


Procedure/s of Communicating Urgent Critical Results

(Department of Laboratory)



Procedure/s of Communicating Urgent Critical Results

Document Title	Procedure/s of Communicating Urgent Critical Results
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Signature		Signature	
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Acronyms

AMRH	Al Masarra Hospital
HOD	Head Of Department
HC	Health Center
LAB	Laboratory
Vers.	Version Number
OPD	Outpatient Department
PRO	Public Relations Officer
P&P	Policy & Procedure
SOP	Standard Operating Procedure
MDR	Multi Drug Resistant organism
HIV	Human Immunodeficiency Virus
MRSA	Methicillin Resistant staphylococcus aureus

Purpose:

To define and list tests with critical limits, standardize practice and guide staff on channel of communication, appropriate documentation and read back verification.

Scope

This document is applicable to the all-laboratory staff, physicians, psychiatrists, and nursing staff of Al Masarra Hospital (AMRH)

Definitions

- **A Critical Result:** a test result which may signify a pathophysiological state that is potentially life threatening or that could result in significant patient morbidity or irreversible harm or mortality and therefore requires urgent medical attention and action. Commonly used alternative terms are critical values, panic values, critical alarms, or alarm values.
- **Read Back Verification:** for any verbal report of a test with critical value, the recipient must record and then read back the message to the caller at the same time result is given.

Procedure:

1. Notification by Laboratory Department.

1.1. Verification and notification of critical value During Working Hours:

- Critical results are identified according to the attached laboratory lists for different sections in the laboratory. (See Appendix 1. Laboratory Critical Results.) They usually appear in red color for tests connected to Al Shifa 3+ system. The operating staff should inform the section in-charge immediately during the normal working hours.
- The integrity and labeling should be crossed checked.
- The sample has to be retested and confirmed prior to notification according to the test specific protocol. (See Appendix 2. Laboratory Action Plan for Critical Value.)
- The laboratory doctor should be informed immediately to correlate with patient data.
- The operating staff has to release the report after notifying the assigned focal unit medical officer doctor/medicine on call. (See Appendix 3)
- The laboratory staff should inform the assigned focal unit medical officer doctor or medicine on-call doctor depending on the test (During working hours) and not anyone else. If no response after 3 attempts with medical officer proceed to cross cover for 3 attempts if still no response inform lab HOD.
- The timeline of critical result report delivery should not exceed 30 minutes after result verification.
- In the verbal notification, the following information should be given:
 - Clear introduction including name of lab staff, department, and section.
 - Reason for phone call: Critical value according to the hospital critical result policy.
 - Patient involved: two identifiers:
 - Full name
 - Hospital number or

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- Date of birth
- Name of doctor
- Give result and request for **Read Back** of information given.
- For new cases of MRSA, MDR and HIV infection control is also notified.

1.2. Document the following in Al Shifa 3+ System at the lab comment Section:

- Add the shortcut (CRT) in the lab comment and fill.
- Name of the lab staff (Caller)
- Name of the doctor who received the result.
- Time of notification and the date.
- Verification that read back was obtained.
- Document any failure of attempts to notify.
- Send SMS by Shifa 3+ to unit doctors.
- Register in the Excel sheet for critical result file of the concerned section.

2. Notification of Critical Values for Out of Working Hours:

- Once the critical results are identified and the first steps in section 1.1 are followed by the laboratory staff, the result shall be promptly communicated to the second on call doctor. The message should be delivered within 30 minutes.
- Notification, read back verification and documentation must be followed as documented in section 1.1. to 1.2.
- Register in the phoned result Excel sheet file of the concerned section.

3. Notification of Critical Results of samples received from other health institution:

- Once the critical results are identified and steps 1 to 5 in section 1.1 are followed by the laboratory staff, the result shall be promptly communicated to the assigned focal point.
- Notification, read back verification and documentation must be followed as documented in section 1.1 up to 1.2.

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- In case of failure to notify the lab in-charge of requesting laboratory, the wilayat lab focal point has to be informed about the result.
- The operating staff has to release the report after notifying the focal point.
- Register in the phoned result file of the concerned section.

4. Channel of communication for a Critical Value at patient areas.

4.1. Channel of communication for admitted and Casualty Patients:

- The receiver of Critical Value has to acknowledge the receipt to the caller by:
 - Repeating the two identifiers of the patient:
 - Full name
 - Hospital number or
 - Date of birth
 - Repeating the received message (Call back verification).
- Inform Head of unit and Nurse Shift in-charge.
- Inform the concerned departments when applicable and agree on the action plan.
- Throughout process of communication, document in patient progress notes the following:
 - The type and time of message received.
 - Name of caller.
 - The action taken.

5. Channel of communication for Discharged and OPD patients:

- The receiver of Critical Value has to acknowledge the receipt to the caller by:
 - Repeating the two identifiers of the patient.
 - Full name
 - Hospital number or
 - Date of birth
 - Repeating the received message (Call back verification).
- The receiver informs head of unit and agrees on the action plan.

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- The receiver contacts the patient immediately as applicable.
- Document in patient progress notes the following:
 - The type and time of message received.
 - Name of caller.
 - The action taken.
 - The contacted number of patient and information given.
- Hand over the message to PRO and OPD Nurse in-charge for follow-up.

Responsibilities:

1. **Lab Technician** shall confirm the critical value, initiate cascade of notification and document in Al Shifa 3+ System and register and send SMS to Unit Doctor.
2. **Section In-charge**
 - Ensure that the procedure of critical value is strictly followed by the staff, inform the concerned lab doctor and initiate escalation procedure if required.
 - Follow up documentation of critical result weekly.
3. **Lab In-charge**
 - Follow and review the notification of critical values and audit the compliance to the policy along with section in-charge and quality officer on regular basis.
 - Ensure all contact numbers are updated.
4. **Lab Doctor** shall follow and ensure full adherence to the policy and participate in the audit.
5. **Lab Quality Officer** shall Audit the adherence to the policy on regular basis and report to Lab HOD.
6. **Lab HOD shall**
 - Be approachable to and collaborate with all concerned parties and answerable to any further action.
 - Follow up investigation of any auditor occurrence and develop action plan with responsibility when needed.
7. **Requesting Doctor** shall be approachable and answerable to the calls and act properly on time to the report.

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8. **Ward Shift In-charge** shall be answerable to the call and act on immediately and on time to the received call.
9. **Assigned Staff Nurse** shall give timely and appropriate action on the received report and plan.
10. **Head of Concerned Department/Unit shall**
 - Ensure that the contact numbers are updated and activated.
 - Ensure that the policy and action plan are clearly followed.
11. **Public Relations Officer (PRO)** shall collaborate and help in timely report delivery to the concerned party and follow up when needed.
12. **Quality Management and Patient Safety Department** shall follow-up the compliance to the policy and guide in investigating occurrence with regards to communication of critical results.
13. **Hospital Administration** shall be ready to help as ultimate way in channel of communication of critical result.

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Document History and Version Control Table

Version	Description	Review Date
1	Initial Release	October 2023
2	Version Two	October 2026
3		

References:

C.A. Campbell, (2014), Harmonization of critical result management in laboratory medicine, Clinica Chimica Acta 432.

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Annexes

Appendix 1. Laboratory Critical Results Table

	Test Name	Critical Low	Critical High	Units	Whom to Notify
Haematology	Activated PTT	-	≥150	sec	Medicine <u>Oncall</u>
	INR	-	≥4		Medicine <u>Oncall</u>
	Hemoglobin	≤6 male ≤7 female	≥20	g/dl	Medicine <u>Oncall</u>
	Leucocytes	<2.0	≥30.0	10 ⁹ /L	HOU
	Platelets	<50	≥1000	10 ⁹ /L	HOU
	Absolute neutrophil Count	≤0.5		10 ⁹ /L	HOU
	Malaria Parasite	Positive			Medicine <u>Oncall</u>
Biochemistry	Amylase		≥200	U/L	HOU
	Bilirubin, Total		≥300	Umol/L	HOU
	AST		≥1000	U/L	HOU
	ALT		≥1000	U/L	HOU
	Calcium, Total	<1.75	>3	mmol/L	Medicine <u>Oncall</u>
	CO2	<12	>40	mmol/L	HOU
	<u>Creatinine</u>		>500	umol/L	HOU
	Glucose	<2.5	>22	mmol/L	Medicine <u>Oncall</u>

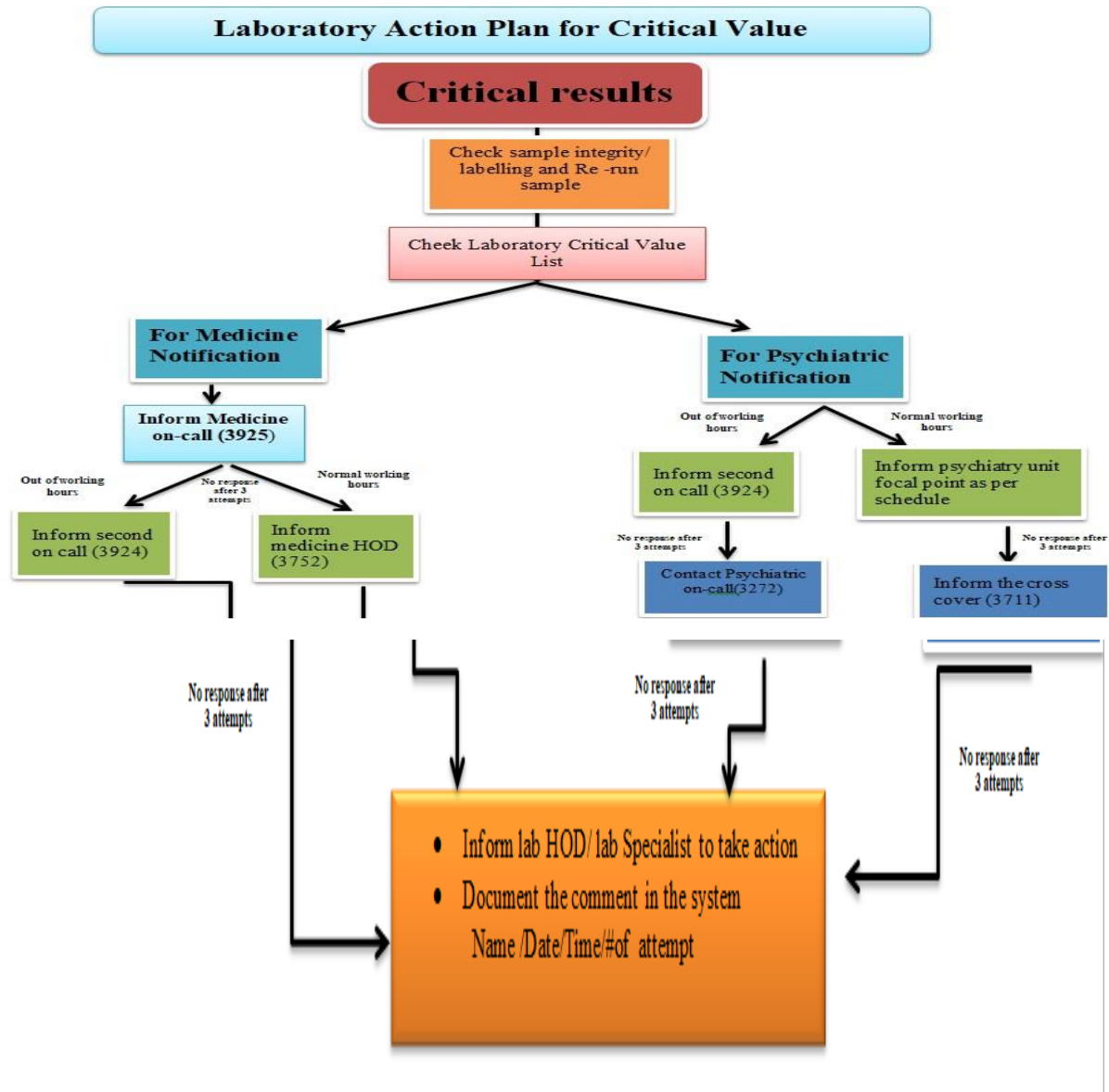
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Biochemistry	Glucose	<2.5	>22	mmol/L	Medicine Oncall
	Magnesium	<0.5	>1.5	mmol/L	HOU
	Phosphorus	<0.3	>3	mmol/L	HOU
	Potassium	<3	≥6	mmol/L	Medicine Oncall
	Sodium	≤120	≥160	mmol/L	HOU
	Troponin		>14	ng/ml	Medicine Oncall
	Urea	<0.2	>35	mmol/L	HOU
	Alcohol		≥400	mg/dL	HOU
	Lithium		>1.2	mmol/L	HOU
	Blood Gases pH (arterial & Venous) pCO ₂ (arterial & Venous) pO ₂ (arterial)	<7.25 <30 <50	>7.5 >50 >90		mmHg
Therapeutic Drug Monitoring	Carbamazepine		>50.8	umol/L	HOU
	Valproate		>693	umol/L	HOU
Microbiology	Blood culture		Positive		Medicine Oncall
	AFB smear		Positive		IPC
	TB culture		Positive		IPC
	MRSA		Positive For 1 st time		IPC
	CRE				

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Microbiology					IPC
	TB culture		Positive		IPC
	MRSA		Positive For 1 st time		IPC
	CRE				
	MDR <u>Acinetobacter</u>				
	Group A strep in Throat		Detected		IPC
	CSF culture/ Bacteria in CSF gram stain		Positive		Medicine <u>Oncall</u>
	Bacterial Antigen for CSF		Positive		Medicine <u>Oncall</u>
	Urine Ketone		Positive		HOU
Hormones Serology	TFT TSH Free T4 FreeT3	≤0.05 <2.0	≥100 >40 >20	<u>miu/L</u> <u>pmol/L</u> <u>pmol/L</u>	HOU
	Prolactin		>2100	<u>miu/L</u>	HOU
	Neonatal TSH(cord blood)		>40	<u>miu/L</u>	--
	HIV- <u>Ab</u> for <u>Rebleed</u>		Positive (by Section <u>Incharge</u>)		HOU
	HIV- <u>Ab</u> Confirmed		Positive (by Lab Doctor)		HOU+ IPC

Appendix 2. Flow Chart of Critical Result



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Appendix 3. List of Unit Medical Officer

Doctor Name	Designation	CORD
Normal working hours		
Unit (A)		
<u>Dr.Salman Ahmed</u>	M.O	3646
Unit (B)		
<u>Dr. Ahmed Habib Rasol</u>	M.O	3726
Unit (c)		
<u>Dr.Fatma Badar Al Rayami</u>	M.O	3931
Addiction Psychiatry Dep		
<u>Dr.Abdul Rahaman Fathelalim</u>	M.O.	3934
Unit (G)		
<u>Dr. Hazim Mohamed (G1)</u>	M.O.	3748
<u>Dr.Samy al badri (G2)</u>	M.O.	3928
Forensic		
<u>Dr. Ahmed Mahgob</u>	M.O	3766
Sleep clinic		
<u>Dr.Said Al-Kaabi</u>	Cons	3907
<u>Dr. Salma tawer Aldawh</u>	M.O.	3642
Child psychiatry		
<u>Dr. Arwa</u>	M.O	3930
Emergency		
<u>Dr.Mammdoh</u>	M.O	3271
Medicine No: 3925		3925
Out of working hours		
Second on call		3924

- ❖ **Note:** If no response after 3 attempts with medical officer proceed to cross cover (3711) for 3 attempts if still no response please inform lab HOD.

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Appendix 4. Audit Tool

Department: _____


Date: _____

Auditor's Name: _____

#	Criteria	Yes	No	N/a	Remarks
Knowledge of the Guideline/Procedure/Protocol (Interview)					
1	Is/are the staff aware of the content of the document?				
2	Is the staff aware about the channel of communication procedure at the lab department?				
3	Is the staff aware about the channel of Communication in the ward/OPD/A&E and other health institution?				
Training (Document Review & Interview)					
4	Is there a training conducted?				
Observation					
5	Are the Random Sample Reports showing compliance with documentation at lab department?				

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Appendix 5: Document Request Form

Document Request Form			
MoH/DGQAC/GUD/001/FRM001/Vers.2			
Section A: To be completed by Document Writer			
Writer Details			
Name	Dr. Nada Al Tamtami	Date of Request	October 2023
Institution	Al Masarra Hospital	Contact information	----
Department	Laboratory		
Purpose of Request:			
<input checked="" type="checkbox"/> Develop new document <input type="checkbox"/> Modify existing document <input type="checkbox"/> Cancel existing document			
Document Information			
Document title (for new & existing documents)	Procedure/s of Communicating Urgent Critical Results		
Document code (for existing documents)	AMRH/LAB/GEN/SOP/001/Vers.01		
Required Amendments	<i>nil</i>		
Reasons	<i>nil</i>		
Section B: To be completed by			
Document Section of Quality Management and Patient Safety			
<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Rejected <input type="checkbox"/> Cancelled			
Comment and Recommendation: <i>To proceed with the document</i>			
Name and Title	Kunooz Balushi  Document Manager	Date	October 2023

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Appendix 6: Document Validation Checklist

Document Validation Checklist					
Document Title: Procedure/s of Communicating Urgent Critical Results			Document Code: AMRH/LAB/GEN/SOP/001/Vers.01		
No	Criteria	Meets the Criteria			Comments
		Yes	No	N/A	
1.	Approved format used				
1.1	Clear title – Clear Applicability	/			
1.2	Footer complete	/			
1.3	Involved departments contributed	/			
2.	Document Content				
2.1	Clear purpose and scope	/			
2.2	Clear definitions	/			
3.	Well defined procedures and steps				
3.1	Procedures in orderly manner	/			
3.2	Procedures define personnel to carry out step	/			
3.3	Procedures/methods define the use of relevant forms	/			
3.4	Procedures to define flowchart	/			
3.5	Responsibilities are clearly defined	/			
3.6	Necessary forms/checklist and equipment are listed			/	
3.7	Forms are numbered			/	
3.8	References are clearly stated	/			
4.	General Criteria				
4.1	Procedures are adherent to MOH rules and regulations	/			
4.2	Procedures are within hospital/department scope	/			
4.3	Relevant central policies are reviewed	/			
4.4	Used of approved font type and size	/			
4.5	Language is clear, understood and well structured	/			
Reviewed by:		Kunooz Al Balushi (Document Manager) 