411 | 1.85 | mmol/L |
| | 1.0 | 4.5 | mg/dl |
| Sodium | 120 | -- | mmol/L |
| CKMB | -- | 50 | U/L |
| Phosphorous | 0.323 | -- | mmol/L |
| | 1.0 | -- | mg/dl |
| TROPONIN | -- | 0.1 | ng/ml |
| HEMATOLOGY | | | |
| White blood cells (WBCs) Neutrophil | <=500 | >= 50,000 | Cells / ul |
| Hb (hemoglobin) | <= 7.0 | >= 18.0 | g/dl |
| MCV (Mean cell volume) | | >= 110 | fl |
| Platelets | <= 20,000 | > = 900,000 | Cells / ul |
| Differential count: Neutrophil | -- | >= 90 | % |
| Differential count: Lymphocyte | -- | >=60 | % |
| D-Dimer | -- | >= 40 | Ug/ml |
| Prothrombin time (PT) | -- | > 30 | seconds |
| Prothrombin time (PT) - patients on oral anticoagulant | -- | > 60 | seconds |
| Partial Thromboplastin time (PTT) | -- | > 70 | seconds |
| Partial Thromboplastin time (PTT) - patients on heparin | -- | > 120 | seconds |
| INR | -- | > 5.0 | |
| Fibrinogen | < 0.5 | -- | g/l |
| All previously unknown patients with blast cells. | | | |
| All previously unknown patients with blood parasites. | | | |



CRITICAL RESULT / RANGE

| TEST | < less than (Low) | > greater than (High) | Units |
|--|---|--------------------------|--------------|
| BLOOD BANK - TRANSFUSION SERVICE | | | |
| Hemolytic Transfusion Reaction | Positive | | N/A |
| Unacceptable Blood Specimen | Hemolysis / labeling | | N/A |
| Blood product unavailability | Inventory shortage | | N/A |
| Red cell-incompatibility found after emergency cross-match | Incompatible cross match | | N/A |
| Positive antibody screening with cross match order | Time required for antibody identification | | N/A |
| MICROBIOLOGY | | | |
| Positive Blood culture | | | |
| Positive Direct Gram stain exam or culture of CSF | | | |
| Positive direct examination from sterile body fluid/site | | | |
| Positive culture of sterile body fluid | | | |
| Positive AFB stain or culture from any specimen | | | |
| PARASITOLOGY | | | |
| Urine analysis Ketones | -- | | + 2 |
| SEROLOGY | | | |
| Brucella Antibody Titer (Out Patients only) | -- | | > or = 1:640 |
| Positive HIV Antigen and Antibody | | | |
| Positive Hepatitis B Core IgM antibody (new Hepatitis B Infection) | | | |
| Positive HCV Antibody | | | |