



STANDARD OPERATING PROCEDURE (SOP) FOR QUALITY IMPROVEMENT



Quality Improvement Secretariat

HEU, Health Service Division, MOHFW
www.qis.gov.bd



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Preface

A standard operating procedure (SOP) is a set of step-by-step instructions compiled by an organization to help service providers carry out complex hospital routine operations. SOPs aim to achieve efficiency, quality output and uniformity of performance, while reducing miscommunication and failure to comply with health service standard and clinical Quality.

Many hospitals are currently providing quality clinical services, which is a new intervention in the practice of health service delivery in the country. However, the services are not being provided in a standardized and uniform manner. Therefore, this standard operating procedures (SOP) manual has been developed to standardize and formalize the provision of Quality clinical services in the health service delivery. SOPs on how to provide clinical services for OPD, IPD, Emergency etc and to document and report the services provided are addressed in this manual.

It is a written procedure prescribed for repetitive use as a practice, in accordance with agreed upon specifications aimed at obtaining a desired outcome.

This document has developed after literature reviewed, then draft has develop, reviewed by the relevant stakeholder by holding series working group meetings & finalized in a national workshop.

This SOP describes specific step by step procedures in clinical management like OPD, IPD Housekeeping, Emergency services, OT services, Radiology Services & Pathology services. It should be used as a hands-on reference for service providers providing services, thereby helping to standardize the practice in all hospitals, with the ultimate goal of optimizing the quality & standard patient care. The manual may also be used as a reference for health service providers for effective health management.

Finally the SOPs will ensure that standardized Quality clinical services are provided in all health facilities and at all times, Clarify roles and responsibilities of the service providers for clinical care, Provide a detailed description of how to perform clinical activities, Improve the standards for clinical services on a continual basis, at end it will ensure the client satisfaction in health service delivery.



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Introduction

The Standard Operating procedure (SOP) are developed for the healthcare facilities based on the Health Care Standards involved in the health service providers and experts. The SOPs include separate sets of procedures for the healthcare facilities of various levels. SOPs reflect the difference in opportunities, capacity and vulnerability of the healthcare staff in different levels of the healthcare system.

The purpose of the Standard Operating Procedures is to provide clear and detailed description of step by step routine actions of the service providers providing services in the facilities.

Many hospitals are currently providing quality clinical services, which is a new development in the practice of health care in the country. However, the services are not being provided in a standardized and uniform manner. Therefore, this standard operating procedures (SOP) manual has been developed to standardize and formalize the provision of Quality clinical services in the health service delivery. SOPs on how to provide clinical services for OPD, IPD, Emergency etc and to document and report the services provided are addressed in this manual.

SOP is a written procedure prescribed for repetitive use as a practice, in accordance with agreed upon specifications aimed at obtaining a desired outcome.

These are a specific set of practices that are required to be initiated and followed when specific circumstances arise. For example, emergency room physicians have SOPs for patients who are brought in an unconscious state; nurses in an operating theater have SOPs for the forceps and swabs that they hand over to the operating surgeons; and laboratory technicians have SOPs for handling, testing, and subsequently discarding body fluids obtained from patients.

In present day medicine, clinicians are familiar with SOPs in restricted contexts. Service providers are also aware of the use of SOPs in the context of clinical trials, either with regard to the functioning of ethics committees or with regard to screening, consenting, assessing, and treating patients across the course of the clinical trial. An idea whose time has now come is the introduction of SOPs into routine clinical practice; that is, not for special patients (e.g. those who are unconscious) or for special circumstances (e.g. clinical trials), but for every patient in everyday clinical care.

SOPs are more specific than guidelines and are defined in greater detail. They provide a comprehensive set of rigid criteria outlining the management steps for a single clinical condition or aspects of organization.

Guidelines are rigorously developed using evidence-based medicine criteria and consist of two distinct components: the evidence summary and the detailed instructions for the application of that evidence to patient care. For the common health care provider, guidelines require local adaptation to suit local circumstances and to achieve a feeling of ownership, both of which are important factors in guideline uptake and use. SOPs therefore, help bridge the gap between evidence-based medicine, clinical practice guidelines, and the local realities at the point-of-care.

SOPs are necessary to remind clinicians of the need for medical evaluations such as ultrasonography of the ovaries in young women advised valproate, physical and metabolic monitoring in patients advised olanzapine, and thyroid assessments in patients with mood disorders. Incorporating reminders in the form of SOPs can improve the rate of compliance with the relevant guidelines.

SOPS are necessary to incorporate aspects of treatment which are not highlighted in guidelines or which are parts of different guidelines. This will ensure that attention is paid to areas as diverse as problem-solving, communication, social support, family burden, and caregiver stress. SOPs are necessary to ensure that easily implemented strategies that benefit mental health are not neglected; examples of behavioral targets are diet, exercise, sleep, stress management, and the pursuit of leisure and pleasure activities. SOPs are necessary to monitor medication compliance, a variable that can make or break the success of a psychopharmacological treatment plan.

The use of SOPs will have the added advantages of utilizing an optimized process for care, implementation of best evidence-based medicine, cost-effectiveness, improved continuing medical education, improved induction of new hospital staff, integrated quality control, transparency and enhanced protection from malpractice. When all these SOPs are in place, the quality of patient care will substantially improve.

Scope of the Manual

This SOPs manual describes the specific steps providing clinical services to the patients . It contains SOPs for the provision of clinical services to the patient in facility level, with the necessary documentation and reporting systems.

Purpose of the Manual

This manual describes specific procedures in clinical care practice. It should be used as a hands-on reference for service providers providing services, thereby helping to standardize the practice in all hospitals, with the ultimate goal of optimizing patient care. The manual may also be used as a reference for health system managers, policymakers, health care providers, academicians, researchers, and pharmacy students.

Objectives of the Manual

General Objective: The general objective of these clinical SOPs is to standardize the provision of Quality clinical services, thereby optimizing patient outcomes by ensuring the rational use of medicines.

Specific Objectives

- Ensure that standardized Quality clinical services are provided in all hospitals and at all times.
- Clarify roles and responsibilities of the service providers for clinical care.
- Provide a detailed description of how to perform clinical activities.
- Serve as a source of guidance for new service providers.
- Improve the standards for clinical services on a continual basis.
- Provide evidence of commitment to improvements in the quality of patient care.

Chapter-1

1. SOP for OPD Services

1.a. Introduction:

Out patient departments (OPD) provide Medicare services to the ambulatory patients. Acute and seriously ill patients must not be referred to the OPD. Majority of the patients received services from the OPD. So it is of maximum importance to serve the people with highest possible quality services to fulfill their need and reduce their sufferings. Efficient OPD service can greatly reduce the burden to the other sections of the hospital services. Out patient services are rendered through the Male / Female / Children / Dental & Family planning out patient departments.

As majority of the people come in contact with the OPD services of the hospitals so it is the area of importance to satisfy and address the people demand accordingly and in an effective way.

Rural peoples come to the Government Hospitals with high expectations and in many situations it was observed that peoples expectations superset the real situation which gives raise to many problems and often confrontation with the service providers. So the mentioning of standard operating procedure with setting up of norms and standards for the OPD will be helpful for both the clients and service providers to be realistic. It will also help the supervisors to measure their institutional service standards.

1.b. Standard Operating Procedure (SOP) of OPD

	Activities	Time/No	Responsible Persons	Alternate Responsible Person	Compliance rate
GENERAL	a) Time table display, sign posting & Display around registration desk.	Before intervention	Superintendent	RMO	*
	b) Registration counter remain closed--	1.00 PM	Superintendent	RMO	*
	c) Ticket will be marked -- by colour pen or providing colourde ticket/seal for each area	Before intervention	Superintendent	RMO	*
STEP-1	A. Registration counter/Desk • Registration in waiting place of OPD area	1 Minutes	Clerk responsible for registration	Second clerk	*
	• Ticket will be provided to patient as	9-00 AM	Clerk assigned for registration	Second clerk	*
	• Patient can be sent to ORT corner or emergency directly if necessary	2 Minutes	Clerk assigned for registration	Second clerk	*
STEP-2	Waiting Place	Male-10 Femel-10 (for 20 person 5	Superintendent	RMO	*
	a) Sitting arrangement				
	b) Waste basket	According to monthly	Do	RMO	*
	c) Sputum box	Two	Do	RMO	*
	d) Safe drinking water facilities	One	Do	RMO	*
	e) Toilet facilities	one for male one for female	Do	RMO	*
	F) Health education's ---- Audio ---- Video ---- Poster	9.00 AM to 2.00 PM	Do	RMO	*

	Activities	Time/No	Responsible Persons	Alternate Responsible Person	Compliance rate
	g) Sign marking with same colour ticket/seal or room/area number towards respective OPD	All activities will be done before intervention	Do	RMO	*
STEP-3	Consultation/Examination room a) Privacy arrangement		Do	RMO	*
	b) Examination facilities— ---- BP. instrument ---- Stethoscope	Before intervention	Superintendent	RMO	*
	---- Tongue depressor ---- Thermometer with antiseptic lotion ---- Weight machine ---- Height tape ---- Torch light ---- Hammer ---- Aural speculum ---- Gloves ---- Vaginal speculum Examination white table covered with Clean white cloth	Do	Do	Do	*
	c) Sitting arrangement for Doctor, chair & table covered with cloth d) Dental surgeon - Dental chair & instrument	Before intervention	Superintendent	RMO	*
	e) Sitting arrangement for patient	Before intervention	Superintendent	RMO	*
	f) other facilities— --- Waste basket --- Basin --- Soap --- Light	One for each	Superintendent	RMO	*
	Examination : a) Second registration with sl-no, name, age, sex, address, timing of in & exit date	clearly written 2Min	Concerned physician	RMO	*

	Activities	Time/No	Responsible Persons	Alternate Responsible Person	Compliance rate
	b) Filled up histories sheet <ul style="list-style-type: none"> • Chief complaints • History of present illness -- History of past illness • Family History • Physical examination • Investigation • Provisional Diagnosis • Treatment & • Advice clearly written • Counseling by providers 	4—6 minutes	Concerned Physician	RMO	*
STEP-4	(A) X-ray Services <ul style="list-style-type: none"> a) Registration & code number is properly filled on investigation slip with brief history b) First come first serve c) Maintain Que. 		Radiology Technician	RMO	*
STEP-5	Dispensing of Drugh: <ul style="list-style-type: none"> a) First come First serve b) Patient will be in Queue by sex c) Pharmacist collect ticket & Register the ticket number d) Dispense drugs & with dose written clearly e) Proper counseling 	2—3 minuets Regularly	Concerned pharmacist	Second Pharmacist	* *
	d) Reports are sent back to respective Doctor:- <ul style="list-style-type: none"> * Plain X-ray, --- Chest --- abdomen --- Bone & joint --- Special X-ray --- Others * Emergency X-ray 	Next day Within 6 hours Within 30 minutes	Medical Technologist	RMO	*

	Activities	Time/No	Responsible Persons	Alternate Responsible Person	Compliance rate
	(B) Pathology a) First come first serve b) Maintain Que. c) Registration with code number with arrival time d) Routine Exam:- --- Stool R/E --- Urine R/E --- Blood for TC. DC. ESR & Hb % --- Sputum AFB --- MP --- Blood group and cross matching	4 Hours after collecting sample after 72 hours Same day	Medical Technologist (Senior person)	Other MT	
STEP-6	A. Admission a) All patients is respective of their income are eligible for admission b) Acutely ill. patients are admitted on priority basis c) Admission board will admit the patient	Same day	Admission board/RMO/MO on duty	Superintendent	*
	B. Referrals from OPD a) Exact problem for which the patient is being referred, write properly the area of referral including the documents & short history	Same day	Admission board/RM/MO on duty	Superintendent	*

* **Compliance rate:**

Quality of care will be measure by Compliance rate is

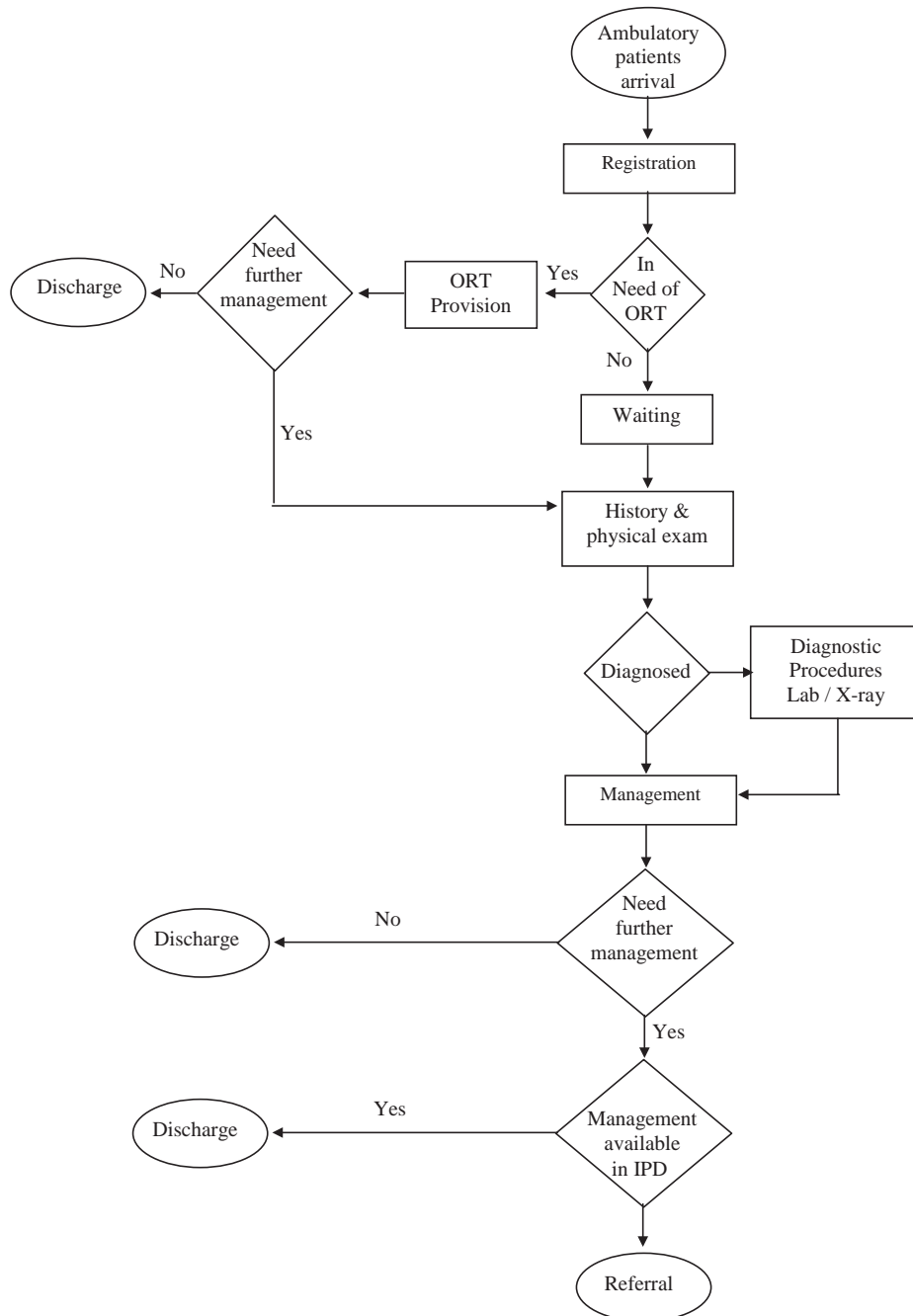
Excellent : 91—100%

Very Good : 76—90%

Good : 50—76%

Bad : < 50%

1.c. Patient Flow Chart In OPD Services



Working Procedures of 1.d. Out Patient Department

Registration

There should be a central desk at the OPD where patients will be provided OPD slips after preliminary registration. This desk may also serve as the booth for hospital information and health education. One nurse/relevant staff with skill in human interactions may be deployed there. After taking brief history of patient's illness he/she will direct them to the respective OPDs. Final registration of patients will be done in the concerned OPDs.

Working rules

The patient treated in the OPD are usually ambulatory. Acutely ill patients must not be referred to the out patient department. They must be management in the emergency. In OPD, a short clinical examination is done and documented in the OPD slip. It must include a clearly written provisional or clinical diagnosis as well as the advice and treatment given to the patient. A list of investigation planned may also be written on the slip for convenience of the patients. The patients are given correctly and completely filled investigation forms. It must be explained to the patients where Investigation Center is located for all the OPD investigations (blood, urine and stool etc.), and the time when samples are collected, and also how the reports are distributed at the OPD. As in usual procedure, a patient will require to wait till the next OPD day. A way should be found out in consultation with the clinical laboratory and radiology department so that reports of majority of investigations may be available on the same day. This will enable the clinicians to advice treatment to the OPD patients on the same day without awaiting too much. for X-rays, the patients should be clearly directed to communicate to the respective counter in the department and to follow the preparatory instructions which will be given there.

In case of an emergency arising in the OPD, the in charge should be provided with necessary first aid, drugs and investigations. After the first aid given, it is advisable to shift the patient to the emergency department immediately.

To make things easy for the patients, it is advisable to fix a definite date mentioning time & place for the next appointment which should be written down on the slip. It must be remembered that quality of care provided at the OPD should be comparable to in-patient care, and it should be the aim of the hospital to deliver significant medical care to the community through the OPD.

Necessary patient information must be written in the CPO register and acceptable out-patient record with diagnosis be available.

Referrals from OPD

For obtaining the opinion of The Consultant the exact problem for which the patient is being referred must be written down on the OPD slip and the patient should be directed to the relevant OPD. While referring the patient to any other specialty, please make sure that the result of the investigations done and the list of investigations requested should accompany by the patient. This will save repetition of the investigations, time, laboratories' time and also save further discomfort to the patient.

Admission of patients from OPD

A patient needing admission to the wards for further management will be admitted from the OPD through the admission board and send the patient to the respective ward.

Reminders for Unit Heads (RMO/Superintendent)

Please.....

- ☞ Display up-to-date organgram
- ☞ Display other information charts, viz. schedules general and visitors' policy, activity report Service data for guidance and transparency
- ☞ Schedule for routine daily and weekly activities at fixed time
- ☞ Monitor and supervise staff performance, cleanliness, equipment maintenance and resources at the unit as per checklists
- ☞ Send daily bed statement along with serious patients' list
- ☞ Maintain staff morale, punctuality, interpersonal relationship, quest for sound professional knowledge & practice and their good behavior to patients and people
- ☞ Maintain records properly
- ☞ Apply mechanism to receive feedback on users' feelings and complaints
- ☞ Hold regular co-ordination meeting Keep minutes and ensure follow up
- ☞ Send report to Director (Hospital), DGHS & HCOA office by 6th day each month as per specific report form.

1.e. OPD Service Monitoring Checklist

SI No.	Services	As per SOP		Remarks
		Yes	No	
1	Whether provided attention to patients and listed their complaints?			
2	Whether given answers to present Question?			
3	Whether asked chief complaints?			
4	Whether asked present history of illness?			
5	Whether asked past history of illness and related family history?			
6	Whether patient checked for vitals signs?			
7	Whether conducted related physical examinations?			
8	Whether reached a provisional diagnosis?			
9	Whether ordered condition related laboratory tests or X-rays?			
10	Whether provided to the patients / relatives information about the condition and treatment plan?			
11	Whether discussed about the importance of compliance with drug?			
12	Whether adequate time spent for patient consultation?			
13	Whether provider wash hands before and between patient examination?			
14	Whether soiled covers are removed and replaced before examining new patient?			
15	Whether thermometer and tongue depressor are kept soaked in antiseptic solution before examining next patient?			
16	Whether maintained patients discipline (Que)?			
17	Whether patient counseling & health education done?			
18	Whether admission procedure SOP followed?			
19	Whether referral procedure SOP followed?			

Chapter-2

2. In Patient Department (IPD Services)

2.a. Introduction:

From Emergency and Out Patient Departments patients are admitted into the In-Patient Department for further management by keeping the patient under close monitoring. In Upazila Level Hospitals IPD is divided mainly into male ward and female ward with 6 beds for MCH. All the male patients > 12 years age are admitted into the male ward and all the female patients and children age below 12 years are admitted into the female ward. At Upazila level hospitals the duty doctor, nurses and the supporting staffs in the IPD are accountable to RMO for their responsibilities and through RMO to TH & FPO.

Usually the more sick, acute and seriously ill patients are admitted into the IPD for immediate and supervised treatment protocol. They may also need to undergo various diagnostic and or operative procedures and multiple inter related activities are performed to serve an admitted patient. So, it is very much important to coordinate and standardize these various components of IPD services and also the various departments (i.e. doctors, nurses and support service staffs).

During admission, patients and their relatives highly depend on the doctor and other hospital staffs for the well-being and comfort of the patient and they are psychologically more sensitive and vulnerable to various emotional matters. So, beside clinical management of the patient, it is also important to look after various behavioral aspects of the patient and their relatives for their satisfaction and confidence. All concern staffs should be well concern about their dealings with the patients and their attendants by considering the psychological status of the respective person. They should be well tempered and skill in managing emotional and critical situations.

Mention of standard operating procedure with norms and standards will be of great importance to improve the IPD services as well as satisfy the patients expectation and make them more rational about the real situation of the hospital. By be informed about the available services and limitations will give a more harmonious relation between service providers and their clients. It will further improve human relationship, make people confident on the hospital services and also improve the providers satisfaction to serve.

2.b. Standard Operating Procedures (SOP) For in Patient Services (IPD)

Steps	Activities	Time/No	Responsible Persons	Alternate Responsible Person	Compliance Rate
GENERAL					
	A. House keeping <ul style="list-style-type: none"> • Mopped & Swept the floor 	3 Times/24 hrs and when necessary	Cleaner/ Ward in-charge /On duty SSN	RMO	⊕
	<ul style="list-style-type: none"> • Clean toilets • Fans, Walls, Roots, Doors & Windows are cleaned dusted. • Tap water supply 24 h • Attendant (Full time) for serious patient • Visitors as per schedule 	1/shift & when required 2 times / week	Ward boy/Sister / Nursing Supervisor	RMO	⊕ ⊕
	A. Facilities <ul style="list-style-type: none"> • Doctors/Nurse/Aya wear their dress & badges 	All the time	Aya / wardboy / Sister / Nursing Supervisor	RMO	⊕
	<ul style="list-style-type: none"> • Investigation forms/Registers Report, Record in registration History sheet. 	1/patient Should maintain fixed visiting hour for hospital	Do	RMO	⊕
	<ul style="list-style-type: none"> • Discharge forms, Death certificates, Temp chart, intake & output chart, Height & Weight chart, Digoxin chart, Diabetic chart, Paragraph for labour Patient 	During working period All time	Sister incharge / Nursing Supervisor Sister in charge	RMO RMO	
	<ul style="list-style-type: none"> • Bed linen, pillow, pillow cover, Bedside locker, Mosquito net, Mosquito net stand available according to need. 	All the time	Sister in charge / Wardboy / Aya / Nursing Supervisor		
	<ul style="list-style-type: none"> • Stock ledger & required register, like handover & take over of charges (shift wise) made available. 	All the time			
	<ul style="list-style-type: none"> • Diet 	All the time			

Steps	Activities	Time/No	Responsible Persons	Alternate Responsible Person	Compliance Rate
	<p>B. Diagnosis * Provisional diagnosis (Clinical diagnosis)</p> <p>* Diagnosis written clearly</p> <p>C. Treatment Treatment will be given after</p> <p>Signature of Doctor</p> <p>D. Diet & Nutrition</p> <p>Break fast</p> <p>Lunch</p> <p>Dinner</p>				
STEP-3	<p>A. Further treatment</p> <ul style="list-style-type: none"> ■ Counseling to the patients need surgical investigation ■ Inform patient / attendants well ahead of surgical procedure <p>-Routine Case</p> <p>-Emergency case at once</p> <p>B. Labour Case</p> <ul style="list-style-type: none"> ■ Place in labour room when pain starts ■ Follow up ■ Maintenance of pantograph <p>C. Transfer</p> <ul style="list-style-type: none"> ■ If the patient is improved then inform the patient regarding discharge. ■ Verbal advice and explanation needed for illiterate patient ■ Follow up ■ If the patient requires specialized 	<p>24 hours before at once</p> <p>Boctors, SSN, Aya, Do Continuously</p> <p>24 hours before</p> <p>Following morning</p> <p>After one week or if needed</p> <p>6 hrs before</p> <p>At once within one hour</p>	<p>Respective doctor</p> <p>Respective doctor</p> <p>Respective doctor</p> <p>ISSN/Doctor on duty</p>	<p>RMO</p> <p>RMO</p> <p>RMO</p> <p>RMO</p>	<p>*</p> <p>*</p> <p>*</p> <p>*</p>

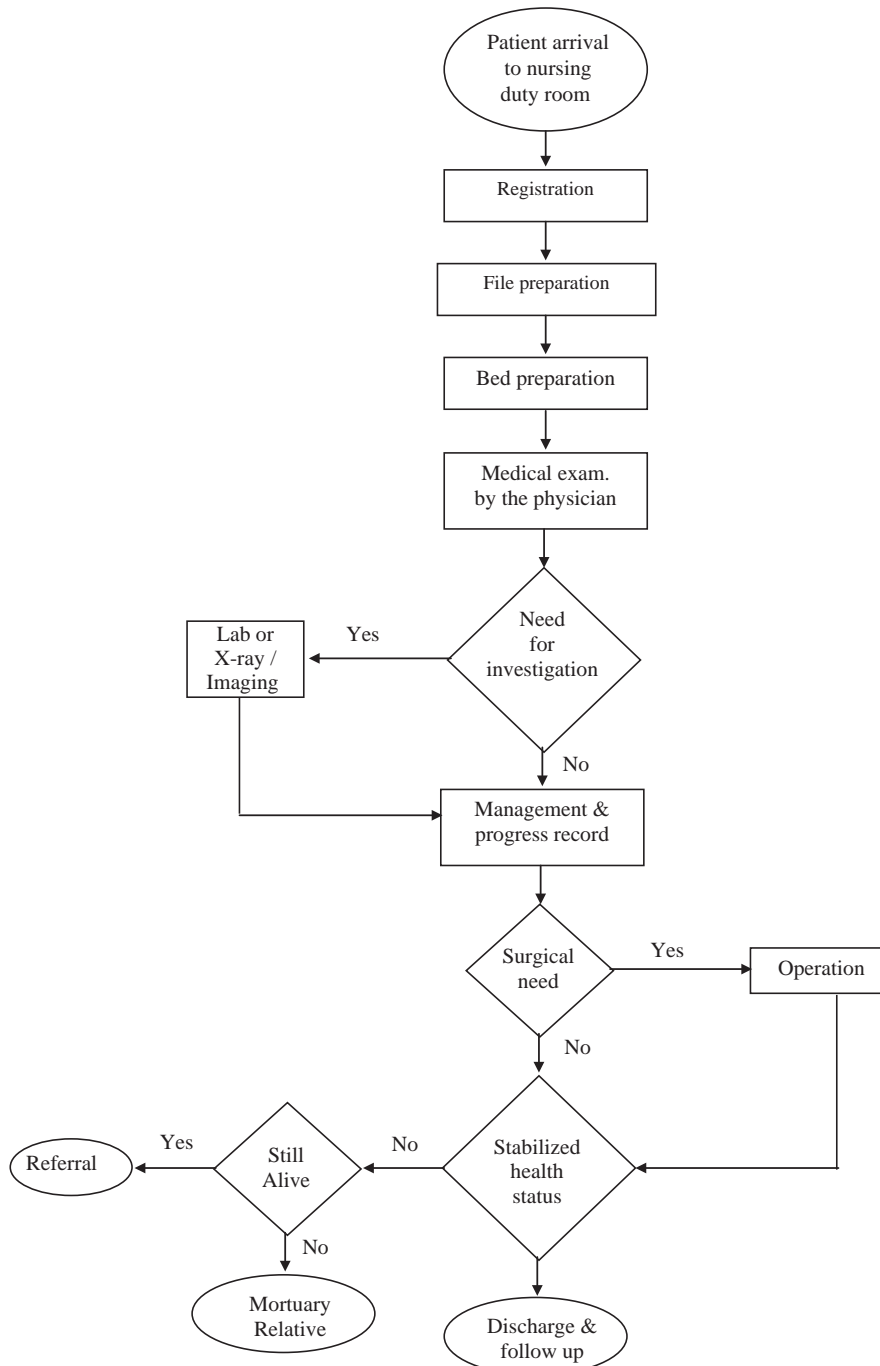
Steps	Activities	Time/No	Responsible Persons	Alternate Responsible Person	Compliance Rate
	services refer with information -----Routine case -----Emergency ■ If death, sent to mortuary/death house/isolation place/handed over to relatives.				

Compliance rate:

Quality of Care will be measured by compliance rate.

The Rated is Excellent : 91-100%
 Very Good : 76-90%
 Good : 50-75%
 Bad : <50%

2.c. Flow Chart of IPD Service



Working Procedure

2.d. In-Patient Ward

Under the new intervention program, the clinical in-patient units Male, female & Children at Thana Hospital, will play independent and broader role. RMO will have to shoulder the responsibilities to co-ordinate the over all activities. All doctors, nurses and other staff will be accountable to TH & FPO.

Case sheet maintenance

Case sheet is an important document for patient care, medical records and medicolegal purposes. Therefore, it should be looked after properly. The final responsibility for the case sheet upkeep is that of the statistician. Please note that it is important to adhere to the following sequence in arranging .the case sheet:

- ☞ Case sheet: particulars of patient (including transfers)
- ☞ Chief Complaints
- ☞ History (present, past, family and others)
- ☞ Physical examination/Special examination
- ☞ Investigations
- ☞ Current treatment orders
- ☞ Previous treatment orders
- ☞ Progress notes (including transfer notes)
- ☞ Pareto-graph for labour patient
- ☞ Consultant/Board
- ☞ Opinion of consultant
- ☞ Opinion of other consultant (s)

Factors involved in good ware management

- ❖ Planning and fixing all regular activities into program and listed in ward policy book
- ❖ Making a planned program for each day's work, in acquaintance of all
- ❖ Encouraging everybody to plan next days work before leaving the ward
- ❖ Starting day on time
- ❖ Discourage interruption while one is engaged in a particular task
- ❖ Establishing of ward routine and policies which enable easy and efficient work
- ❖ Orienting new staff
- ❖ Maintaining suitable environment: privacy, noise, proper ventilation, temperature, smoothing light, cleanliness, care of stores and utility rooms
- ❖ Providing constant supplies and equipment for efficient work: adequate supply should be kept in hand all times conveniently located and in good condition

- ☞ Progress report
- ☞ Discharge summary
- ☞ Morning and evening round should be ensured.

- ❖ Clean cut doctor's order: in clear legible handwritings and complete
- ❖ Accurate and complete records
- ❖ Establishing good working relationship among all members of ward
- ❖ Delegating certain responsibilities
- ❖ Well planned assignments of staff: interesting to staff, regarded as education experience to them
- ❖ Patient satisfaction: good care to patient, readily available consultation, feedback about patients' and visitors' feelings and comfort.
- ❖ Transparency: Display the for routine activities and visitors' policy
- ❖ Monitoring and supervision
- ❖ Evaluation

Progress report

Descriptive progress report should be written at intervals. Abbreviations should better be avoided. Following guidelines are suggested for writing progress report: Attending doctors should write his/her name distinctly.

- For acutely ill patients progress of pulse, respiration, temperature, blood pressure, intake-output, treatment given, investigation reports and other relevant facts regarding patient's illness must be written round the clock (hourly, 2 hourly, 4 hourly, etc.).
- DI (Dangerously ill patient) list should be maintained .
- For routine patients, progress report may be written in SOAP headings after the report of a certain investigation: when accident such as fall from bed have occurred or if certain complications occur;
- When special procedures are carried out; when the patient undergoes surgery (pre, per and postoperative). * Under certain circumstances, it is advisable to make a flow chart of important parameters in addition to the descriptive progress report, e.g. BP chart in hypertension, platelet, reticulocyte, TC, DC blood count, blood urea, electrolytes, creatinine and intake-output chart with renal failure.

- Maintains of partograph for labour patient .
- Preparation for anesthesia, preoperative orders, written informed consent of patient and post operative instructions.

Preparation for anesthesia and post operative instructions

Preoperative orders should be written well in advance so that sister can take written informed consent of patient, and also other preparation, bowel washes, enema etc. before patients retires to sleep. The nature of the procedure. expected outcomes and the possibility of isolation/postoperative ventilation should be explained thoroughly to the patient and attendant. Adult patient should remain fasting from midnight. Children need to be kept fasting only 4-6 hours and can have milk between 4-5 a.m. Postoperative instructions should be written clearly and the postoperative ward sister should be notified for special instruction, e.g. hourly urine output, oxygen therapy, etc. Anesthesia deaths must carefully be recorded and investigated.

Investigations and bed-side procedures

- All investigation forms must be completely filled in the previous night and handed over to, the night nurse so that she gets ready for collection of various samples and also be able to collect the morning samples of urine, stool, sputum, etc.
- No regular or routine procedures may be done or ward round taken while the meals are served to patients at the following hours. Breakfast, Lunch and Dinner.
- All routine dressings and procedures should be done in the morning hours as the maximum nursing staff is available in these hours. Only emergency procedures should be taken up in the evening or at night.
- The instructions of the doctors to the nurses must be given in writing on the case sheets as well as entered in doctors' instruction book of the ward.

The following guidelines may be regarded as ideal:

- Requisition for emergency investigations must be kept to a bare minimum. An urgent investigation may be requisitioned only when truly urgent (ESR is never an urgent investigation).
- The so called routine work-up investigations must be kept to a minimum. Overloading the laboratory with irrelevant and unnecessary investigations is one of the most important causes of unreliable report. An over burdened laboratory can not function properly. Please remember, just as a clinician has a right to ask for an investigation.

- The investigations must be planned in such a way that a minimum number of pricks are given to the patients.
- There can not be any excuse for giving several pricks a day to the patient.
- If a particular investigation requires the patient to be fasting, under no circumstance should he/she be kept waiting. Such a patient must get priority over all other routine works.

A sample should be accompanied by correct labeling of container with Name, Reg. No. Age, Sex, Place of origin, Provisional diagnosis. Sometimes the corroborative data is mandatory for the correct interpretation of the test. Another important point to remember is that the doctor's name should be written in block letters below the signature you may display a chart in the ward showing amount of sample and method of collection for each test. This will be a great help for the nurses who work in the ward for making such a chart, you should better consult your own hospital laboratory. Below is an example of how to make the chart.

Test	Sample	Amount	Method of collection
Glucose (F)	Blood	1 ml	Collected in sugar tube prepared in lab with anticoagulant and fluoride
Blood gas & acid-base	Blood	1 ml	Collected in anaerobic condition in liquid paraffin, test tube kept in ice cold water

Concerns of result for treatment

The treatment plan should be such that there remains concern for end results. The number of patients recovered, not recovered, improved, not improved, not treated, admitted for diagnosis only, or died, etc. are to be carefully evaluated and constant efforts are diverted for improvement of the figures. All tissues removed at operation should be sent to pathologist and report of examination should be placed in records. Appropriate procedures in relation to infection control, sterile supplies and safety precautions are to be followed. Postoperative infection rate and postoperative death rate must also be under vigilance. Delay before operation must be reduced significantly, by doing preoperative investigation in the out patient department. Every opportunity of health education of patients and their visitors should be utilized by all personnel and staff.

Patient diets

It is very important part of the doctors working RMO on the ward to see that their patients are getting the correct diet prescribed by them. Diet should be tasty. However, if the patient is suffering from PEM and/or losing protein due to illness then he will need high protein diet should be categorized according to patients need example high protein, diabetic, salt, restricted, diet, etc.

The following may be the general rule: When protein requirement is more than 100 gm a day, then extra egg may be added over regular diet. Fruits may be added with milk diet, semisolid diet or those with tube feeding. Additional butter may be added to patients needing more than 2400 calories a day. But before prescribing extra, every body should be rational, because unnecessary extra may cause pilferage in allocation for diet, which will cause sufferings of the deserving patients. It is requested that the doctors in charge of the patient will check the diet of his/her patient is getting. If any discrepancy is noticed, this should be brought to the notice of nurse and dietitian.

Patients' attendants and attendant pass

In the general wards, no more than one attendant should usually be allowed to stay with each patient. However, attendants should not be allowed to enter the treatment room, operation theaters. Storage of food at the bed side should be restricted. The attendants must leave the ward and wait at verandah during the consultant's round. In pediatric ward, one attendant; preferably the mother, may stay with the child even during the rounds. Identity card paper should be provided to the attendant who will stay with patient. Other relatives and friends can visit the patient only during the visiting hours. However, the doctors will decide weather they will allow or not allow visitor(s) for a particular patient depending upon their condition. The relatives of the patient must be informed of the progress of the patient daily after the wards rounds. If needed, the consultants may also discuss the problem of the patient with relatives after the ward rounds. Each patient, irrespective of whether he/she is admitted to general/paying bed is issued one attendant pass. This pass is issued by the ward doctors. Only one attendant having the pass is permitted to stay with the patient in the ward.

Discharge and follow up

For the convenience of patients it is suggested that they must be informed about their contemplated discharge at least 24 hours in advance. It is advisable to get a clearance of other consulting units if they have also been closely involved in the patient's management. The discharge must be planned in such a way that the patient acute bed by 11-00 a.m.

This timing is helpful in many ways. The transportation of patient is easier during the day rather than night. Patients are admitted from the OPD usually during around noon time and they will be able to occupy the vacated bed immediately rather than to wait for hours. A complete summary of the patient's medical records duly signed by the authorized doctors of the unit is given to the patient at the time of discharge. Discharge summary is the only official documents given by the hospital to the patient. Therefore, it must truly reflect the highest standards of medical care being given to patients in this hospital. It must be exact, factually correct and concise. It must include the identity of the treating unit, registration number, date of admission and discharge, diagnosis in capital letters, summary of investigations, and clearly written instruction regarding the follow-up management and the date, time, place and identity of OPD where the patient should report for follow-up.

Transfer of patient to other hospitals

It is possible that due to the special type of medical problem for which specialized hospitals are earmarked, or due to the shortage of bed, the patients may be required to be transferred to some other hospitals. In all such cases, it must be ensured that detailed case records, investigations and treatment done accompany the patient; also the patients and their relatives are properly explained the reason of transfer to other hospital.

Death Certificate

The death certificate must be filled correctly as per the original case sheet. It is signed by the authorized doctor of the unit with his full name in block letters. All case records duly completed must be passed on promptly (within 24 hours of discharge or death) to the Medical Records Section. Incomplete records bring bad name to the treating unit.

Reminders for Unit Heads

Please.....

- ☞ Display up to date unit organ gram
- ☞ Display other information charts, viz. Schedule, general and visitor's policy, activity reports, etc. for guidance and transparency.
- ☞ Schedule routine daily and weekly activities at fixed time
- ☞ Monitor and supervise staff performance, cleanliness, equipment maintenance and use of resources at your unit as per checklist.
- ☞ Maintain staff morale, punctuality, interpersonal relationship, quest for sound professional knowledge and practice and their good behavior to patients and people.

Availability of doctors and sisters

Doctors and sisters must always be available in the duty room in the ward round the clock. The nurse in charge will be responsible for providing for good nursing care for all patients. She will be responsible for carrying out the medical advice given by the doctors and co-ordinating patients care activities with all other departments. She will also instruct, supervise and evaluate the performances of all other nursing personnel in the ward.

- ☞ Maintain records properly
- ☞ Apply mechanism to receive feedback about users feeling and complaints
- ☞ Hold regular coordination meeting each week. Keep minutes and ensure follow up.
- ☞ Send report to Hospital Director at 6th day of each month as per specific Report from.
- ☞ Medical audit must be done regularly.

Patient satisfaction and transparency

Superintendent should motivate his personnel and staff to be particularly careful to ensure patients satisfaction. Sympathetic and helping attitude and behavior towards patients and their relatives are important factors. Explanations of patient's condition and reassurance may establish good rapport with the people. Display of hospital drug list, list of available investigations, different schedules, such as, ward round, meal time, visitor's policy, statistical data of unit's patient care services during the last few months and in money value, etc. may create scope for establishing transparency as well as building strong public support for hospital.

Scheduling different activities

For the sake of easy and comfortable delivery of medical care to patients. it is expected that all the activities of the ward will be carefully scheduled and the different responsibilities will be assigned properly. A display of such schedule in the ward will work in favour of transparency. and if followed properly, will enhance trust and image of the health care providers to the public.

Supervision checklist

To ensure sound delivery of medical care to patients, maintenance of sound environment, including cleanliness and sanitation, equipment maintenance, judicious use of materials and resources, staff morale and punctuality. specific supervision checklist and feedback forms based on standard which is prepares for this hospital and is agreed upon by all concerned should be strictly followed.

Infection control

Infection among all patients, surgical, medical and obstetrical must be investigated. Precaution should be taken to reduce infection brought in by patients and visitors. Proper attention should be paid to house-keeping, equipment, sterile techniques and supplies. periodic bacteriological tests of appropriate items should be routinely carried out.

Co-ordination meeting

Each week, the institution head will organize a co-ordination meeting at his office where all personnel and staff will participate. Review of performance and issues for further improvement will be included in the agenda. Views will be exchanged upon open discussion. Keeping of proper minutes and their follow-up will be given special attention.

2.e. IPD Service Monitoring Checklist

Sl No.	Services	As per sop			Remarks	Score as per SOP
		Yes	No	N/A		
1	Whether mopping/sweeping materials supply adequate?					
2	Whether toilet facilities satisfactory?					
3	Whether fans, walls, doors, windows clean and in good condition?					
4	Whether supply of safe water adequate?					
5	Whether display of visiting hours and visiting policy displayed?					
6	Whether Doctor/Nurse and other staffs use of official dressed?					
7	Whether forms, registers, history sheets, records book are available supply?					
8	Whether temperature chart, Ht/Wt chart, Digoxin Chart, Diabetic chart, partograph are used when necessary?					
9	Whether patient registration done properly?					
10	Whether preparation and allocation of bed accordingly?					
11	Whether giving health education?					
12	Whether following instruction sheet?					
13	Whether using of case sheet properly?					
14	Whether asking for chief complaints?					
15	Whether taking history of the patient?					
16	Whether physical examination done properly?					
17	Whether urgent investigation report ensured within 2 hrs?					
18	Whether routine investigation report ensured within 24 hrs?					
19	Whether diagnosis written clearly?					
20	Whether treatment schedule written clearly with signature of the doctor?					
21	Whether food served as per schedule?					
22	Whether counseling the patient before surgical treatment?					
23	Whether informing patient and attendant before surgical procedure?					
24	Whether maintain of partograph in labour case?					
25	Whether procedure of discharge followed properly?					
26	Whether procedure of referral followed properly?					
27	Whether regarding death, hand-over of dead body as per procedure?					

Chapter-3

3. House-Keeping

3.a. Introduction:

Good House keeping is an art of utmost importance of the hospital services. No standard service can be provided without good house keeping. Good house keeping can improve public relation and psychological effect on patients, visitors and service providers. In Upazila Level Hospital House Keeping is supervised by UH&FPO, RMO and QA facilitator. All personal related to House Keeping should know the characteristics and qualities of cleaning agents, their selection and proper use.

Primary activity of House Keeping includes the cleaning, dusting, moping and related domestic duties involved in maintaining a high standard of cleanliness of hospital. General sanitation, Mosquitoes, insects and other rodent control are among the most important duties of House Keeping. The House Keeper acts as an inspector and reports to respective supervisor. Routine work schedule should be co-ordinate with other departments in order to provoke a minimum disruption of other services. A system that involves water supply, ventilation, sewerage and waste disposal etc. are of major concerns of good House Keeping.

3.b. Standard Operating Procedure (SOP) at Upazila Hospital on House-Keeping

	Activities	Time/No	Responsible person	Alternate person	Compliance Rate
Step: 1	A. Floor ■ Routine cleaning	2 times/working day & when necessary	Cleaner, RMO	Ward In Charge	*
	■ Dusting of wall & Roof, Door, Window	1/week & necessary	MLSS/Aya	Ward In Charge RMO	*
	■ Furniture, Fan, Equipments Mopping	2times/day	Cleaner, RMO	Nursing Supervisor	*
	B. Scrubbing	Once in a week (Holiday)	Cleaner, QI, Facilitator & RMO	Nursing Supervisor	*
	A. Bathroom & toilet ■ Cleaning ■ Scrubbing	1 time / day & when necessary 1 time / week	Cleaner, RMO	Nursing Supervisor	*
	B. Segregation Disposal of waste: General, Sharp, infectious wastes to be collected separately.	2times/day & when needed (hazardous) Once daily (non hazardous)	Cleaner, QI, Facilitator & RMO	Nursing Supervisor	*
	C. Disposal of waste from ■ Waste basket ■ Sputum box	Cleaned once daily Once / daily or when needed	Cleaner, QI, Facilitator & RMO	Nursing Supervisor	*
	D. Maintenance of waste basket sputum box (colour & Repair)	Once/month	Cleaner, RMO	Nursing Supervisor	*
	E. Waste must be chemically treated before disposal if it is infectious. For this purpose chemicals (phenyl, lysol, carbolic acid, bleaching powder, etc.) may be used.	When necessary	Cleaner, QI, Facilitator & RMO	Nursing Supervisor	*
	F. OT : Keep ready for all time.	All time	RMO, QI Incharge	Nursing Supervisor	

* Compliance rate :

Quality of Care will be compliance rate. The Rated is Excellent : 91-100%
Very Good : 76-90%, Good : 50-75%

The above procedures can be applied in all areas of Upazila Hospitals, Emergency, ward, OT, Labour room, kitchen and campus, where the following activities will be done and in addition to above activities.

STEP : 2

Cleaning activity	Expected Frequency	Norm
Garbage removed from wards	3	2 Time/day or whenever needed
Garbage removed from OTs	3	2 Time/day or whenever needed
Garbage removed from Campus	1	Once daily
Kitchen	2	2 Time/day or whenever needed
Wards mopped and swept	3	3 Time/day

Note : Garbage : staining Materials, Soiled Linen, Blood stain Gauge & Bandage.

Rules of detergent use

STEP : 3

Name	Time
■ Lysol	30 ml/Liter of water/15bed ward
■ Vim	20 mg/ward/day (to clean basin & pans etc)
■ Soap	100 gram/week/500 Sq. ft floor space

After chemical treatment disposal hazardous/infectious waste shall be made by dumping / burning every week or when needed.

Following may be considered :

Upazilla level hospital

1. Burning and dumping tools and facilities should be made available locally or centrally.
2. Proper place for burning (incineration) and dumping should be specified.
3. Low cost incinerator may be considered for near future.

Non infectious sharps, plastics and metals may be brought for use by recycling process and metals may be brought for use by recycling process if feasible. In this respect hospital waste should be classified in certain criteria.

3.c. Working Procedure of House-Keeping

Good House-Keeping is an asset. No hospital can afford to be without. This is, not only because of its public relations and psychological effects upon patients, visitors and employees, but also from the standpoint of economy. The respective TH & FPO/RMO/SSN/ Aya/Ward boy/Sweeper are mainly responsible for House Keeping activities. Head of the housekeeping department should know the characteristics and qualities of cleaning agents, their selection and proper use.

Since he/she will direct a fairly large staff comprising unskilled workers he should be capable of carrying out continuous guidance and teaching. The primary activities of the housekeeping include the routine cleaning, dusting, mopping, and related domestic duties involved in maintaining a high standard of cleanliness of the hospital. General sanitation, are among the most important duties. Housekeeping employees are in the best position, in their daily, intimate tours of duty, to assist all employees. Particularly the nursing staff and administrator, to establish and maintain many aspects

of an adequate safety program. The housekeeper acts as an committee. Inspector for and reports to the authority any repairs needed, such as damage to floors or walls, peeling paint, or cracking plaster. He may initiate requisitions for repairs of these and for various items of equipment and furniture. Routine work schedules should be co-ordinated with those of other departments in order to provoke a minimum disruption of all services. Systems that involve water supply, ventilation, sewage, waste disposal, etc. are of major concerns.

Several Tips of House-Keeping

- Use, clean and care equipment
- Give special attention In cleaning of special areas such as male & female suit etc.
- Be careful in selection, measurement and proper use of house keeping materials.
- Maintain cleaning schedule.
- Apply techniques for evaluation of cleaning effectiveness.
- Maintain liaison with infection control committee.

Water supply

The water to be tested every month, treated to make it safe and potable for drinking, hand washing, bathing, cooking, washing eatables and utensils, preparation and processing of food.

Ventilation and other equipment, furniture and bedding

Must be maintained carefully under a regular system of preventive maintenance by keeping them clean, free from dust, dirt, etc. Critical address like operation theater, post operative room, deliver room, new born nursery, are be scrupulously clean, free from dust, dirt, etc. and preferably fitted with ventilation system with controlled filtered air.

Storage areas

Storage areas, roof and staircase shall be clean the space under the staircases shall not be used for storage. The store should be free from insects, rodent.

Reminders for Manager

Please.....

- Display up to date unit organogram
- Display other information charts, viz, schedules, general and visitors, policy, activity reports etc. for guidance and transparency.
- Schedule routine daily and weekly activities at fixed time.
- Monitor and supervise staff performance, cleanliness, equipment maintenance and use of resources at your unit as per checklists.
- Maintain staff morale, punctuality, interpersonal relationship, quest for sound professional knowledge & practice and their good behavior to patients and people.
- Maintain records properly.
- Apply mechanism to receive feedback about users feelings and complaints.
- Hold regular co-ordination meeting each week. Keep minutes and ensure follow up.
- Send report to hospital Director (DGHS) & HCQA office ant 6th day each month as per specific Report Form.

Waste disposal

Solid wastes are ideally packed or wrapped at site of origin within minimum handling. patient care potentially hazardous. isolation wastes and materials contaminated with secretions, excretions or blood are to be collected in impervious containers for handling within hospital, Cover, Tubes, sputum cups, swabs, etc. are to be preferably sterilized by autoclave, prior to washing or discarding or incinerated.

3.d. Service Monitoring Checklist for House-Keeping

SI No.	Question / Observation	Response/ Result			Remarks	SOP-Score
		Yes	No	N/A		
1	Whether clean of the floor routinely?					
2	Whether dusting of wall, roof done routinely?					
3	Whether dusting of furniture done routinely?					
4.	Whether mopping of the floor done routinely?					
5	Whether scrubbing?					
6	Whether cleaning of bath room & toilets?					
7	Whether scrubbing of bath room & toilets?					
8	Whether disposal of solid waste?					
9	Whether disposal of liquid waste?					
10	Whether disposal of waste from waste basket & spitting box?					
11	Whether maintenance of waste basket & spitting box?					
12	Whether chemical treatment of the waste done when necessary?					
13	Whether removal of garbage from the wards?					
14	Whether removal of garbage from the campus?					
15	Whether removal of garbage from the kitchen?					

Chapter-4

4. Emergency

4.a. Introduction:

Emergency department of hospitals is often the point of major public interest and is the most vulnerable to criticism. The reputation of a hospital rests to a very large measure on two important factors, i.e. the emergency & OPD. The sudden and unexpected nature of the emergency produces panic and psychological disturbance of relatives which must be appreciated and born in mind in organization and management of services. Emergency department is primarily meant for the immediate medical attention and resuscitation of seriously ill patients. They should have priority over, less serious patients. All patients attending the emergency are to be registered after a quick preliminary assessment of the severity and urgency of their ailment by the Medical Officer on duty. This is particularly an important point; clerical work involving registration, etc. should never take priority over the urgent attention to the acutely ill patient. All particulars as per the standard format should be recorded in the emergency register. The emergency ticket should be clearly filled up for name, age, sex, date, time, emergency registration number and clinical diagnosis clearly. A summary of all the relevant clinical findings along with the medical aid given, consultations and the progress of the patient is to be noted down on the emergency register (register should contain clear description of treatment details) by the attending doctor(s) before he/she is admitted or discharged or referred to secondary or tertiary hospital. The original emergency ticket is handed over to the patient.

4.b. Standard Operating Procedure (SOP) of Emergency Services

	Activities	Time Limit	Responsible Persons	Alternate Person	Compliance rate
GENERAL	<ul style="list-style-type: none"> • Waste basket in Reception and waiting area • Sputum box • Toilet facility • Safe drinking water • sign posting & display 	Before intervention	UH & FPO	RMO	⊕
STEP : 1 [Management of patient should take precedence above everything]	<ul style="list-style-type: none"> • Reception • Registration • Ticket will be Provided to patient • Ticket will be marked by a separate colour or by emergency seal • Call the M.O. on duty 	Within-10 Min	Medical Assistant / Pharmacist	Other Medical Assistant	⊕
STEP : 2	<u>Resuscitation Examination</u> <u>Diagnosis & Treatment</u> <ul style="list-style-type: none"> • Resuscitation • History taking (Present, past, families) • Examination • Investigation as necessary • X-ray if any • Clinical Diagnosis • Treatment & advice 	Immediately 1hour	MO/Consultant MA Medical Technologist (on call)	Other MO	⊕
STEP : 3	<u>Further treatment</u> <ul style="list-style-type: none"> • Minor Injury : Send the patient into OT for repair • when patient requires plaster send the patient to plaster room / OT • Labour case to labour room • IPD • Referred to secondary or tertiary hospital • Discharge / Follow-up 	2 Hours	Doctor on duty	Other Doctor	⊕

⊕ **Compliance rate :**

Quality of Care will be measure by Compliance rate :

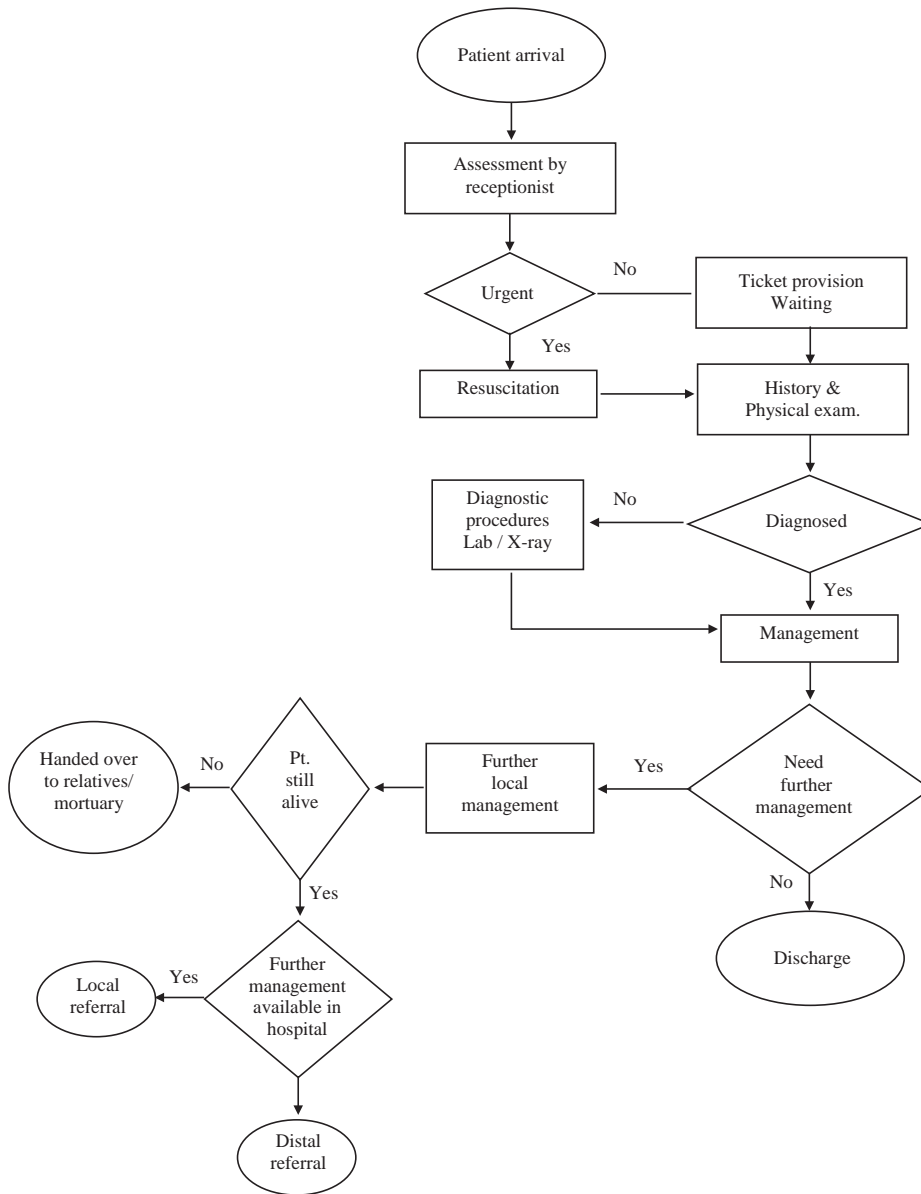
The rate is Excellent : 91 – 100%

Very Good : 79 – 90%

Good : 50 – 75%,

Bad : < 50%

4.c. Patient Flow Chart in Emergency Services



4.d. List of Equipment, Materials and Medicines for Emergency

Name of equipment	Name of drugs and supplies
Patient table	Autoclave
Stethoscope & BP instrument	Naso-gastric tube
Thermometer	Patient trolley & stretcher
Glucometer	Screen & stand
Tongue depressor	Inj. Antispasmodic
Auroscope	Injection Mg. Sulphate (For Eclampsia)
Measuring Tape	Injection Gardenal Sodium
Weighing machine	Injection Hydrocortisone
Height scale	Injection Diazepam
Torch light	Injection Antihistamine
Filled up Oxygen cylinder with Flow meter	Injection Pathedine
IV infusion stand and set	Injection Atropine
Suturing materials	Injection Aminophylline
Canula	Injection Frusemide
Tourniquet	Injection Quinine (on demand)
Disposable syringe and needles	Injection Dexamethasone
Gloves	Injection Lignocaine (2%)
Sterile gauze, bandage, micropore, plaster, splint etc	Inj. Ergometrin
Sterilizer	Injection Amoxycillin
Emergency trolley (with minor surgical sets)	Antiseptic liquid
Emergency generator (Alternate Power supply)	Lignocaine jelly (for catheterisation)
Suction machine	Cap. Amoxycilin
Nebuliser	Tab. Paracetamol
ECG	Tab. Tri-nitroglycerine, Tab. Aspirin, Nifecap
Stomach tube	IV fluids, Cholera fluids , DNS, DA
	ORS, Glucose

4.e. Working Procedure of Emergency Services

Patients requiring ambulatory care

Patients needing only ambulatory care should be given necessary first aid treatment and sent home with appropriate advice written on the emergency ticket. If they are referred to any OPD, the days, timing and location must be properly explained to patients and written down on emergency ticket.

Patients requiring short term observation

Patient requiring close observation to determine the further line of management are to be admitted in IPD.

Patient requiring hospitalization from emergency

Only the seriously ill patients and the patient who cannot wait for the regular OPD clinic should be admitted in the hospital.

Transfer of patients to other hospital

It is possible that due to non-availability of beds or because of nature of the medical problem requiring specialist care, the patient may be transferred to the concerned hospital. In all such cases, it must be ensured that proper first aid has been given and the reason of transfer is explained to the patient and relatives. Efficient ambulance service is essential for the quick transfer of patient.

Reminders for UH & FPO

Please.....

- Please Display up-to-date organ gram
- Display other information charts, i.e. schedules, general and visitor's policy, activity reports, etc. for guidance and transparency.
- Schedule routine daily and weekly activities at fixed time
- Monitor and supervise staff performance, cleanliness, equipment maintenance and use of resource as per checklists.
- Maintain staff morale, punctuality, interpersonal relationship, quest for sound professional knowledge & practice and good behavior to patients and relatives.
- Maintain records properly
- Apply mechanism to receive feedback about user's feelings and complaints.
- Hold regular co-ordination meeting each week. Keep minutes and ensure follow up.
- Send report to Hospital Director, (DGHS) & HCQA Project at 6th day each month as per specific Report Form.

Emergency staff and administration

The staff posted in the emergency will work on shift basis. At the beginning of every shift, the doctor and other staff must check and ensure that the equipments are in working order. He/She should also know the emergency drugs are in adequate supply.

General administration of emergency room

MO on duty will be responsible for the clinical management of the patient in the emergency room. The general administration and control of other staff, cleanliness, equipment maintenance, etc. will be looked after by the Resident Medical officer. He will be responsible for the overall management of the emergency room.

General conduct and behavior of the emergency staff

When a relative comes to the emergency room with a seriously ill patient, he/she is emotionally upset and slightest apparent delay/ misdemeanors may trigger off a violent reaction. All the staff are therefore required to be tolerant and should extend due courtesy and sympathy to them.

4.f. Emergency Service Monitoring Checklist

SI No.	Question / Observation	Response/ Result			Remarks	SOP-Score
		Yes	No	N/A		
1	Is the level of cleanliness satisfactory?					
2	Are signs & posting displayed clearly?					
3	Is the furniture & equipment's arrange well?					
4.	Is the staffing attendance?					
5	Is the staff dressing properly?					
6	Are waste basket & sputum box available?					
7	Is the patient received properly					
8	Does the patient wait less then 10 minute?					
9	Is the ticket provided marked by specific colour seal?					
10	Is resuscitation in case of need done immediately?					
11	Is history taken & examination done properly?					
12	Are the necessary investigation done?					
13	Are the urgent investigation done within 1 hour?					
14	Is the patient send to the proper place for further treatment?					

Chapter-5

5. SOP of Operation Theater

5.a. Introduction:

An operating theater is a facility within a hospital where surgical operations are carried out in an aseptic environment.

Operating rooms are generally windowless and feature controlled temperature and humidity. Special air handlers filter the air and maintain a slightly elevated pressure. Electricity support has backup systems in case of a black-out. Rooms are supplied with wall suction, oxygen, and possibly other anesthetic gases. Key equipment consists of the operating table and the anesthesia cart. In addition, there are tables to set up instruments. There is storage space for common surgical supplies. There are containers for disposables. Outside the operating room is a dedicated scrubbing area that is used by surgeons, anesthesiologists, and nurses prior to surgery. An operating room will have a map to enable the terminal cleaner to realign the operating table and equipment to the desired layout during cleaning.

Several operating rooms are part of the operating suite that forms a distinct section within a health-care facility. Besides the operating rooms and their wash rooms, it contains rooms for personnel to change, wash, and rest, preparation and recovery rooms(s), storage and cleaning facilities, offices, dedicated corridors, and possibly other supportive units. In larger facilities, the operating suite is climate- and air-controlled, and separated from other departments so that only authorized personnel have access.

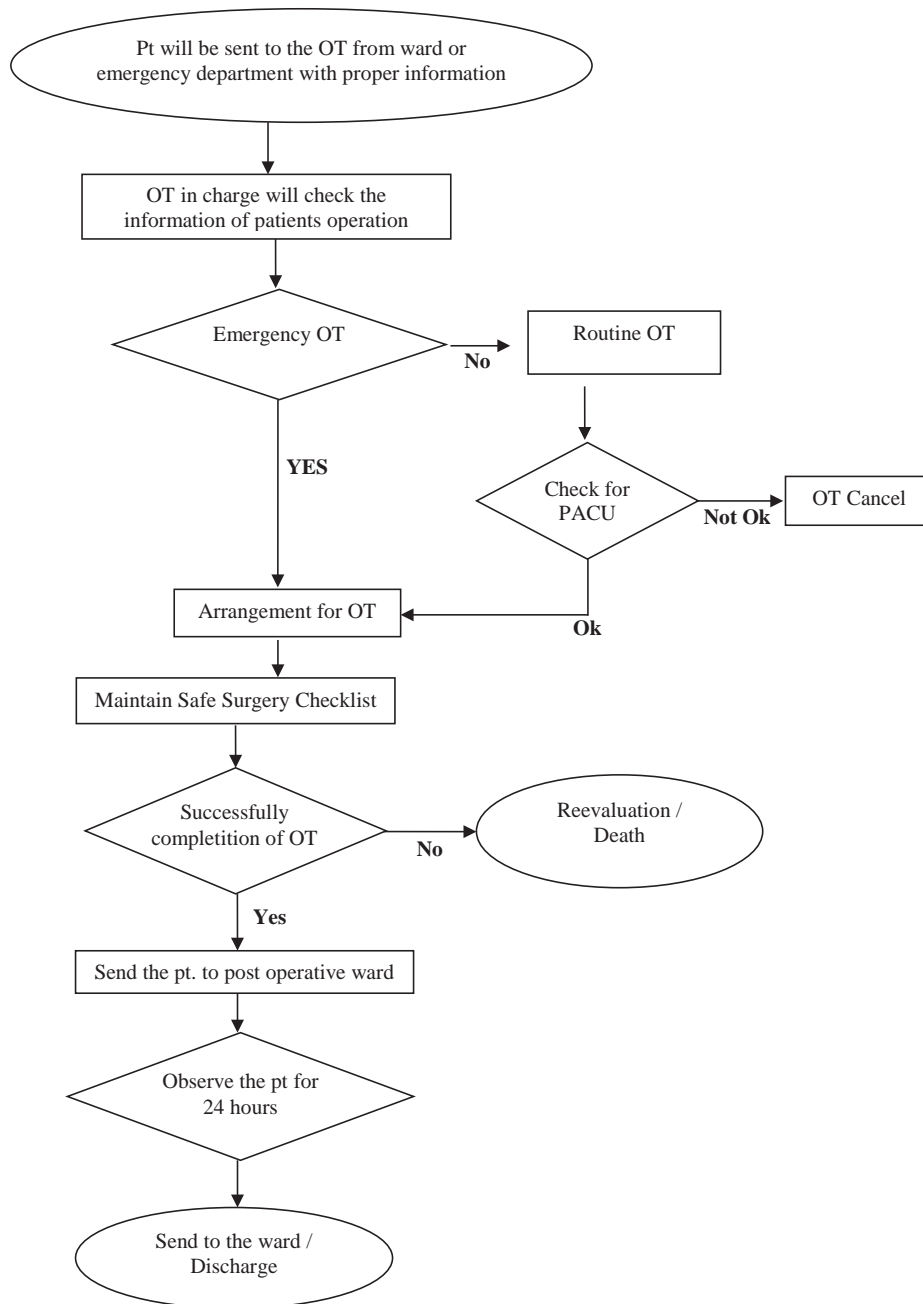
Objective of OT flow chart is to:

- a) Standardize the pathways from entry of a patient to be operated as well as going out.
- b) It will give opportunity to get prepared for an operation well ahead with necessary articles and actions.
- c) It helps synchronized and harmonious actions by the OT team to have desired outcome

5.b. List of Equipment, Materials and Medicines for OT

Name of equipment	Name of drugs and supplies
OT table	Autoclave
Stethoscope & BP instrument	Naso-gastric tube
Thermometer	Patient trolley & stretcher
Glucometer	Screen & stand
Laryngoscope	Inj. Antispasmodic
OT light	Injection Mg. Sulphate (For Eclampsia)
Measuring Tape	Injection Gardenal Sodium
Weighing machine	Injection Hydrocortisone
Height scale	Injection Diazepam
Torch light	Injection Antihistamine
Oxygen cylinder with Flow meter	Injection Pathedine
IV infusion stand and set	Injection Atropine
Suture materials	Injection Aminophylline
Canula	Injection Frusemide
Tourniquet	Injection Quinine (on demand)
Disposable syringe and needles	Injection Dexamethasone
Gloves	Injection Lignocaine (2%)
Sterile gauze, bandage, micropore, plaster, splint etc	Inj. Ergometrin
Sterilizer	Injection Amoxycillin
Emergency medicine trolley	Antiseptic liquid
Emergency generator (Alternate Power supply)	Lignocaine jelly (for catheterisation)
Suction machine	Cap. Amoxycillin
Nebulizer	Tab. Paracetamol
ECG	Tab. Tri-nitroglycerine , Tab. Aspirin, Nifecap
Stomach tube	IV fluids , Cholera fluids , DNS, DA
Anesthesia machine	ORS, Glucose
Gloves	

5.c. Flow Chart for Operation Theatre



5.d. Standard Operating Procedures (SOP) for OT

STEPS	ACTIVITIES	TIME/NO	RESPONSIBLE PERSONS	ALTERNATE RESPONSIBLE PERSON	COMPLIANCE RATE
GENERAL					
	A. House keeping <ul style="list-style-type: none"> • Mopped & Swept the floor • Walls, Roots, Doors & Windows are cleaned dusted. • Tap water supply Facilities • Doctors/Nurse/Aya wear their dress & badges 	3 Times/24 hrs and when necessary 2 times / week Regularly	Cleaner/ Ward in-charge /On duty SSN Aya / ward boy / Sister / Nursing Supervisor	OT in charge OT in charge OT in charge	
STEP-1	Reception and Registration <ul style="list-style-type: none"> • First attendees in duty room • Registration in IPD Register • Bed allocation & Preparation • Health education & instruction sheet • Send the Patient to bed • inform Doctor in duty 	3-5 min:	SSN	OT in charge	
STEP-2	A. Examination * Check case sheet supplied from emergency /OPD	5-10 min	Doctor		
Step-3	A. Further treatment <ul style="list-style-type: none"> ■ Cunselling the patients need surgical investigation ■ Inform patient / attendants well ahead of surgical procedure -Routine Case -Emergency case at once B. Follow up If the patient required specialized services referred with information -----Routine case -----Emergency If death sent to mortuary/death house/isolation place/handed over to relatives.	5-10 min	Doctor		

Compliance rate:

Quality of Care will be measure by compliance rate.

The Rated is Excellent : 91-100%

Very Good : 76-90%

Good : 50-75%

Bad : <50%

5.e. OT Service Monitoring Checklist

SI No.	Services	As per sop			Remarks	Score as per SOP
		Yes	No	N/A		
1	Whether mopping/sweeping materials supply adequate?					
2	Whether satisfactory walls, doors, windows clean and in good condition?					
3	Whether use of OT dress by Doctor/Nurse and other staffs?					
4	Whether forms, registers, records book are available?					
5	Whether patient record done properly?					
6	Whether following instruction sheet?					
7	Whether checking of case sheet properly?					
8	Whether use safe surgery check list routinely?					
9	Whether cleaning of equipments properly?					
10	Whether autoclaving of equipments properly?					
11	Whether maintaining of equipments list properly?					
12	Whether disposal of solid waste?					
13	Whether disposal of liquid waste?					
14	Whether disposal of waste from waste basket & spitting box?					
15	Whether maintenance of waste basket & spitting box?					
16	Whether maintaining of AC properly?					
17	Whether use of consent form routinely?					
18	Is there 24-hour OT service available for inpatients?					
19	Is there available guideline for different operation procedure available?					
20	Is the SOP on OT available?					
21	Is the danger sign displayed in the OT?					

Location:

The OT complex should be located on the ground floor as the OT department should be easily accessible to the CSSD, Emergency and surgical wards.

Size:

- Optimum size of OT should be 18ft X 18ft.
- Wall: the floor height (tiling on the walls) must be 7-10 ft so that it can be easily cleaned and Disinfected.
- Doors and Windows: Doors should be of 2 leaf type and self closing, at least 5ft wide. Windows should be 3ft and 4 inches above the floor and should be covered with glass panes.
- Floor: The floor should be easily washable and non-staining.

Zoning in OT:

The OT complex should comprise of following zones:

- 1) Protective zone: this is the outermost zone and includes the changing room, toilets etc. this is the area where everyday clothes can be worn.
- 2) Clean zone: Anesthesia preparation, pre medication, anesthetists' office, stores for sterile supplies, laying of sterile equipments, and scrubbing facility is provided. Sterilization room with autoclave is also a part of the zone.
- 3) Sterile zone: The main OT remains in this zone where patient and staff enters only after changing into sterile clothing.
- 4) Disposal zone: It comprises of the area where used instruments, waste material and soiled linen are temporarily stored before being collected. The zone must have separate passage from OT and should have independent connection to outside. All the taps inside the OT should be elbow operated taps.

Advantages of Zoning:

- 1) Minimizes the risk of hospital infection
- 2) Minimizes unproductive movement of staff, supplies and patients.
- 3) Increases efficiency of staff working in the operation suites and ensures smooth workflow.
- 4) Reduces hazards in the operating suites.
- 5) Ensures proper positioning of the equipment.
- 6) Ensures optimum utilization of the operating suites.

Items required:

- 1) Slipper stand
- 2) Clean slippers
- 3) Emergency tray with drugs (Drug list along with expiry dates to be pasted above it)
- 4) Drug trolley (this should have anesthetic drugs as well as emergency drugs and IV fluids)
- 5) Instrument Trolley
- 6) Hub cutter
- 7) Macintosh for OT tables
- 8) Cupboards for storing instruments
- 9) Bio Medical Waste Bins
- 10) Generator/ Invertor

Chapter-6

6. Standard Operating Procedure (SOP) of Pathology and Microbiology

6.a. Introduction:

The pathology service is an essential organization that assists doctors to diagnose and treat illness. Clinical pathologists test tissue and body fluid taken from patients for abnormalities and infection. It tells about how the pathology and microbiology service is structured, the kind of work are accomplished. There are many disciplines within pathology an almost all pathology laboratories have several different departments. Four key departments are Biochemistry, Hematology, Microbiology and Pathology. There are some other variation in the way different hospital laboratories are organized and run.

The SOP of pathology and microbiology tell about how specimens are processed including, health and safety considerations, how the specimen is collected and stored/transported, the tests that are carried out on the specimen, how the specimen is recorded/tracked through the process, how results are processed, the safeguards in place to protect patient information.

Microbiologists working in the pathology service routinely test patient samples for bacterial infections. For most patients it is enough to identify the general type of bacterium, for example E. coli or Streptococcus sp. but the specific strain isn't important. The patient's samples are then checked for antibiotic sensitivity so that treatment can be recommended.

In a hospital laboratory, microbiologists will test many samples at the same time. In this case study you will carry out the procedure for one sample.

Aseptic technique is the most important skill a microbiologist needs to learn. Using aseptic technique makes it unlikely that samples are contaminated with micro-organisms from the environment (in the air or on surfaces) and the micro-organisms being studied do not escape to cause infection.

Objectives:

- To provide a guide to services offered at the pathology and microbiology department.
- To assist physicians to diagnosis.
- To ascertain sensitivity of organism.
- To guide aseptic techniques.

6.b. Standard Operating Procedure (SOP) of Pathology and Microbiology

	Activities	Time Limit	Responsible Persons	Alternate Person	Compliance rate
GENERAL	<ul style="list-style-type: none"> • Necessary signage should present • Time schedule display • Price list display • Waste basket in Reception and waiting area • Mopped & swept the floor • Fans, walls, roof, doors & windows are cleaned dusted. • Toilet facility • Sputum box • Safe drinking water • Health education – how Pathological sample collection done. • Sitting arrangement of patients in waiting room • Sitting arrangement of Pathologist, doctors) 	Before intervention	Rmo/Cleaner/ MLSS of Pathology department	Pathology & microbiology in charge	⊕
STEP : 1	<ul style="list-style-type: none"> • Reception (patient arrival in Pathology department) • Registration • Issued charge slip will be provided to patient • Ticket will be marked by a separate colour or by emergency seal 	Within-05 Min	Receptionist of Pathology & microbiology department,	Other Medical Assistant	⊕
STEP : 2	<ul style="list-style-type: none"> • Short history taking • Patient will be prepared mentally • Should have the procedure explained to them • Concern about complication (if any) 	Within-10 Min,	Medical Technologist of Pathology (For female patient- female attendant should present)	Pathology in charge	⊕
STEP : 3	<ul style="list-style-type: none"> • Sample taking done quickly for Urgent patient 	With in 30 minute,	Pathologist & microbiology department	Alternate Pathologist /	⊕

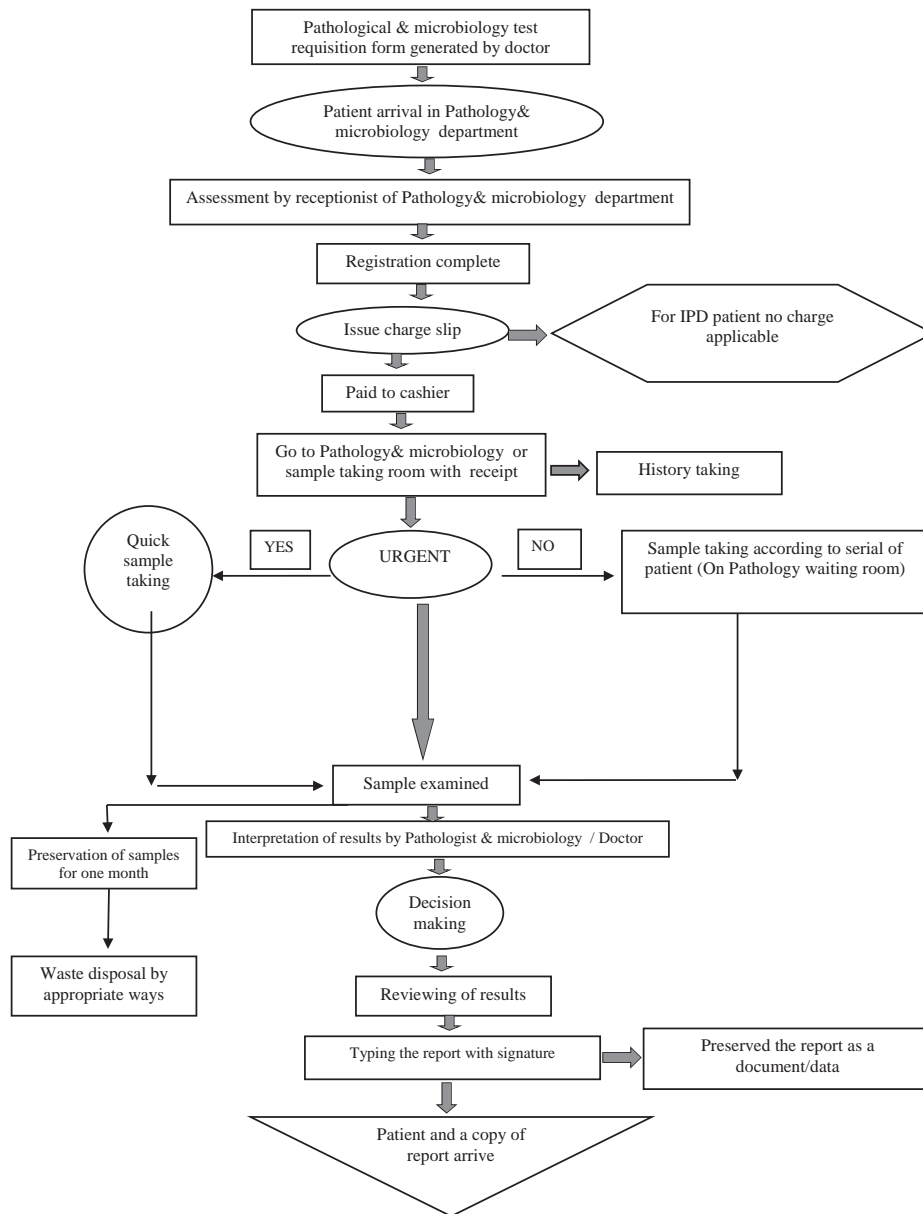
	Activities	Time Limit	Responsible Persons	Alternate Person	Compliance rate
	<ul style="list-style-type: none"> • Other patient-according to serial(on Pathology waiting room) • Prepare the sample-marking, identity, drying and filing • Examination/interpretation of film by Pathologist • Decision making • Review the sample • Confirmation of disease • Report typing • Signature of Pathologist/doctor • Put the result in register • Give the report to patient • Advice for follow up test (if needed) 	Or next day/fixed delivery date.		doctor.	
STEP : 4					
	<ul style="list-style-type: none"> • Examination/interpretation of film by Pathologist • Decision making • Review the sample • Confirmation of disease • Report typing • Signature of Pathologist/doctor • Put the result in register • Give the report to patient • Advice for follow up test (if needed) 	With in 30 minute , Or next day/fixed delivery date. IF C/S report will be provided after 72 hours.			

⊕ **Compliance rate:**

Quality of Care will be measure by Compliance rate:

- The rate is Excellent : 91 – 100%
 Very Good : 79 – 90%
 Good : 50 – 75%
 Bad : < 50%

6.c. Flow Chart of Pathology and Microbiology



6.d. Service Monitoring Checklist for Pathology and Microbiology

SI No.	Question / Observation	Response/ Result			Remarks	SOP-Score
		Yes	No	N/A		
1.	Is the Pathology & microbiology department including rooms are labeled?					
2.	Is the wall of Pathology & microbiology room structured according to law?					
3.	Is the level of cleanliness like roof, wall, windows & floor satisfactory & good condition?					
4.	Is the Pathology & microbiology department free from unwanted materials?					
5.	Are the signage system displayed clearly?					
6.	Is the furniture & equipment arranged well?					
7.	Whether display of time schedule perfectly?					
8.	Has the patient waiting space sufficient Sitting arrangements (Male & female separate space)?					
9.	Whether is clean toilet?					
10.	Is the stuff adequate for Pathology & microbiology?					
11.	Is the staff skilled enough?					
12.	Is the waste basket available?					
13.	Is the registration of patient done properly?					
14.	Is the consent of patient taken?					
15.	Is the short history taken properly?					
16.	Whether counseling of the patient before sample taking?					

Sl No.	Question / Observation	Response/ Result			Remarks	SOP-Score
		Yes	No	N/A		
17.	Are the urgent test/procedure done quickly?					
18.	Whether supply of safe water adequate?					
19.	Whether forms, registers, films & records book are in available supply?					
20.	Whether giving health safety instruction?					
21.	Whether diagnosis written clearly?					
22.	Is there 24-hour Pathology & microbiology service available for inpatients?					
23.	Is the guideline of Pathology & microbiology available?					
24.	Is the SOP on Pathology & microbiology department available?					
25.	Is the danger sign displayed in the Pathology & microbiology department?					

Chapter-7

7. Standard Operating Procedure (SOP) of Radiology

7.a. Introduction:

The Department of Radiology and Imaging is nationally and internationally recognized as the premier center for leading-edge musculoskeletal, orthopedic and rheumatologic clinical and research imaging. Our mission is to provide the highest quality diagnostic imaging for musculoskeletal conditions and to provide image-guided treatment options to support restoration of function and mobility. Our goal is to enhance the quality of patient lives through cutting-edge research in diagnostic imaging – in MRI, CT, ultrasound and interventional radiology – through the development of new techniques that optimize the early detection and treatment of musculoskeletal conditions.

Radiology is the medical specialty that uses medical imaging to diagnose and treat diseases within the body. A variety of imaging techniques such as X-ray radiography, ultrasound, computed tomography (CT), nuclear medicine including positron emission tomography (PET), and magnetic resonance imaging (MRI) are used to diagnose and/or treat diseases. Interventional radiology is the performance of (usually minimally invasive) medical procedures with the guidance of imaging technologies.

The modern practice of radiology involves several different healthcare professions working as a team. The Radiologist, Nurses and Radiology technologists usually work as a team.

Objective:

- a) It provides steps to follow to get radiology done.
- b) It helps to prepare general environment for radiology.
- c) To ascertain fitness of patients for radiology.
- d) It will guide to prepare patients for doing radiography

7.b. Standard Operating Procedure (SOP) of Radiology

	Activities	Time Limit	Responsible Persons	Alternate Person	Compliance rate
GENERAL	<ul style="list-style-type: none"> • Necessary signage should present • Time schedule display • Price list display • Waste basket in Reception and waiting area • Mopped & swept the floor • Fans, walls, roof, doors & windows are cleaned dusted. • Toilet facility • Sputum box • Safe drinking water • health education – how x-ray/imaging done /procedure • Sitting arrangement of patients in waiting room • Sitting arrangement of radiologist, doctors. 	Before intervention	Cleaner/ MLSS of radiology department	Radiology in charge	⊕
STEP : 1	<ul style="list-style-type: none"> • Reception (patient arrival in radiology department) • Registration • Issued charge slip will be provided to patient • Ticket will be marked by a separate colour or by emergency seal • Urgent patient will scan quickly • Other patient-scan according to serial(on radiology waiting room) 	Within-05 Min	Receptionist of radiology department,	Other Medical Assistant	⊕
STEP : 2	<ul style="list-style-type: none"> • Short history taking • Patient will be screened, dressed • Should have the procedure explained to them 	Within-10 Min, If multiple x-ray of a single	Medical Technologist of radiology, Apply	Radiology in charge	⊕

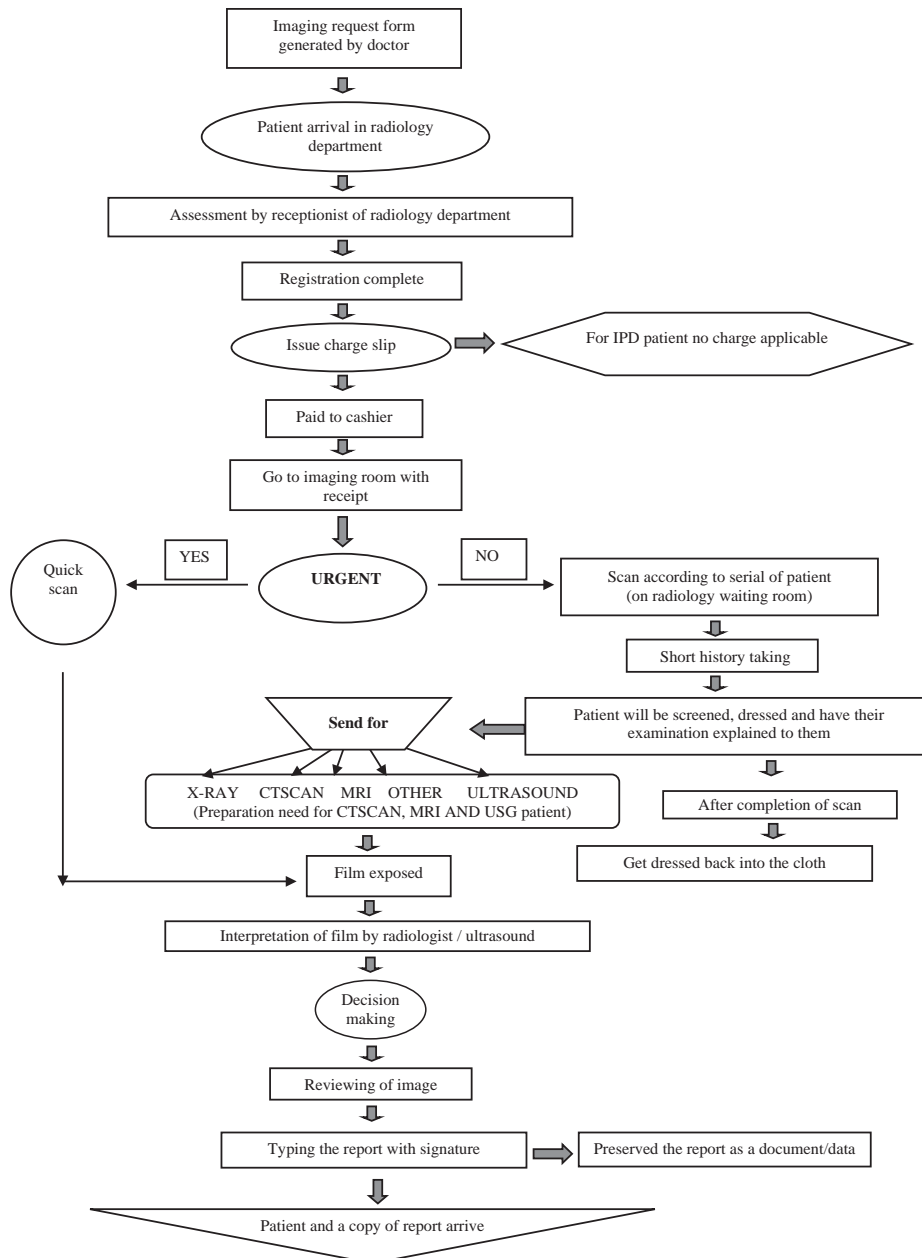
	Activities	Time Limit	Responsible Persons	Alternate Person	Compliance rate
	<ul style="list-style-type: none"> Preparation of patient for corresponding scan (like- CTSCAN, MAMOGRAPHY, MRI) X-ray/imaging done Get dressed back into the cloth Scan completion Concern about complication (if any) Prepare the film-marking, identity, drying and filling. 	patient/ unconscious patient (time may vary)	protective guard (for radiation) (For female patient- female attendant should present)		
STEP : 3					
	<ul style="list-style-type: none"> Examination/interpretation of film by radiologist/ ultrasonologist Decision making Review the film/image Confirmation of disease Report typing Signature of radiologist/doctor Put the result in register Give the report to patient Advice for follow up x-ray / scanning (if needed) 	With in 30 minute , Or next day/fixed delivery date.	Radiologist	Alternate radiologist / doctor.	⊕

⊕ Compliance rate:

Quality of Care will be measure by Compliance rate:

The rate is Excellent : 91 – 100%
 Very Good : 79 – 90%
 Good : 50 – 75%
 Bad : < 50%

7.c. Flow Chart of Radiology



7.d. List of Equipments, Materials and Medicines for Radiology

SL NO	EQUIPMENT AND MATERIALS
01.	X-Ray Unit— Table, Tube Assembly, Spot Film Device, Compression Device, Image Intensifier and TV System, X-Ray Generator, Ambient Conditions, Power Connection, X-ray protection. X-Ray Film processor X-ray Film Viewer Portable x-ray machine Contrast media / injection
02.	Ultrasound- Viewing Monitor, Image Display Modes, Measurement and Analysis, Probe connectors, Probes- General abdomen OB/GYN 2.5-6.0 MHz. Small parts, PV (steered linear) 5.0-10.0 MHz. Adult heart (harmonic echo) 2.1-3.8 MHz.
03.	CT-scanner (compact tomography scan)- Patient table, Gantry -- Number of slices per rotation, Detector, X-ray subsystem, Scanning parameters.
04.	MRI (magnetic resonance of imaging)
05.	<u>Echocardiography</u>
06.	<u>Mammography</u>
07.	<u>Linear accelerator-</u> used in <u>radiotherapy</u> for <u>cancer</u>
08.	<u>Positron emission tomography</u> (PET Scan)
09.	<u>Interventional radiology-</u> <u>angioplasty</u> , <u>TIPS</u> .
10.	<u>Radio-isotope scan</u> or <u>nuclear scintigraphy</u>
11.	<u>SPECT scan</u>

7.e. Service Monitoring Checklist for Radiology

Sl No.	Question / Observation	Response/ Result			Remarks	SOP-Score
		Yes	No	N/A		
1.	Is the radiology department including rooms are labeled?					
2.	Is the wall of radiology room structured according to law?					
3.	Is the level of cleanliness like roof, wall, windows & floor satisfactory & good condition?					
4.	Is the radiology department free from unwanted materials?					
5.	Are the signage system displayed clearly?					
6.	Is the furniture & equipment arranged well?					
7.	Whether display of time schedule perfectly?					
8.	Has the patient waiting space sufficient Sitting arrangements (Male & female separate space)?					
9.	Whether are clean toilets?					
10.	Is the stuff adequate for radiology?					
11.	Is there any radiation protection measures taken (lead gown)?					
12.	Is the waste basket available?					
13.	Is the registration of patient done properly?					
14.	Is the consent of patient taken?					
15.	Is the short history taken properly?					
16.	Is the privacy of the patient ensured during radiological procedure?					
17.	Are the urgent test/procedure done quickly?					
18.	Whether supply of safe water adequate?					
19.	Whether forms, registers, films & records book are in available supply?					
20.	Whether giving health safety instruction?					
21.	Whether diagnosis written clearly?					
22.	Whether counseling of the patient before x-ray, ct-scan, mri & usg?					
23.	Is there 24-hour radiology service available for inpatients?					
24.	Is the guidelines of atomic Energy Commission (AEC) available?					
25.	Is the SOP on radiology department available?					
26.	Is the danger sign displayed in the radiology department?					



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