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|--|-----------------------------|----------------------------|---------------------|-------------|------------------|
| Institution Name: Al Masarra Hospital | | | | | |
| Document Title: Policy and Procedure of Radiology | | | | | |
| Approval Process | | | | | |
| | Name | Title / Designation | Institution | Date | Signature |
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Acronyms

| | |
|-------|--|
| ALARA | As Low As Reasonably Achievable |
| AMRH | Al Masarra Hospital |
| PACS | Picture Archiving and Communication System |
| CD | Compact Disc |
| CT | Computed Tomography |
| ID | Identification |
| LMP | Last Menstrual Period |
| MO | Medical Orderly |
| MOH | Ministry of Health |



Policy and Procedure of Radiology

1. Introduction

The Medical Imaging Department of Al Masarra Hospital (AMRH) hospital provides 24-hour services through X-ray examinations and general plain Computed Tomography (CT) scan studies. These aids physicians on properly assessing, ruling out, or diagnosing a joint abnormalities, broken bones, spinal injuries, alignment correction of growing bones, and stabilization of fractured bony fragments following a fracture treatment. Moreover, CT scans imaging helps psychiatrist to rule out any organic causes prior to starting psychiatric treatment and medications.

2. Scope

This document is applicable to all health care professionals in Al Masarra Hospital (AMRH) as per the regulations of Ministry of Health (MOH).

3. Purpose

3.1. To establish a standardized and safe work flow, template, structure and numbering system of written procedures

3.2. To ensure a reliable, evidence-based, high quality radiological procedures in accordance to the Ministry of Health regulations.

4. Definitions

4.1. **As Low As Reasonably Achievable (ALARA):** The **ALARA** radiation safety principle is based on the minimization of radiation doses and limiting the release of radioactive materials into the environment by employing all “reasonable methods.”

4.2. **Radiation:** the emission of energy as electromagnetic waves or as moving subatomic particles, especially high-energy particles which cause ionization.

4.3. **Radiographer:** are healthcare professionals who specialize in the imaging of human anatomy for the diagnosis and treatment of pathology.

4.4. **Radiologist:** Are medical doctors that specialize in diagnosing and treating injuries and diseases using medical imaging (radiology) procedures (exams/tests) such as X-rays, computed tomography (CT), magnetic resonance imaging (MRI), nuclear medicine, positron emission tomography (PET) and ultrasound.



5. Policy

5.1. Radiology department of Al Masarra Hospital ensures a safe provision of radiological examination in accordance to the rules and regulations of the Ministry of Health of the Sultanate of Oman.

5.2. All equipment controlled by the Radiology Department shall be operated only by licensed/diploma radiographers with specific training in Radiologic Technology.

5.3 All radiology equipment machines must be inspected annually by each company model as required.

5.4. All radiographic machines shall be checked daily, monthly and yearly to maintain its quality working condition to avoid any breakdowns.

5.5. All safety warnings must be posted in highly visible areas.

5.6. Radiation monitor badge must be worn by radiology department personnel during the work day.

5.7. Protective Lead aprons must be used in all exams, whenever possible and annually checked for cracks or any failure.

6. Procedure

6.1. Patient will be identified by the reception request pending list and patient ID numbers in Al Shifa 3+ System (hospital information management system).

6.2. Patient identification shall be correctly verified by the radiographer before any radiographic examination. A patient sticker ID may be requested and the patient's picture will be checked in the clinical summary as a mean of patient identification.

6.3. Before taking the radiographs, it is important to inform and explain to the patient/nurse the procedure and answer any questions relating to the radiographic examination to be performed.

6.4. Female patient prior to any radiographic examinations, shall be inquired if applicable; for any possibility of pregnancy, stating her last menstrual period (LMP) and to check if LMP is within 28 days as considered safe for the procedure; then to be documented accordingly.

6.4. The patient shall be appropriately prepared by instructing him/her to remove clothing, jewelry, and/or other artifacts from the body if necessary to avoid obstruction of the



radiographic image; and must be provided with a safety radiation shield whenever possible.

6.5. The privacy of the patient must be highly ensured. The door of the examination room must be closed and all irrelevant staff or personnel will not be allowed to enter during the examination time.

6.5.1 Even the patient's relatives are not allowed to enter the X-ray room during the examination

6.5.2 If the situation necessitates that the radiographer must be assisted by a nurse or a relative, then they must be provided with a protective Lead apron, Lead gloves, or thyroid collars to wear depending on the safety and protection that the procedure may require. If the assisting nurse or relative is a female, she must also be asked for any chance of pregnancy.

6.6. During General X-ray (See Appendix 2.General X-ray Flowchart)

6.6.1. The radiographer will be receiving a call from the nurse requesting to bring a patient to the department. Request orders are received from the physicians through the Reception Pending List in Al Shifa 3+ System.

6.6.2 The radiographer shall check the request and ask the nurse about the patient's behavior for cooperation on the procedure otherwise can postpone to later timing to ensure a fast and safe provision of the procedure

6.6.3 The patient shall be escorted to the Radiology Department by the nurse and Medical Orderly (MO) if the patient came from the ward.

6.6.4 *Follow Procedures 6.1-6.5*

6.6.5 Upon completion of the radiographic study, the patient will be directed to the Outpatient Department (OPD)/Inpatient Ward where the physician will provide the initial review of the radiograph and discusses his/her interpretation with the patient or the relative or the nurse.

6.6.6 The radiographic exam shall be soon sent to a radiologist, who will interpret the radiograph.

6.6.7 The radiologist's interpretation will appear in Al-Shiffa system

6.7. During CT Scans (See Appendix 4. CT Scan Flowchart)



6.7.1 After re-checking the patients name and ID, patient must wear a radiation shield before any examination. (See Appendix 3.Protective Gears)

6.7.2 *Follow Procedures 6.1-6.5*

6.7.3 *Same as Procedures 6.6.5.-6.6.7.*

6.8. Sending, releasing and reporting radiographic examination films/studies

6.8.1 Since there is no radiologist in the department, the radiographic exam film/ studies will be sent to Al Nadha Hospital through the Picture Archiving and Communication System (PACS) for a radiologist to interpret.

6.8.2. All studies which are sent to; and to be reported by the radiologist are traced by patient Identification (ID) and the day of examination in a daily manner to avoid any delay or loss.

6.8.3. The radiologist's interpretation of each exam will appear in Al Shifa system to be checked by the requesting doctor.

6.8.4. Afternoon radiology staff has to call the wards and inform about the reported studies to be checked by the requesting doctors.

6.8.5 A patient's original Radiograph/CT Films must be filed in the filing section of X-ray department according to patient terminal identification numbers in the radiology examination room.

6.8.6 The patient will be properly identified through Full Name, Birth Date, Patient ID number, and Date of radiographic study

6.8.7 If the patient is to be transferred to another medical facilities and the copy of the medical imaging films are needed, a Request for Release of Radiology X-ray/CT film must be communicated properly to the Radiology department, then the radiology patient log book will be filled by the radiology staff with his/her name, signature, and date of release of the film.

6.8.10. Any X-ray and CT film\CD which are to be sent by fax or be carried by any medical staff or patient's relative outside AMRH, must be labeled visibly with the patient's name, date of birth, date of examination and Patient ID then to be written in the prepared patient log book.



6.8.11. If the patient wants to take a copy of the Disc of the CT scan result, he/she has to pay in the Finance Department.

6.8.12. All outgoing films (outside AMRH) must have appropriate identification, labeling and must be placed in the identified film holder envelope.

7. Responsibilities

7.1 Chief of the Radiology Department Shall:

7.1.1 Provide the consultation whenever it is required by the staff and be the available connection between the administration and the department.

7.1.2 Supervise the routine daily working steps including the availability and punctuality of staff to ensure that the work is done in a professional and in high patient safety standard.

7.1.3 Check and provide the department requirements.

7.1.4 Check the monthly duty roster prepared by the deputy.

7.1.5 Check the staff's location and availability.

7.1.6 Ensure the patient safety standards are met by the department.

7.1.7 Check staff training needs.

7.1.8 Inspect for infection control and waste management standards.

7.1.9 Make staff meetings and solve out any problem that might arise.

7.1.10 Perform all administrative responsibilities.

7.2 Chief Deputy Shall:

7.2.1 Prepare the monthly duty roster.

7.2.2 Revise the radiographs and help the staff.

7.2.3 Cover the Chief during his/her leave.

7.2.4 Supervise and advise the staff.

7.2.5 Contact the wards.

7.2.6 Call for meetings with the staffs.

7.2.7 Register and archive the outcomes of meetings.

7.3 Radiographers Shall:

7.3.1 Ensure that the working area and environment is safe and is set to receive the patients in a professional way.



- 7.3.2 Receive the calls from the wards.
- 7.3.3 Receive the patient after ensuring a safe working environment.
- 7.3.4 Revise the details of the radiographs and copy the CDs.
- 7.3.5 Perform routine daily and monthly quality checkups including with the machines.
- 7.3.6 Send the films for reporting and follow up.
- 7.3.7 Perform infection control practices and inspect working area.
- 7.3.8 Perform 24-hour on-site duty.
- 7.3.9 File the radiographs and CT scan CDs.
- 7.3.10 Share the experience and ideas to improve the department's quality of service.
- 7.3.11 Check daily quality checklist and ensure patient safety standard practices.

8. Document History and Version Control Table

| Document History and Version Control | | | |
|---|---|---|--------------------|
| Version | Description of Amendment | Author | Review Date |
| 01 | Initial Release | Ameer Ali Al Hadi | January 2021 |
| 02 | Update | Ameer Ali Al Hadi | |
| 03 | Update <i>Modified 3.1-3.2.; 4.3.</i> | Ameer Ali Al Hadi | March 2026 |
| Written by | | Reviewed by | Approved by |
| Ameer Ali Al Hadi | | Laila Al Hasani Maria Claudia Fajardo-Bala | Dr. Bader Al Habsi |



9. Related Documents

- 9.1 Appendix 1. General X-ray Flowchart
- 9.2. Appendix 2. CT Scan Flowchart
- 9.3 Appendix 3. Request for Release Form
- 9.4 Appendix 4. Protective Gears
- 9.5 Appendix 5. Audit Tool.
- 9.6 Appendix 6. Document Request Form
- 9.7 Appendix 7. Document Validation Checklist

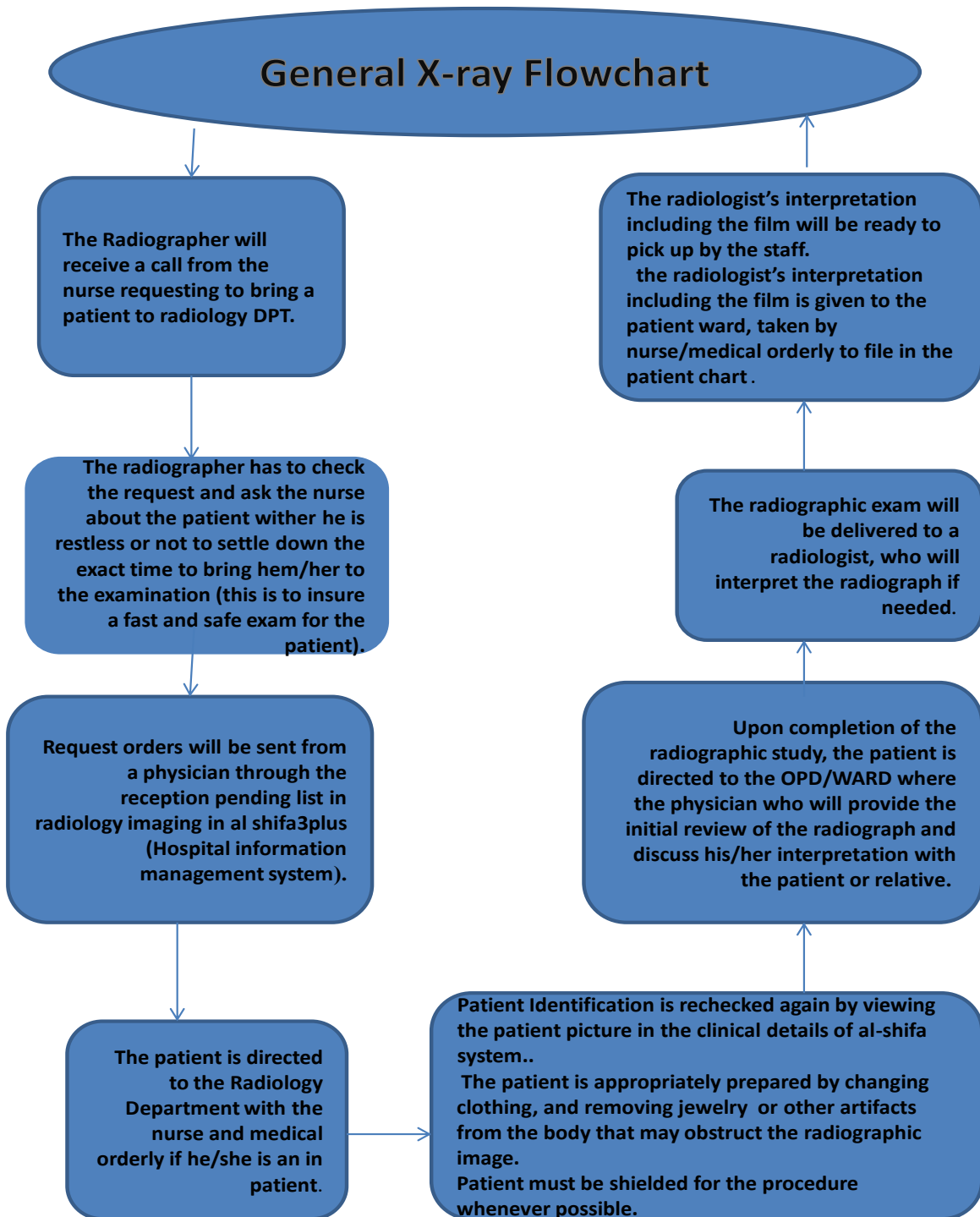
10. References

| Title of book/journal/articles/website | Author | Year of Publication | Page |
|--|----------------|----------------------------|-------------|
| WWW.alaskafamilymedical.com | In bound med | 20-12-2017 | |
| www.wikiradiography.net | Andy c | 14-12-2009 | |
| Lecture notes –radiology 2 nd edition | Pradip R.Patel | 2004 | 3 |



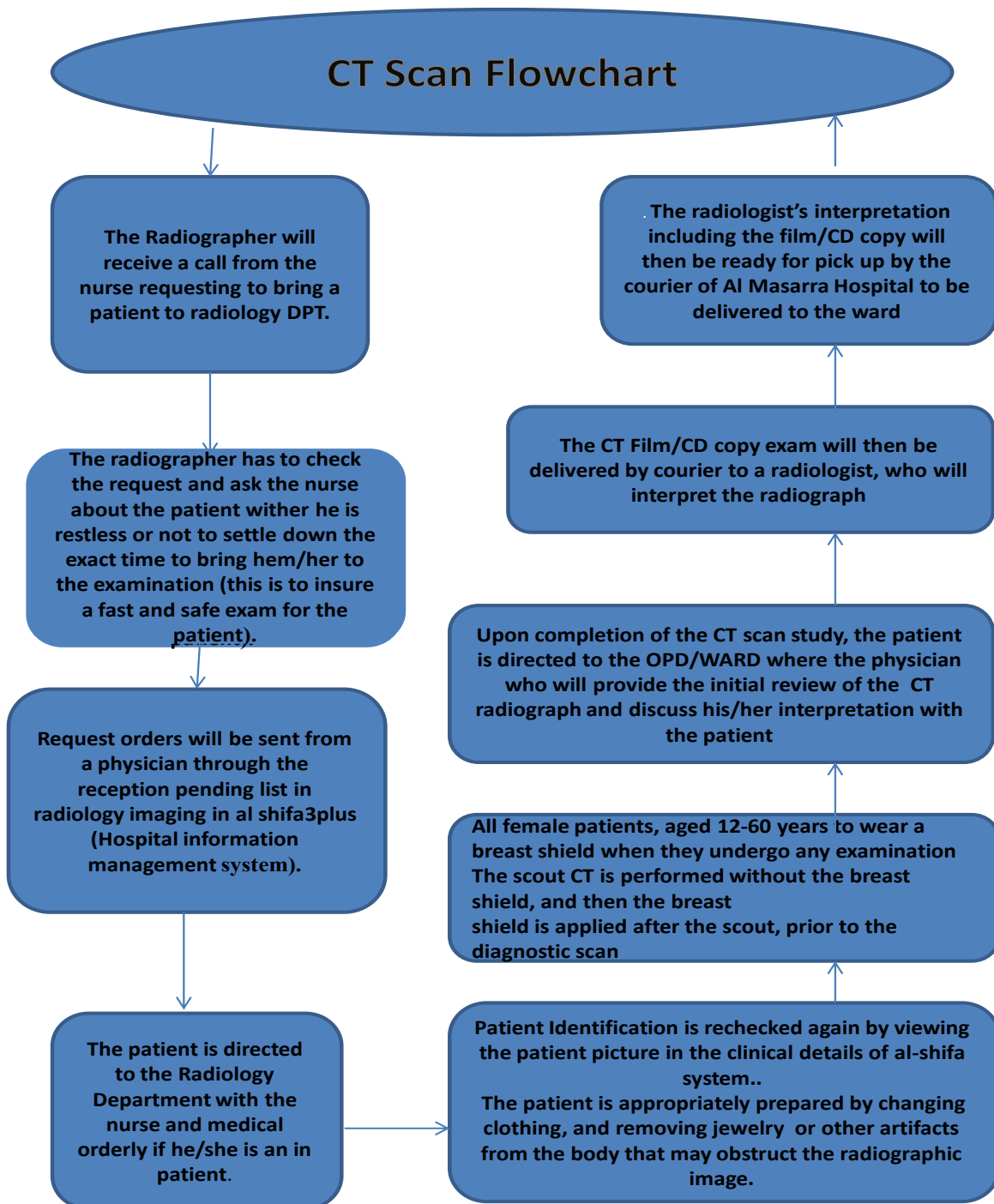
11. Appendices

Appendix 1. General X-ray Flowchart





Appendix 2.CT Scan Flowchart





Appendix 3.Request for Release Form

RELEASE FORM

Patient Details

RELEASE DATE

TYPE OF EXAMINATION.....

BILL NUMPER IF ANY.....

NAME.....

SIGNATURE.....



Appendix 4. Protective Gears





Appendix 5.Audit Tool

| Department | | | Date | | | | Comment |
|------------|-------------------------------|---|------|---------|----|-----|---------|
| S.N. | Audit Process | Standard / Criteria | Yes | Partial | No | N/A | |
| 1 | Observation | Does the staff performs and maintain a safe examination steps? | | | | | |
| 2 | Observation & Document Review | Are the machines inspected in daily and monthly checklists? | | | | | |
| 3 | Observation | Do the outgoing films include patient ID, marker and clear investigation? | | | | | |
| 4 | Document Review | Are the Guidelines updated by the chief and followed by staff? | | | | | |
| 5 | Document Review | Radiograph/DVD/FILMS Released must be documented in a release form which include: RELEASE DATE, TYPE OF EXAMINATION, BILL NUMPER IF ANY, PATIENT DETAILS, NAME, SIGNATURE | | | | | |
| 6 | Interview Observation | Does the staff implement CT and General X-ray procedures accordingly? | | | | | |
| 7 | Observation | Does the staff organize the Person Permitted in the Radiology? | | | | | |
| 8 | Observation | Is/Are there clear Warning signs in the area? | | | | | |



Appendix 6.Document Request Form

| Document Request Form | | | |
|---|--|---|-------------------------|
| Section A: Completed by Document Requester | | | |
| 1. Requester Details | | | |
| Name | AMEER AL-HADI | Date of Request | March 2023 |
| Institute | Al Masarra Hospital | Mobile | 92720721 |
| Department | RADIOLOGY | Email | radiologyamrh@gmail.com |
| The Purpose of Request | | | |
| <input type="checkbox"/> Develop New Document | <input checked="" type="checkbox"/> Modification of Document | <input type="checkbox"/> Cancelling of Document | |
| 1. Document Information | | | |
| Document Title | POLICY AND PROCEDURE OF RADIOLOGY | | |
| Document Code | AMRH/RAD/P&P/001/Vers.03 | | |
| Section B: Completed by Document Controller | | | |
| <input checked="" type="checkbox"/> Approved | <input type="checkbox"/> Cancelled | <input type="checkbox"/> Forward To:..... | |
| Comment and Recommendation: <i>to proceed with the document</i> | | | |
| Name | Kunooz Balushi | Date | March 2026 |
| Signature | | Stamp | |



Appendix 7.Document Validation Checklist

| Document Validation Checklist | | | | | |
|--|---|--------------------|--|-----|----------|
| Document Title: Policy and Procedure of Radiology | | | Document Code: AMRH/RAD/P&P/001/Vers.03 | | |
| No | Criteria | Meets the Criteria | | | Comments |
| | | Yes | No | N/A | |
| 1. | Approved format used | | | | |
| 1.1 | Clear title – Clear Applicability | ✓ | | | |
| 1.2 | Index number stated | ✓ | | | |
| 1.3 | Header/ Footer complete | ✓ | | | |
| 1.4 | Accurate page numbering | ✓ | | | |
| 1.5 | Involved departments contributed | ✓ | | | |
| 1.6 | Involved personnel signature /approval | ✓ | | | |
| 1.7 | Clear Stamp | ✓ | | | |
| 2. | Document Content | | | | |
| 2.1 | Clear purpose and scope | ✓ | | | |
| 2.2 | Clear definitions | ✓ | | | |
| 2.3 | Clear policy statements (if any) | | | ✓ | |
| 3. | Well defined procedures and steps | | | | |
| 3.1 | Procedures in orderly manner | ✓ | | | |
| 3.2 | Procedure define personnel to carry out step | ✓ | | | |
| 3.3 | Procedures define the use of relevant forms | ✓ | | | |
| 3.4 | Procedures to define flowchart | ✓ | | | |
| 3.5 | Responsibilities are clearly defined | ✓ | | | |
| 3.6 | Necessary forms and equipment are listed | ✓ | | | |
| 3.7 | Forms are numbered | ✓ | | | |
| 3.8 | References are clearly stated | ✓ | | | |
| 4. | General Criterial | | | | |
| 4.1 | Policy is adherent to MOH rules and regulations | ✓ | | | |
| 4.2 | Policy within hospital/department scope | ✓ | | | |
| 4.3 | Relevant policies are reviewed | | | ✓ | |
| 4.4 | Items numbering is well outlined | ✓ | | | |
| 4.5 | Used of approved font type and size | ✓ | | | |
| 4.6 | Language is clear, understood and well structured | ✓ | | | |
| Recommendations For implementation ✓ More revision To be cancelled | | | | | |
| Reviewed by : ...Kunooz Balushi ... | | | Reviewed by: Maria Claudia Fajardo-Bala | | |

Kunooz Balushi

