
General Hospital - Requirements

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Tables of Contents

ACKNOWLEDGEMENT	3
FOREWORD.....	3
SECTION ONE: GENERAL.....	4
1. Scope.....	4
2. Normative References.....	4
3. Terminologies and Definitions	5
4. SERVICE STANDARDS.....	7
4.2. Outpatient Services	13
4.3. Emergency Services	17
4.4. Internal Medicine Services.....	21
4.5. Pediatric Services	24
4.6. Surgical and Orthopedic Care Services.....	31
4.7. Gynecology and Obstetrics Care Services	46
4.8. Anesthesia Services.....	60
4.9. Intensive Care unit (ICU) Services	68
4.10. Mental Healthcare Services	73
4.11. Dentistry Services.....	79
4.12. Otorhinolaryngology (ORL) Services	86
4.13. Ophthalmology Services.....	90
4.14. Dermatology Services.....	94
4.15. Oncology Services.....	96
4.16. Physical therapy service	102
4.17. Radiology Services.....	104
4.18. Medical Laboratory Services.....	110
4.19. Pathology Services	119
4.20. Pharmaceutical Services	121
4.21. Blood Transfusion Services.....	142
4.22. Liaison Service	144
4.23. Health Care Quality Improvement and Patient safety System	146
5. OTHER HOSPITAL SERVICES	149
5.1. Infection Prevention	149
5.2. Medical Recording	156
5.3. Food and Dietary Services	159

5.4.	Sanitation and Waste Management	166
5.5.	Housekeeping, Laundry and Maintenance Services	170
5.6.	Social Work Services	177
5.7.	Morgue Services.....	179

ACKNOWLEDGEMENT

FOREWORD

SECTION ONE: GENERAL

1. Scope

- 1.1. This Ethiopian standard shall be applicable for all general hospitals new and existing, governmental and non-governmental.
- 1.2. The standard covers the minimum requirements with respect to practices, premises, professionals and products or materials put into use for general hospitals.
- 1.3. Requirements of a general hospital are stipulated under section two to eight of this standard.

2. Normative References

The latest editions of the following laws, regulations, directives and guidelines shall be taken as part and parcel of this Ethiopian Standard.

- 2.1. Ethiopian Food, medicine and Healthcare Administration and Control Proclamation No. 661/2009
- 2.2. Ethiopian Food, Medicine and Healthcare Administration and Control Regulation No. 189/2010
- 2.3. Federal Hospitals Administration Council of Ministers Regulation No. 167/2009
- 2.4. The Ethiopian Hospital Reform and Implementation Guidelines, Mar 2010
- 2.5. Health Policy of Ethiopia
- 2.6. Drug Policy of Ethiopia
- 2.7. Commercial Code of Ethiopia
- 2.8. Criminal Code of Ethiopia
- 2.9. Medicines Waste Management and Disposal Directive No 2/2011
- 2.10. Ethiopian National Guideline for Health Waste Management, 2008
- 2.11. Ethiopian Building Proclamation, No. 624/2009

3. Terminologies and Definitions

3.1

Appropriate Organ

Shall mean a state government organ authorized to implement food, medicine and healthcare administration and control activities at a state level;

3.2

Authority

Shall mean the Ethiopian Food, Medicine and Healthcare Administration and Control Authority.

3.3

Proclamation

Shall mean the Ethiopian Food, Medicine and Healthcare Administration and Control proclamation No 661/2009.

3.4

Appropriate Law

Shall mean a law issued by a state to implement regulatory activities regarding food, medicine and healthcare.

3.5

Person

Shall mean any physical or juridical person

3.6

Authorized Person

Shall mean any hospital staff who is responsible for a given service

3.7

General Hospital

Shall mean a health facility at secondary level of healthcare which provides promotive, preventive, curative and rehabilitative service that requires diagnostic facilities and therapeutic interventions with a minimum capacity of 50 beds and at least shall provide gynecology and obstetrics, pediatrics, internal medicine, surgery,

psychiatry and emergency services. In addition, it shall provide laboratory, imaging and pharmacy services and other related services stated under this standard.

- 5.1.1. The general hospital shall have at least the following summary of professionals and staffing:

4. SERVICE STANDARDS

4.1. Nursing practice

- 4.1.1. There shall be written protocol and procedures of nursing services for routine taking and documenting vital signs, carrying out prescribed medication and nursing care to be rendered. Such protocol and procedures shall be reviewed at least once every two years.
- 4.1.1.1. There shall be regulations that ensure nurses access to clinical supervision, support and participation in regular clinical services audit and reviews.
- 4.1.1.2. There shall be current clinical and administrative nursing protocol and procedures available to all nursing personnel on each patient care unit at all times.
- 4.1.1.3. Nursing care service at different service delivery areas shall be directed by nurses director.
- 4.1.1.4. Written copies of nursing procedure manual shall be available to the nursing staff in every nursing care unit. The hospital shall have established guidelines for verbal and written communication about patient care that involves nurses.
- 4.1.1.5. There shall be a procedure for standardized, safe and proper administration of medications by nurses or designated clinical staff including regular checks of patients' medications and proper documentation of administered medicine.
- 4.1.1.6. There shall be a system/ protocols in place to handle comatose or patients on life support system and also patients diagnosed to have communicable diseases.

Nursing care: general patient services

- 4.1.1.7. Assessment and documentation of the holistic needs of patients; formulating, implementing goal-directed nursing interventions and

evaluating the plan of nursing care and involvement of patients, their relatives or next of kin in decisions about their nursing care shall be done by licensed nurses.

- 4.1.1.8. All patients shall be under the supervised care of a licensed nurse at all times.
- 4.1.1.9. Implementation of infection prevention procedures and provision of information on IP practices to patients, clients, family members and other caregivers, as appropriate shall be done by the nurses; see the infection prevention section of this standard.
- 4.1.1.10. Nurses shall work with others to protect and promote the health and wellbeing of patients under their care.
- 4.1.1.11. Nurses shall be open and honest, act with integrity and uphold the reputation of their profession.
- 4.1.1.12. All nursing staff shall wear easily readable name tags that include their name and status, (such as licensed nurse, student, etc). The hospital shall have a policy to identify nursing unit exceptions to this procedure where necessary.
- 4.1.1.13. Nurses providing care and service at specific units like OR, ICU, Recovery, cardiac unit, etc., shall have proper orientation and minimum basic training on related nursing activities in each unit.
- 4.1.1.14. . There shall be a protocol that empowers nurses to restrict number of visitors and/ or care takers based on the condition of the patient.
- 4.1.1.15. Documentation and completion of all patient's recording, registers, and reporting formats shall be the responsibility of licensed nurses in the unit. The nursing care plan shall be initiated upon admission of the patient and, as a part of the long-term goal, shall include discharge plans. This planning, nursing interventions and patient responses shall be documented in the medical record.
- 4.1.1.16.
- 4.1.1.17. In addition to this the nurse shall be write his/her name and signature. The nursing care plan shall be initiated upon admission of the patient and, as a part of the long-term goal, shall include discharge plans.
- 4.1.1.18.

- 4.1.1.19. A nurse shall write brief and pertinent nursing care plan and activity for each patient. As Per national nursing care guideline
- 4.1.1.20. Nurses shall not disclose confidential information relating to their patients.
- 4.1.1.21. Nurses shall explain and seek informed consent from their patients or their relatives/next of kin (for incompetent patients) before carrying out any procedure.
- 4.1.1.22. Nurses shall find solutions to conflicts caused by deep moral, ethical and other beliefs arising from a request for nursing service through dialogue with patients.
- 4.1.1.23. Patient discharge instructions shall be documented in the patient's medical record at the time of discharge.
- 4.1.1.24. Allergies shall be listed on the front cover of the patient's chart and/or, in a computerized system, highlighted on the screen and this shall be posted in patient's bed.
- 4.1.1.25. Patients who require assistance in feeding shall be identified, and there shall be a mechanism in place to assure that assistance is provided.
- 4.1.1.26. For admitted patients, the nursing staff shall take and document the necessary vital signs as ordered and communicate to treating /attending physician immediately if abnormal findings observed.
- 4.1.1.27. Patients who required/prescribed to have special diet/ care shall be identified, labeled and there shall be a mechanism in place to ensure this procedure.
- 4.1.1.28. There shall be clear protocol that state general and oral hygiene in particular of admitted patients as part of the nursing care.
- 4.1.1.29. There shall be written protocol that states the procedures for communicating with laboratory, laundry and food service. The nurse shall communicate and follow up food orders, laboratory orders and specimens and patient transfers.
- 4.1.1.30. There shall be protocol that state reporting of any signs suggestive of child abuse, substance abuse and or how to link abnormal psychiatric manifestations by the nursing staff.

Nursing care services related to pharmaceutical services

- 4.1.1.31. All medications administered by nursing personnel shall be prescribed by physician and/or any other authorized health professional and shall be administered in accordance with the prescriber orders.
- 4.1.1.32. Medications for individual patients shall not be removed from their original prescription containers by nursing personnel until the time of medicines administration.
- 4.1.1.33. Medicines packaged in unit dose containers shall not be removed from the containers by nursing personnel until the time of medicines administration. Such medicines shall be administered immediately after the dose has been removed from the container, and by the individual who prepared the dose for administration.
- 4.1.1.34. Each patient shall be identified prior to medicines administration. Medicines dispensed for one patient shall not be administered to another patient.
- 4.1.1.35. The nurse shall observe administration of prescribed medicines for those patients under nursing care who are taking oral medications.
- 4.1.1.36. Regarding self-administration of medicines, nursing personnel shall directly observe self-administration and implement policies and procedures developed by the pharmacy and therapeutics committee.
- 4.1.1.37. There shall be a policy of reporting and documenting medication errors, product quality defect and adverse drug reaction by attending nursing personnel immediately to the prescriber and ADE focal person.
- 4.1.1.38. Medicines in patient care areas shall be maintained under proper conditions, as indicated under pharmaceutical service standards of this standard.
- 4.1.1.39. Medicines, needles and syringes in patient care areas shall be maintained under proper conditions as per the pharmaceutical service standards stated under this standard.
- 4.1.1.40. Nursing personnel shall return unfit-for-use medicines to the central medical store of the hospital for disposal.
- 4.1.1.41. Nursing personnel shall store and use needles and syringes in accordance with the infection prevention standards of this standard
- 4.1.1.42. There shall be a protocol that guides nurses copying the prescription of prescriber's order.

Nursing care: use of restraints

- 4.1.1.43. The hospital shall have written policies and procedures regarding the use of physical restraints that are reviewed at least once every three years and implemented. They shall include at least the following:
- (a) Protocol for the use of alternatives to physical restraints, such as staff or environmental interventions, structured activities, or behavior management. Alternatives shall be utilized whenever possible to avoid the use of restraints;
 - (b) A delineation of indications for use, which shall be limited to:
 - Prevention of imminent harm to the patient or other persons when other means of control are not effective or appropriate; or
 - Prevention of serious disruption of treatment or significant damage to the physical environment;
 - (c) Contraindications for use, including at least clinical contraindications, convenience of staff, or discipline of the patient;
 - (d) Protocols for notifying the family or guardian of reasons for use of restraints, and for informing the patient and requesting consent when clinically feasible; and
 - (e) Protocol for removal of restraints when goals have been accomplished.
- 4.1.1.44. Except in an emergency, a patient shall be physically restrained only after the attending physician or another designated physician has personally seen and evaluated the patient and has executed a written order for restraint.
- 4.1.1.45. An emergency restraint procedure, beginning with the least restrictive alternative that is clinically feasible, shall be initiated by a licensed professional nurse only when the safety of the patient or others is endangered or there is imminent risk that the patient will cause substantial property damage. The attending physician, another, or a licensed psychiatric nurse or other authorized professional shall be notified immediately and shall respond within one hour. An order shall be given if the use of restraints is to continue beyond one hour. The clinical condition of the patient shall be evaluated and documented by medical or licensed nursing personnel at least once every two hours.

- 4.1.1.46. In all cases, the attending physician, or licensed psychiatry nurse or other authorized professional shall observe the restrained patient at least once every 24 hours to evaluate any changes in the patient's clinical status. This evaluation shall be documented in the patient record. If a physician has ordered the use of restraints, a subsequent order for the use of restraints shall not be required so long as its use is in compliance with the intent of the original order and hospital policy.
- 4.1.1.47. Interventions while a patient is restrained, except as indicated at (g) below, shall be performed by nursing personnel in accordance with nursing care policy. They shall include at least the following and shall be documented:
- (a) Assessment for clinical status and reevaluation of need for restraints at least every two hours;
 - (b) Toileting at least every two hours with assistance if needed;
 - (c) Monitoring of vital signs; and
 - (d) Release of restraints at least once every two hours in order to:
 - Assess circulation and skin integrity;
 - Perform skin care; and
 - Provide an opportunity for exercise or perform range of motion procedures for a minimum of five minutes per limb.
 - (e) Continuous or periodic visual observation based upon an evaluation of the patient's clinical condition.
 - (f) Administration and monitoring of adequate fluid intake;
 - (g) Adequate nutrition through meals at regular intervals, snacks, and assistance with feeding if needed;
 - (h) Assistance with bathing as required, occurring at least once a day; and
 - (i) Ambulation at least once every four hours if clinically feasible.
- 4.1.1.48. Licensed professional nursing staff shall evaluate and ensure appropriate monitoring and documentation of the effects of all psychotropic medications. These medications shall be administered only upon written physician orders as part of the patient's treatment plan and shall not be used as a method of restraint, discipline, or for the convenience of staff.

Nursing care: Dying patient

- 4.1.1.49. There shall be a protocol that state the procedure to be followed for dead body care which at least contain:
- (a) Confirmation of death by at least attending physician or any independent practitioner and the nurse giving care (at least 2 medical personnel),
 - (b) The time of death shall be documented on the patients chart,(nursing procedure note)
 - (c) The body shall be taken to morgue immediately,

4.2. Outpatient Services

4.2.1. Practices

- 4.2.1.1. The outpatient services shall comply with the standards prescribed under patient rights and responsibilities standard
- 4.2.1.2. The hospital outpatient service shall have a triage system
- 4.2.1.3. The outpatient service shall have Procedure and procedures regarding access, availability of service and networking
- 4.2.1.4. The outpatient service shall be available in working days for at least eight hours a day
- 4.2.1.5. The hospital may have a system for providing after-hour (non-working hour) follow up service.
- 4.2.1.6. Follow up clinic services, which shall be led by a specialist or senior general practitioner shall be available for eight hours per discipline.
- 4.2.1.7. The hospital Should have a system to make follow up of patients by the same physician
- 4.2.1.8. The outpatient service shall have consultation and functional intra and inter facility referral system as per national referral guideline.
- 4.2.1.9. The medical assessment at outpatient services shall at least includes comprehensive medical and social history, physical examination, diagnostics impression as well as laboratory and other medical workups (x-ray, ultrasound, etc) when indicated.

4.2.1.10. The outpatient clinic shall have clinical protocols for management of at least common disease entities and locally significant diseases in line with the national and international guidelines.

4.2.1.11. The range of relevant treatment options and the clinical impression shall be fully described to client and/or their families and clearly documented accordingly and put his/her name and signature.

4.2.2. Premises

4.2.2.1. The outpatient layout shall include the following:

- a) Dedicated entrance for outpatient department
- b) Waiting area: room /lobby preferably with TV area, drinking fountain/optional/ and gender specific toilet
- c) Central triage
- d) Reception and recording area/deskDedicated patient consultation and examination rooms /cubicles for each specialty services
- e) Room for minor procedures
- f) Room for providing injections(Optional)
- g) Storage place for sterile supplies
- h) Soiled utility
- i) Staff room (for changing cloth)Janitors closet Shared with emergency service and should have a sink

Service room	Square area	Number of rooms
Family planning services with procedure room	12 for each	2
Gynecologic and emergency OPD with two resuscitation beds	24	1
ANC room and PMTCT	12 for each	2
Gyn and obs referral clinic	12	1
Procedure room (for gyn &ob. Wih patient changing area	16	1
Surgical and orthopedics outpatient services premises		
Services room	Square meter	Number of Rooms
Examination room /consultation room	12 sq.m each	2

Procedure room(orthopedics)	20 sq.m	1
Minor operation room With Patient cloth changing area	26 sq.m	1
Internal medicine outpatient services premises		
Examination room	12 sq.m each	2
Pediatrics outpatient services premises		
Examination room		
Immunization with clod chain		
Nutrition and ORS corner		

\All rooms shall have adequate light, water and ventilation

4.2.2.2. Communication system shall be connected with major functional areas

4.2.2.3. The room arrangements of outpatient services shall consider proximity between related services

4.2.2.4. The outpatient clinical setup shall have easy access to pharmacy, laboratory and other diagnostic services.

4.2.2.5. The outpatient clinic shall be well marked and easily accessible for disabled clients, elderly patients, under five children and pregnant mother.

4.2.2.6. The outpatient service shall be located where access for ambulatory patients is the easiest and where in coming client would not have to pass through other care service outlets (in- patient , laboratory etc)

4.2.2.7. The outpatient clinics shall have fire extinguishers placed in visible area

4.2.3. Professionals

4.2.3.1. At least one general medical practitioner per discipline (Internal Medicine, Pediatrics, Surgery, Gynecology and Obstetrics) for the general outpatient service shall be assigned for eight hours in each working day

4.2.3.2. At least One specialist per discipline (specialty) to run the respective specialized outpatient service shall be assigned

4.2.3.3. The actual number of personnel shall be determined by workload analysis using recognizable methods

4.2.3.4. The staff shall have regular supportive supervision by senior staff or peer review or case conferences every three months and it shall be documented

4.2.4. Products

4.2.4.1. Products that are specific to particular department are indicated under the specific discipline

- | | |
|----------------------------------|------------------------|
| a) Weighing Scale | c) Refrigerator |
| b) Vital Sign and Diagnostic Set | d) Dressing Set |
| • Thermometer | e) Minor Set |
| • Stethoscope | f) Examination Couch |
| • Sphygmomanometer | g) Catheterization set |
| • Fundoscope | h) Trolley |
| • Otoscope | i) Folding Screen |
| • Pulseoxymeter | j) X-Ray Film viewer |
| • Reflex hammer | |
| • Snellen's chart | |

4.3. Emergency Services

4.3.1. Practices

- 4.3.1.1. The emergency service including emergency surgical interventions shall be available 24hrs a day and 365 days a year.
- 4.3.1.2. The hospital shall have an emergency triage system. Triage shall be carried out before any administrative procedures such as registration.
- 4.3.1.3. Patients identified as non-emergency cases in emergency service unit shall be transferred to the central triage or respective outpatient services.
- 4.3.1.4. Infection prevention standards shall be implemented in the emergency room as per the IP standards stated under this standard
- 4.3.1.5. The emergency service shall have functional intra and inter facility referral system which encompasses SOP for selection of referral cases, referral directory, referral forms, referral tracing mechanism, feedback providing mechanism, documentation of referred clients and consultation forms.
- 4.3.1.6. If referral is needed it shall be done after providing initial stabilization and after confirmation of the required service availability in the facility where the patient is to be referred to.
- 4.3.1.7. If the patient to be referred needs to be accompanied by a physician or other professional on the way to another hospital, the hospital shall arrange an ambulance service and accompanying professionals to transfer the patient.
- 4.3.1.8. Every procedure, medication and clinical condition shall be communicated to the patient or family member after responding for urgent resuscitation measures
- 4.3.1.9. There shall be a mechanism of quality improvement for the service at least by collecting feedback from clients and having a formal administrative channel through which clients place their complaints and grievances
- 4.3.1.10. For labor and delivery emergencies, the emergency service of the hospital shall have direct access with the delivery facility.
- 4.3.1.11. The emergency service shall have clinical protocol for the initial management of at least the following emergency cases:
 - (a) Shock
 - (b) Bleeding
 - (c) Fracture and injuries
 - (d) Coma

- (e) Seizure disorder
- (f) Air way obstruction
- (g) Cardiac emergencies
- (h) Hypertension emergencies
- (i) Psychiatric emergencies
- (j) Acute diarrhea
- (k) Tetanus
- (l) Meningitis
- (m) Burn
- (n) Poisoning
- (o) Cerebrovascular accident
- (p) Acute abdomen

4.3.1.12. Emergency referral system shall be strictly chained, controlled & managed by the emergency team of the hospital.

4.3.2. Premises

4.3.2.1. The emergency room shall be located in a place where it is easily recognizable to the public and shall be labeled in bold.

4.3.2.2. The emergency premise shall be low traffic area and there shall be reserve parking place for ambulances.

4.3.2.3. The corridor to emergency rooms shall be stretcher friendly and not less than 1.5 m.

4.3.2.4. The emergency department shall have the following premise set up

Rooms required	# required	Area required
• Waiting area		
• Triaging area	1	12 sq.m
• Area Accepting and providing immediate care including emergency procedures	1	20 sq.m
• Instrument processing room	1	6 sq.m
• Admitting for a maximum of 24 hrs to provide emergency care (8 beds)	1	62 sq.m
• Emergency pharmacy	1	12 sq.m
• Staff/duty room		
• Toilet (male/female)		

4.3.2.5. Beds shall be arranged as the description of inpatient beds' arrangement

4.3.2.6. The size of the door for the emergency room shall not be less than 1.5 meter

4.3.2.7. The emergency premise shall allow patient dignity and privacy.

4.3.2.8. The rooms shall be arranged in such a way that the first encounter to an emergency patient coming from outside will be the examination room or space

4.3.2.9. The emergency room shall have the following facilities

- (a) Adequate water, light and ventilation.
- (b) Fire extinguishers placed in visible area
- (c) Telephone
- (d) Hand washing basin in each room

4.3.3. **Professionals**

4.3.3.1. The emergency service shall be directed by emergency medicine specialist/emergency and critical care professionals specialist/GP/IESO.

4.3.3.2. The team of emergency shall be changed every eight hours and the team composition during working and non-working hours shall have similar staffing pattern.

4.3.3.3. Each team for all the shifts shall contain a minimum of the following professionals:

Professional required	#required for one shift (8hrs)
• Emergency medicine specialist /emergency and critical care professionals specialist/GP/IESO	1
• General practitioner	1
• Health officer (optional)	1
• Professional nurse	4
• Emergency and critical care nurse	1
• Porter	
• Cleaner	

4.3.3.4. At least one specialist for each major discipline shall be available for emergency consultation on call basis.

4.3.3.5. The actual number of personnel required shall be adjusted based on Workload analysis.

4.3.3.6. All health professionals working in the emergency room shall be trained on at least cardio-pulmonary resuscitation

4.3.3.7. Rotation of staff shall not be a routine exercise for the emergency service.

4.3.3.8. Drill-exercise of emergency case management shall be conducted on regular bases among the teams working in the emergency service.

4.3.4. **Products**

- 4.3.4.1. The emergency service shall have readily arranged emergency medicines and supplies on trolley.
- 4.3.4.2. There shall be at least two coaches at emergency room
- 4.3.4.3. There shall be at least eight beds to be used only for emergency admission
- 4.3.4.4. The emergency service shall have at least the following products.
- | | |
|--------------------------------|---|
| (a) Emergency Bed with wheel | (o) Oxygen supply: oxygen, cylinder with flow meter, trolley and nasal prongs |
| (b) Stretcher with wheel | (p) Examination Lamp |
| (c) Wheelchair | (q) Pulseoximeter |
| (d) IV Stand | (r) Infusion pump |
| (e) ECG | (s) X-ray viewer |
| (f) Suction machine | (t) Resuscitation set on trolley |
| (g) Defibrillator | (u) Intubation set |
| (h) Cardiac monitor | (v) Ambu bags |
| (i) Tracheotomy set | (w) Mobile x-ray machine (optional) |
| (j) NG tube | (x) Examination coach |
| (k) Minor surgical set | |
| (l) Different types of splints | |
| (m) Mobile examination light | |
| (n) Hot air oven | |

4.4. Internal Medicine Services

4.4.1. Practice

- 4.4.1.1. There shall be written protocols and procedures which shall be enforced that establish the management of the medical conditions in the unit as well as consultation and transfer of patients admitted to this unit or other units or to general hospital.
- 4.4.1.2. For non-emergency medical condition the medical service shall be available during the regular working hours.
- 4.4.1.3. For admitted patients the medical service shall be organized in such a way that it covers all the shifts.
- 4.4.1.4. Nursing functions shall be the responsibility of licensed nurses and shall be monitored by at least nurse professional coordinator.
- 4.4.1.5. The service shall have written policies and procedures that shall include
 - a) Admission and discharge criteria specific to the service;
 - b) Visitors policy that specifies the number of visitors permitted for each patient at any time
 - c) Infection control specified under this standard and National and or Hospital IP guideline
 - d) Transfer and referral of patients
 - e) Monitoring and follow-up of patients
- 4.4.1.6. Every medical records shall be kept for each patient as specified in the medical records of this standard
- 4.4.1.7. Information contained in the medical record shall be complete and sufficiently detailed relative to the patient's history, physical examination, diagnosis, diagnostic procedures, medication administration, and treatment. Refer to the medical record section of this standard.
- 4.4.1.8. The medical unit shall have a follow-up service for patients with chronic ailments.
- 4.4.1.9. Diseases under national surveillance shall be notified through the proper channel (to chief clinical officer or chief executive officer and hence to the local health office.
- 4.4.1.10. The unit shall avail updated reference materials, treatment guidelines and manuals (e.g. National TB and leprosy, pain management, Malaria treatment, ART etc)

4.4.1.11. The caretakers and/or patients shall be included in the development of the nursing patient plan of care

4.4.1.12. There shall be a system for clinical staff to refer patients directly to the social works unit.

4.4.2. Premises

4.4.2.1. In patient room capacity shall not exceed a maximum of six beds per room

4.4.2.2. Patient rooms shall be constructed to meet a minimum of 9 meter squares for single bed room

4.4.2.3. In case of multiple beds per room, the area per bed shall be 8.6m²

4.4.2.4. Dimensions and clearances- the dimensions and arrangements of rooms shall be such that there is a minimum of 0.9m (90cm) between the sides and foot of the bed and any wall or any other fixed wall construction. In multiple bed rooms a clearance of 1.2 meter shall be available at the foot of each bed or between beds to permit the passage of equipments and beds

4.4.2.5. The number of rooms and beds shall be as per the load, volume and nature of work performed.

4.4.2.6. Patients in acute care shall be under direct observation in a room near the nurses' station.

4.4.2.7. In addition to the ward rooms, the internal medicine service shall have the following rooms and facilities:

Rooms required	#required	Area required
Examination rooms	2	12 sq.m for each
Physician office	1	9 sq.m for each
Store	1	6 sq.m
Procedure room	1	9 sq.m
Isolation rooms (with self contained toilet)	2	12 sq.m each
Care after death room (optional)	1	6 sq.m
Soiled utility room (optional if shooting system is available)	1	4 sq.m
Duty room		
Nurse station		
Patient Toilet with hand washing basin and shower at least one per each room		

4.4.3. **Professionals**

- 4.4.3.1. The internal medicine services shall be directed by a licensed internist
- 4.4.3.2. There shall be licensed medical and nursing personnel in the medical service unit available at all times to meet the service needs
- 4.4.3.3. The number and type of technical staff shall be determined by the volume and type of work carried out (Workload Analysis)
- 4.4.3.4. A general practitioner shall be available (physically present) at all times in the adult medical service unit.
- 4.4.3.5. An internist or licensed independent practitioner shall be on duty or on call at all times. The physician on call shall be duty bound to respond to calls.
- 4.4.3.6. An internist or general practitioner shall be responsible for the follow-up clinics.
- 4.4.3.7. The internal medicine department shall contain a minimum of the following professionals :

Professional required	#required for 8hrs	
	OPD	IPD
Internist	1	1
General practitioner	1	1
Nurse professional/nurse	2	According to 1 to 5 patient ratio
Runner/porter		
Cleaners		

4.4.4. **Products**

- 4.4.4.1. The hospital shall prepare an emergency medicines list in accordance with the hospital medicines list and ensure their availability.
- 4.4.4.2. The medical OPD shall have the following supplies and functional equipment in addition to office furniture's
 - a) Torch, Otoscope, ophthalmoscope
 - b) Weighing scales for adults
 - c) Measuring board for measuring length and height
 - d) Tape meter, thermometer
 - e) Stethoscopes
 - f) Sphygmomanometer
 - g) Examination couch

- h) Lumbar puncture, bone marrow aspiration set, pleural (peritoneal) biopsy set, cut down set, Pericardiocentesis set, wide bore needles for thoracentesis

4.4.4.3. The inpatient service shall have the following supplies and functional equipments

- a) Torch, Otoscope, funduscope etc...
- b) Weighing scales
- c) Tape meter, thermometer, patella hammer
- d) Stethoscopes and Sphygmomanometer
- e) Examination couch, medicine trolley, Cup board
- f) Lumbar puncture, Bone marrow aspiration set, pleural biopsy set, tracheotomy set, chest tube
- g) EKG machine
- h) Suction machine
- i) Drip counters/Infusion pump, Tourniquets and IV stands
- j) Oxygen cylinder, Flow-meters for oxygen, Nasal prongs catheters
- k) Self inflating bags for respiratory support, Masks, endotracheal tubes,
- l) Laryngoscope
- m) Cannulas, Nasogastric tube
- n) Beds
- o) Nebulizers
- p) Equipment for skin scrapings and biopsy of dermatological lesions, bone marrow trephine needles and slides and others
- q) Glucometer and gluco stick
- r) Pulseoximeter
- s) Wheelchair
- t) Over bed table(for feeding)
- u) Bed side cabinet and bed curtain fixed with the roof and the ground
- v) Waste paper basket

4.5. Pediatric Services

4.5.1. Practices

4.5.1.1. Pediatric emergency care shall be available 24 hours a day and 365 days a year.

4.5.1.2. The pediatric services shall have a plan to deal with internal disasters such as the arrival of one or more seriously injured patients.

- 4.5.1.3. The hospital shall have full-fledged neonatal unit with neonatal ICU and this service unit shall have written protocols and procedures
- 4.5.1.4. For non-emergency pediatric patients, the service shall be available during regular working hours
- 4.5.1.5. Admitted patients shall receive services for 24 hours a day and 365 days a year.
- 4.5.1.6. The service shall have written protocol and procedures that shall include
- a) The age below which all patients must be admitted to a pediatric service;
 - b) Admission and discharge criteria specific to the service;
 - c) Infection control as per the standard prescribed under IP standards
 - d) Transfer and referral of patients
 - e) Safety measures for the purpose of preventing electrical and bodily injury to pediatric patients.
 - f) Monitoring and follow-up of pediatric patients
- 4.5.1.7. The nursing assessment and care of each pediatric patient shall consider the patients developmental needs
- 4.5.1.8. The parents or guardians of pediatric patients shall be included in the development of the nursing plan for patient care
- 4.5.1.9. Immunization services shall be available in the pediatric unit and all children shall have their immunization status checked before discharge
- 4.5.1.10. The unit shall avail updated reference materials, treatment guidelines and manuals (e.g. National TB, Malaria, ART etc.)
- 4.5.1.11. Medical records shall be kept in line with standards
- 4.5.1.12. Information contained in the medical record shall be complete and sufficiently detailed relative to the patient's history, physical examination, diagnosis, diagnostic procedures, medication administration, and treatment.
- 4.5.1.13. Growth monitoring activities and nutritional advice and management shall be there.
- 4.5.1.14. The pediatrics unit shall have a follow-up service for patients with chronic ailments.
- 4.5.1.15. All children with notifiable diseases shall be notified through the proper channel (to chief clinical officer or chief executive officer and hence to the local health office.
- 4.5.1.16. There shall be a system for clinical staff to refer patients directly to the social works unit.

4.5.2. Premises

4.5.2.1. In patient room capacity shall not exceed six patients (or beds) per room

4.5.2.2. Patient rooms shall be constructed to meet a minimum of 9 meter squares for single bed room

4.5.2.3. In case of multiple beds per room, the area per bed shall be 8.6m²

4.5.2.4. Dimensions and clearances- the dimensions and arrangements of rooms shall be such that there is a minimum of 0.9m (90cm) between the sides and foot of the bed and any wall or any other fixed wall construction. In multiple bed rooms a clearance of 1.2 meter shall be available at the foot of each bed to permit the passage of equipments and beds

4.5.2.5. Each room shall have at least one window

4.5.2.6. Each room shall have a hand washing sink.

4.5.2.7. The pediatric premises shall include at least emergency unit, outpatient, and inpatient

4.5.2.8. The pediatric outpatient shall have a functional oral rehydration therapy corner

4.5.2.9. A minimum of 10 percent of the beds used for pediatric care shall be capable of functioning as isolation rooms.

4.5.2.10. The number and size of the rooms shall be adequate in relation to the volume and nature of the activity in the unit (work load analysis).

4.5.2.11. Patients in acute care shall be under direct observation in a room near the nurse's station.

4.5.2.12. The following premises setup shall be available in the pediatric service

Room required	# required	Area required
• Pediatric OPD		
✓ Child friendly waiting area		
✓ Examination room	1	12 sq.m
✓ Procedure room	1	9 sq.m
✓ Toilet for patient (male/female)		
• Paediatric emergency		
✓ Space for patient triaging/ reception	1	
✓ Examination room	1	12 sq.m
✓ Room for initial management of patients with ORT corner.	1	16 sq.m
• Pediatric inpatient		

✓ Inpatient care room care		
✓ Procedure room	1	9 sq.m
✓ Room for severely malnourished patients		
✓ Nutritional supplement preparation room	1	6 sq.m
✓ Nurses station area		
✓ Isolation room with self contained toilet and shower 12sq.m		12 sq.m
✓ Office for physicians	1	9 sq.m
✓ Store room	1	6 sq.m
✓ Toilet and bath for patients and care takers		
• Neonatal ICU		
✓ Room for care of critical newborns	1	16 sq.m
✓ Isolation room for infectious cases	1	9 sq.m
✓ Nurses station with in the room		
✓ Room for mothers	1	16 sq.m
✓ Milk preparation room	1	6 sq.m
✓ Kangaroo mother care room	1	12 sq.m
✓ Store room	1	6 sq.m
✓ Toilet and bath for mothers		

N.B. The arrangement of the rooms for the neonatal care shall avoid wind draft and shall be access limited.

4.5.3. Professionals

4.5.3.1. The pediatric service shall be directed by a licensed pediatrician.

4.5.3.2. There shall be qualified medical and nursing staff in the pediatric unit available at all times the service needs

4.5.3.3. The number and type of technical staff shall be determined by the volume and type of work carried out (Workload Analysis)

4.5.3.4. A general practitioner shall be available at all times in the pediatric unit

4.5.3.5. A licensed pediatrician shall be available at all times. The pediatrician on call shall be duty bound to respond calls.

4.5.3.6. The pediatrics unit shall have at least the following professionals:

Required Professionals	#Required for 8 hrs
Neonatologist/ optional	1
Paediatrician	1
General Practitioner	1
Neonatal Nurse/ paediatric Nurse	4
Professional Nurse	4

4.5.4. **Products**

4.5.4.1. The pediatric emergency unit shall have the following equipment and supplies:

- a) Resuscitation stretcher, examination couches, beds for emergency services,
- b) X-ray viewer,
- c) Sphygmomanometer (pediatric and adult sizes), stethoscope, thermometer, weight scale, tape meter, Torch, Otoscope, ophthalmoscope, patella hammer,
- d) Oxygen cylinder with flow meter,
- e) Nasal prongs catheters,
- f) Self inflating bags for respiratory support,
- g) Masks (infant size, child size, adult size),
- h) endotracheal tubes (pediatric and adult sizes),
- i) laryngoscope
- j) Equipment for intra-osseous fluid administration (optional)
- k) Glucometer with glucosticks,
- l) pulse oximetry,
- m) ECG machine and its supplies,
- n) Cardiac monitor (optional),
- o) lumbar puncture set,
- p) minor set,

- q) tracheostomy set
- r) Suction machine,
- s) medicine trolley, Cup board
- t) Nebulizers (electricity driven, or oxygen driven or manual)
- u) Spacers with masks for sprays,
- v) Emergency medicines as per the national medicine list.

4.5.4.2. The pediatric OPD shall have the following functional equipment and supplies:

- a) Diagnostic equipment: Torch, Otoscope, ophthalmoscope, reflex hammer,
- b) Weighing scales for children and infants,(MUC)
- c) Measuring board for measuring length (lying for infants) and height (standing for older children),
- d) Measuring tape, thermometer,
- e) Stethoscopes,
- f) Sphygmomanometer (pediatric and adult sizes),
- g) X-ray viewer,
- h) Examination couch,
- i) Lumbar puncture, Bone marrow aspiration set, pleural biopsy set,

4.5.4.3. The pediatric inpatient shall have the following functional equipment and supplies:

- a) Diagnostic equipment: Torch, Otoscope, ophthalmoscope, reflex hammer,
- b) Weighing scales for children and infants,
- c) Measuring board for measuring length (lying for infants) and height (standing for older children),
- d) Measuring tape, thermometer,
- e) Stethoscopes and Sphygmomanometer (pediatric and adult sizes),
- f) X-ray viewer,
- g) Examination couch, medicine trolley, Cupboard,
- h) Lumbar puncture, Bone marrow aspiration set, pleural biopsy set,
- i) ECG machine and its supplies,
- j) Suction machine,
- k) Drip counters,
- l) Infusion pump (optional)
- m) Tourniquets,
- n) IV stands,

- o) Radiant or Heat source,
- p) Beds for patients, mothers and croup tents
- q) Oxygen cylinder, Flow-meters for oxygen
- r) Nasal prongs catheters
- s) Self inflating bags for respiratory support,
- t) Masks (infant size, child size, adult size)
- u) endotracheal tubes (pediatric and adult sizes), laryngoscope
- v) Equipment for intra-osseous fluid administration
- w) Nebulizers for administration of salbutamol (electricity driven, or oxygen driven or foot pump driven)
- x) Spacers with masks for administration of metered doses (spray) of salbutamol

4.5.4.4. The neonatal ICU shall have the following equipment:

- | | |
|--|---|
| <ul style="list-style-type: none"> a) Neonatal bed/ cradle, (6 in number) b) Incubator (2 in no.) c) Oxygen source, d) Baby weighing scale, e) Patient monitor (2in no.) f) Pulse oximeter, g) Glucometer, h) Infusion pump, i) Phototherapy light with bed, j) X-ray viewer, k) Diagnostics: Torch, Otoscope, ophthalmoscope, Stethoscopes, thermometer l) Measuring board for measuring length, Measuring tape, m) Examination couch, n) Medicine trolley, o) Medicine Cup board, p) Lumbar puncture, | <ul style="list-style-type: none"> q) Suction machine, r) Tourniquets, s) IV stands, t) Exchange transfusion sets, u) Radiant warmers, v) Oxygen cylinder with flow-meters, w) Nasal prong catheters, x) Self inflating bags for respiratory support, y) Masks (infant size), z) endotracheal tubes (new born sizes), aa) laryngoscope (new born size), bb) Refrigerator, cc) consumables: <ul style="list-style-type: none"> • Butterflies and/or cannulas of paediatric size, • NG-tubes-paediatric size, |
|--|---|

- Umbilical catheters
- dd) Beds for mothers,
- ee) Mobile X-ray machine (optional)

4.5.4.5. Medicines and supplies shall be available in line with hospital's medicine list.

4.6. Surgical and Orthopedic Care Services

4.6.1. Practices

4.6.1.1. Comprehensive emergency surgical and orthopedic service shall be available 24 hours a day, 365 days a year,

4.6.1.2. Services for non-emergency elective surgical cases shall be available only when all the necessary experts are available;

4.6.1.3. There shall be written protocols and procedures for admissions and discharges with follow up.

4.6.1.4. There shall be protocols for the management of the surgical conditions in the Department

4.6.1.5. There shall be protocols for consultation and transfer of patients admitted to this unit and to other departments.

4.6.1.6. There shall be a clear Protocol for handling emergency surgical conditions. This service shall be available 24 hours a day throughout the year.

4.6.1.7. The hospital shall have emergency surgical services integrated with the general emergency service.

4.6.1.8. The admission process for emergency surgery shall be done by the emergency/ duty physician with consultation to the duty surgeon/IESO.

4.6.1.9. The admission process for elective surgery shall be done by the respective surgeon in consultation with the anesthesia department, and with the other departments as needed.

4.6.1.10. For admitted patients the surgical service shall be organized in such a way that it covers all the shifts

4.6.1.11. There shall be a mechanism and documentation system of interdepartmental consultations with surgical unit for which the surgeon on duty shall be responsible.

- 4.6.1.12. Adequate surgical records shall be kept for each patient and the patient's surgical record shall be integrated with the patient's over-all hospital record.
- 4.6.1.13. All surgical procedures (except in life-threatening emergencies) are performed only after appropriate history, physical examination, and indicated diagnostic tests are completed and documented in the patient's medical record.
- 4.6.1.14. The preoperative diagnosis shall be recorded in the medical record for all patients prior to surgery.
- 4.6.1.15. The surgeon shall explain the disease condition, possible surgical intervention and outcome possibilities in clear, simple and understandable terms to the patient and/or family.
- 4.6.1.16. Except in life-threatening emergencies, the surgeon shall obtain an informed consent and this must be documented in the patient's medical record. For the case with life threatening condition, consent shall be obtained from spouse, family, guardian or based on the surgeon's clinical judgment.
- 4.6.1.17. If there is no body to sign the consent for the patient who is in life-threatening condition, the reason for not having the consent shall be stated.
- 4.6.1.18. The nursing care plan of patients undergoing surgery shall be documented in the medical record, directed by a nurse professional, and includes the following:
 - (a) Pre-operative care,
 - (b) Location of post-operative care,
 - (c) Type of post-operative care and monitoring needed,
 - (d) Pain management, and
 - (e) Patient understands of discharge instructions.
- 4.6.1.19. Operative reports shall be written in the patient's record and in the OR registration book immediately after surgery and include at least the following:
 - (a) Patient identification,
 - (b) Pre-operative diagnosis,
 - (c) The procedure performed,
 - (d) Findings during surgery,
 - (e) Post-operative diagnosis,
 - (f) Surgical specimens removed,
 - (g) Date and time operation started and ended,
 - (h) Name of surgeon, anesthesiologist/anesthetist, scrub nurse, and any assistants,

- (i) Signature of the surgeon, and the scrub nurse
- (j) Immediate post-operative orders explicitly in the order sheet.

There shall be a procedure to use nationally adopted national and international safe surgery checklist to all patient undergo for surgery

4.6.1.20. There shall be Protocol that leads to positively identify the patient and ensure that the correct procedure and the correct side are confirmed prior to starting the surgery.

4.6.1.21. There shall be processes and Protocol defining the appropriate safety before, during and immediately after surgery, including at least the following:

- (a) Aseptic technique,
- (b) Sterilization and disinfections,
- (c) Selection of draping and gowning,
- (d) Counting of sponges, instruments, and needles

4.6.1.22. The hospital shall have protocol for sending pathological specimen. There shall be a Protocol for preparing and availing appropriate and properly functioning supplies, equipment, and instruments available for all surgeries performed according to the country standard

4.6.1.23. There shall be a protocol for patient transfer from operation theatre to recovery room. This includes;

- (a) The handover and/or transfer of immediate post-operative patients shall be done between the anesthetist or anesthesiologist who administered the anesthesia and the licensed nurse in recovery room,
- (b) The nurse in the recovery room shall immediately re-evaluate the condition of the patient in front of the anesthesiologist or anesthetist,
- (c) The follow up of immediate post-operative patients in the recovery room shall be done by licensed nurse with special training or similar experience until the anesthesiologist, anesthetist or other qualified physician makes the decision to transfer the patient from post-anesthesia care and this decision shall be based on the documented results of monitoring during anesthesia recovery,
- (d) The transfer from recovery room shall be done after the transfer order is signed by the appropriate professional in the following order: Anesthesiologist, Surgeon, Anesthetist or General Practitioner

- (e) The nurse in the recovery room shall inform the ward and the ward nurse shall transfer the patient with the signed transfer note.
- 4.6.1.24. Post- operative patient in the wards shall get post operative care as per postoperative nursing care.
- 4.6.1.25. The post operative care shall include to the minimum:
 - (a) Evaluation by the surgeon or appropriate physician and ward nurses daily or whenever needed,
 - (b) Follow up of vital signs and carrying out of post-operative orders shall be done as per the order specified for individual patients. (special orders-NPO, positioning, exercise, drainages, etc.,)
- 4.6.1.26. The hospital shall have clear protocol for surgical activities to be done at outpatients level, surgical referral clinics, follow up clinics, minor operations and orthopedic procedures
- 4.6.1.27. There shall be no time left without having surgeon or physician attending the surgical unit.
- 4.6.1.28. There shall be a Protocol or procedure that clearly shows at least one general surgeon/ and one orthopedic surgeon that shall be to respond for surgical requests from emergency and/ or surgical ward physician.
- 4.6.1.29. There shall be a mechanism that the surgeon shall be available within 30 minutes upon call.
- 4.6.1.30. All patients in surgical unit shall be attended by licensed nurse all the time with supervision by duty physician.
- 4.6.1.31. There shall be a mechanism by which the surgical unit provides board certificate in response to hospital medical board request. The board shall be composed of, at minimum, one physician and two specialist' one of them being the treating one.
- 4.6.1.32. Emergency call access to each bed in the wards and recovery room /can be in place;

4.6.2. Premises

4.6.2.1. Surgical Department

- (a) A general hospital shall have a minimum of three operating theatres, of these one is for septic operation theatre.
- (b) The operation room shall be readily accessible to the surgical wards.

- (c) An operating room shall have access- restricted environment where surgical and invasive interventions are performed. It shall be organized and equipped so that OR trafficking shall be controlled and exercised over all persons and materials entering and leaving the area.

Operation room set up

4.6.2.2. Entrance/Patient Transfer Area:

- (a) This area shall be large enough to allow for the transfer of patients from a bed to OR stretcher.
- (b) A line shall be clearly marked in red on the floor, beyond which no person shall be permitted to set foot without putting on protective clothing and OR shoes.
- (c) Holding bay: there shall be a space or corridor to keep and observe pre-operative patients until called to theatre.

4.6.2.3. Staff Change Rooms

- (a) Suitable separate changing rooms shall be available and clearly labeled for male and female,
- (b) Each changing room shall have two doors, one entrance and the second door accessing into the restricted access area; the entrance is from outside the restricted access area.
- (c) Each changing room shall be provided with a locker for a to keep personal clothes and belongings.
- (d) Each changing room shall be provided with shelves for Storage of clean theatre attire and inside shoes and operation theatre gum boots.
- (e) Separate storage bin shall be provided for used and soiled theatre apparels.
- (f) Each changing room shall be provided with hand wash basins.
- (g) For each changing room, there shall be Toilets and shower separated for male and female stands.

4.6.2.4. Scrub area:

- (a) There shall be a scrubbing-up area outside but adjacent to the operating theatre(s). The scrub area shall be in between the two self closing doors. If there is one common scrub area for the three theatres, it shall be wide enough to accommodate four staff scrubbing simultaneously.

- (b) Scrub area shall be provided with multiple sinks or with wide sink and taps for running water and mirror(s) above each sink. The taps for running water for scrubbing shall be hand free to be manipulated with elbow or knee joint.

4.6.2.5. Set-up area (optional):

- (a) There shall be a set –up area where suture materials and other supplies and necessary consumables could be stacked on a trolley that could be wheeled into theatre for subsequent procedure.
- (b) Doors into the operating room shall be big enough to wheel through the set trolleys from the set up room into the operating room without contact with doors or non sterile surfaces.
- (c) Packed instruments and other relevant materials shall be brought from the CSR and stored in this area according to the daily schedules one day prior to the scheduled operations.
- (d) Mayo table and dressing trolley to set up for the next case are kept in this area.
- (e) If there is no set up area the instruments can be set up within the operating theatre

4.6.2.6. Operation Theatre:

- (a) The wall of the operation theatres shall be washable; the vicinity of plumbing fixtures shall be smooth and water resistant i.e., plated up to the ceiling.
- (b) The ceiling shall be monolithic, scrub-able and capable of withstanding chemicals. Cracks or perforation in these ceilings are not allowed.
- (c) Floors and walls penetrated by pipes, ducts and conduits' shall be tightly sealed.
- (d) The floor of the theatre shall be smooth, easily cleanable, non-slippery and non-staining and it shall not be affected by water or germicidal cleaning solutions.
- (e) There shall be at least six fixed electric outlets in each theatre with cover,
- (f) The entrance and exit doors to the theatre shall be fitted with self-closing double doors,
- (g) There shall be one operation table in each theatre,
- (h) At least one ceiling operation light and one mobile operation light per operation theatre shall be available
- (i) Glass cabinet and shelves shall be available
- (j) Appropriate 18- 22 °C temperature shall be maintained in the operation theatre (considering the climatic conditions of the hospital location).

- (k) Orthopedic accessories for OR table shall be available (can be removed and stored when not in use)

4.6.2.7. Staff station

- (a) It shall be access restricted area, which is so situated, constructed and equipped to enable nursing staff to observe patients directly and where necessary, to render assistance.
- (b) There shall be a corridor or allocated area for keeping charged and empty Oxygen cylinders; the empty and charged oxygen cylinders shall be labeled clearly.

4.6.2.8. Operating Theatre Sterile Supply Store: This shall be a room which is used for the storage of all sterile instrument sets, swabs and sterile renewable, consumables and it requires shelves.

4.6.2.9. Clean Utility, Surgical Suite: There shall be a room allocated for storage of IV fluids, clean linen, medicines and other sundry items. Requirements:

- (a) Shall be situated where OR staff have easy access to the clean utility store.
- (b) Metallic washable rack for storage shall be available,
- (c) Equipments used for special procedures like splints shall be kept here thoroughly cleaned after use,
Refrigerator with thermometer shall be available for medicines requiring a temperature range of 4 to 8 °C.
- (d) Sink, cabinets and shelves

4.6.2.10. Soiled Utility/Sluice room shall be available with the followings;

- (a) Shooting system/or liquid proof container

4.6.2.11. Cleaner's Room shall be available with the followings;

- (a) A room provided with 2 sets of cleaning equipments and materials,
- (b) Hand washing Basin,
- (c) Washing sink,
- (d) Detergent proof shelves and cabinets.

4.6.2.12. Central sterilization room shall be available with following requirement;

- (a) Easy access to OR,
- (b) Needs a minimum of the following rooms:
 - One for reception, sorting of equipments; or clothes and documentation process;

- One for inbuilt autoclaves;
 - One separate properly ventilated room for storing and shelving sterile clothes and instruments as per the guideline,
- (c) Shall have at least two inbuilt autoclaves, with small one as backup,
- (d) Continuous water supply with extra reservoir,
- (e) There shall be a closed drainage system for the autoclaves,
- (f) Shelves shall be washable, corrosive free and metallic racks.
- (g) The name of the set/ instruments, date of sterilization, evidence of sterilization shall be written on the wrap of the set/ instrument,
- 4.6.2.13. Recovery facilities shall be available with the following requirement;
- (a) Close to OR, and shall be within the semi- restricted area.
- (b) A minimum of four beds shall be available,
- (c) A minimum of 1.2 meter gap between beds for patient transferring stretcher,
- (d) Recovery beds shall have flexible side protections,
- (e) A minimum of two electric outlets shall be available for each bed,
- (f) A trolley carrying functional emergency equipments shall be available in the recovery room,
- (g) A minimum of four bed pans
- (h) A minimum of four patient screens shall be available,
- (i) Sufficient light for each bed,
- (j) Heater
- (k) Hand washing basin
- 4.6.2.14. Minor operation theatre shall be available with the followings requirements;
- (a) Located accessible to OPD, and shall be with low or no traffic area.
- (b) One operation room with one theatres,
- (c) One transparent cabinet for surgical consumables in the OR,
- (d) one patient changing rooms,
- (e) Mark on the floor restricting movement of unauthorized and/or person without OR suit,
- (f) Staff room
- (g) Utility room,
- (h) Store with shelves and cabinets,
- (i) Nurse station with table and chairs,

- (j) Toilet rooms for male female,
- (k) Cleaners room,

Surgical ward set up

4.6.2.15. **Surgical ward** shall be available with the followings requirements;

- (a) It shall be part of the inpatient service,
- (b) There shall be a separate orthopedic wing/room,
- (c) The beds shall be flexible and orthopedic beds,
- (d) In third class, space between beds shall be at least 1.2m.
- (e) There shall be a minimum of one separate room, labeled “Septic Room” for septic patients,
- (f) The beds shall be equipped with fixtures for certain surgical patients-orthopedic cases
- (g) Patient screens, for surgical ward
- (h) Patient toilets and showers with proximity to the ward, or covered walkways to the ablution facilities.

4.6.2.16. **Nurses’ station** shall be available with the following;

- (a) located amidst of the wards
- (b) shall have table and chairs
- (c) shall have lockable cabinets,
- (d) shall have specimen collection station/ laminated table with racks
- (e) shall have hand washing basin,

4.6.2.17. **procedure room** shall be available with the following;

- (a) Dressing trolleys ,beds
- (b) POP equipments sets,
- (c) Deep Sink,
- (d) Hand washing basin,
- (e) Worktable with laminated top,
- (f) Cabinets and shelves,

4.6.2.18. **Surgical ward clean utility room/linen room/inpatient store** with shelves, cabinets and fixed electrical plugs with protection shall be available

4.6.2.19. **Surgical ward soiled utility room** with shelves and leak proof containers with leads shall be available

4.6.2.20. **Surgical ward cleaner's room** shall be available with the following requirements;

- (a) Hand washing basin,
- (b) Sinks and cleaning equipments,
- (c) Shelves and Cabinet,

7.1.1.1. In summary, the surgical department shall have the following premise set up

Rooms required	# required	Area required
• Minor OR/ procedure room,		
○ Minor operation theatre	1	20 sq. m
○ Patient changing room/ area	1	6sq. m
○ Nurse station & Recording room	1	12sq. m
○ Clean Utility room	1	6sq. m
○ Mini-Store room	1	6sq. m
○ Soiled utility room	1	6sq. m
• Operation Room		
○ Operation theatre	2	60sq. m
○ Scrub area	1	12sq. m
○ Staff Change area	2	12sq. m
○ Clean utility room	1	6sq. m
○ Soiled utility room	1	6sq. m
○ Nurse station	1	12sq. m
○ Anesthesia store	1	8sq. m
○ OR equipment store	1	12sq. m
○ Sterile supply room	1	12sq. m
○ Doctor's office	1	12sq. m
○ Duty room	1	8sq. m
○ Janitor's closet	1	6sq. m
○ Toilet rooms with shower and hand washing basin	2	12sq. m
• Recovery room (with 4 beds)	1	30 sq. m
• Sterilization room	1	32 sq. m
○ Reception and sorting		
○ Autoclave area		
○ Store		
• Surgical ward/ inpatient room		
○ Patient rooms for a minimum of 10 beds {with maximum room capacity not more than 6 beds }	2	96sq. m
○ Isolation rooms	2	30sq. m
○ Nurse station	1	9sq. m
○ Duty rooms with lockers (male/ female)	2	8sq. m each

○ Clean utility & linen room	1	6sq. m
○ Soiled utility room	1	6sq. m
○ Toilet rooms with shower and hand washing basin (can be in each patient room)	4	4 sq. m each

4.6.3. Professionals

4.6.3.1. Surgical services shall be directed by a licensed surgeon/orthopedic surgeon

4.6.3.2. Minimum number of professionals for surgical service at OR per shift(every 8 hours) shall have.

- (a) Anesthesiologist or anesthesiology professional specialist 1
- (b) anesthesia professional /Nurse Anesthetist level 5/ -----3
- (c) OR nurses/ trained professional nurses----- 9
- (d) Cleaners -----
- (e) Technicians
- (f) Porters

4.6.3.3. Minimum number of professionals for surgical service at recovery:

- (a) Recovery nurses /professional nurses 4
- (b) Porters

4.6.3.4. Minimum number of professionals for surgical service at CSR:

- (a) level 4 nurses/professional nurses ,sterilization Technician / =2
- (b) Cleaner

4.6.3.5. Minimum number of professionals for surgical department:

- (a) General surgeons 2
- (b) Orthopedists 1
- (c) GP (2 OR assistant, ward, minor OR)
- (d) Health officer/optional 1
- (e) IESO/ optional 1
- (f) Professional Nurses ----- 7
- (g) Cleaners
- (h) Porters

4.6.3.6. The nursing services in the OR shall be coordinated by a licensed nurse experienced in surgical nursing.

4.6.3.7. Number of general surgeons shall be determined by the 24 hour service availability.

4.6.3.8. Number of scrub nurse shall sufficient to the number of operation theatres.

- 4.6.3.9. A surgeon or licensed general practitioner shall be responsible for the services provided to each patient; while the nurse coordinator (licensed BSc nurse) shall be responsible for all nursing care provided to the patient
- 4.6.3.10. The duties and responsibilities of Para-medicals and porters shall be clearly outlined by the hospital.
- 4.6.3.11. Orientation and continuous training shall be provided for cleaners for proper handling and disposal of sharp materials and surgical wastes by OR nurse coordinator or via IP committee.

4.6.4. Products

4.6.4.1. Surgical ward equipments and supplies

- | | |
|-----------------------------------|-------------------------|
| (a) Surgical bed and mattress | (g) Bed screen, |
| (b) Pillows | (h) Waste paper basket |
| (c) Oxygen flow meter, 0-15 L/min | (i) Safety boxes |
| (d) Chairs, | (j) Footstool |
| (e) Feeding table/ Over bed table | (k) IV stands |
| (f) Bed side cabinet | (l) Wheelchairs |
| | (m) Stretchers |
| | (n) Oxygen on trolleys |
| | (o) Hand washing basins |

4.6.4.2. Equipment – Orthopedics Specifics ward

- | | |
|--------------------------------------|--------------------------------|
| (a) Brauns frame | (i) Flexible nail set |
| (b) Thomas splint | (j) Basic orthopedic /bone set |
| (c) Traction set | (k) Large fragment plating set |
| (d) power drill | (l) Small fragment plating set |
| (e) Steinmann pin | (m) Humby knife with blade |
| (f) /locked intra medullary nail set | (n) amputation set |
| (g) Orthopedic bed with fixtures | |
| (h) Rush nail set | |
| (o) | |
| (p) POP cutter | |

- (q) POP spreader
- (r) K-Wires and cerclage wire set

4.6.4.3. Externalfixator large and small . Equipment – Clean Utility Room and procedure room

- (a) Dressing trolley
- (b) IV stand
- (c) Wheelchair
- (d) Walking rail,
- (e) Crutches,

4.6.4.4. Equipment – Nurses station

- (a) Wall clock
- (b) Desk
- (c) Chair
- (d) Trolley for vital sign monitoring
- (e) Refrigerator for medication with temperature control
- (f) Safety box
- (g) Waste paper basket
- (h) Adult sphygmomanometer
- (i) Stethoscope, dual head
- (j) Stethoscope, adult head
- (k) Thermometer
- (l) Plusoxmetry
- (m) Glucometer

4.6.4.5. Equipment – surgical ward soiled utility room:

- (a) Soiled linen trolley
- (b) Bin with lid
- (c) Worktable with laminated top
- (d) Washing basins
- (e) General purpose trolley, trays
- (f) Mobile trolley

4.6.4.6. Equipment – surgical ward cleaner’s room:

- (a) Cleaning trolley
- (b) Mop rack
- (c) Worktable
- (d) Cabinets and shelves
- (e) Pail with handle
- (f) Brooms
- (g) Mops

4.6.4.7. Equipment – reception/nurse station, operating theatre suite:

- (a) Wall clock
- (b) Desk
- (c) Desk chair
- (d) Cabinet
- (e) Chair, stackable, without armrests
- (f) Basket, waste-paper,

4.6.4.8. Equipment – entrance, patient transfer area, operating theatre suite:

- (a) Chairs
- (b) Patient stretchers

4.6.4.9. Equipment –staff changing room, operating theatre suite:

- (a) Soiled linen trolley
- (b) Clean linen cabinet
- (c) A big mirror
- (d) Waste basket
- (e) Lockers
- (f) Shoe shelves
- (g) Aprons

4.6.4.10. Equipment, operating theatre: Minimum equipment list for a single operating theatre.

- (a) Time clock
- (b) Anesthesia trolley
- (c) Oxygen cylinders
- (d) Worktable with laminated top
- (e) Stools
- (f) IV stands
- (g) Kick buckets
- (h) Safety boxes
- (i) Swab rack with drip trays
- (j) Swab count record boards
- (k) Bowls and stands
- (l) Instrument tables, Mayo type
- (m) Framed boards with pencil trays
- (n) Infusion pumps
- (o) Chest tubes with bottles
- (p) Blankets, warming
- (q) Tourniquets
- (r) Tongue depressors
- (s) Coagulation unit, electro, mobile, 200 W
- (t) Lights, operating, 1 large copula, ceiling mounted
- (u) Mobile operating lights
- (v) Operating table, 3 sections
- (w) Suction machines
- (x) Hip spica tables
- (y) Bone cutters
- (z) IV fluid pressure bag
- (aa) Anesthesia machine with ventilator, 2 vaporizers, and gas cylinders
- (bb) Laryngoscope, set (Mackintosh)
- (cc) Magill forceps (adult & pediatrics)
- (dd) Laryngeal mask set
- (ee) Mask holder
- (ff) Mouth gauge
- (gg) Patient monitor
- (hh) Dual head stethoscope

4.6.4.11. Equipment – scrub area:

- (a) Soap dispenser
- (b) Scrub-up brushes

4.6.4.12. Equipment: set up area

- (a) Worktable with laminated top
- (b) Cabinets and shelves
- (c) Dressing trolley
- (d) Instrument table, Mayo type
- (e) Blood warmer
- (f) IV fluid warmer

4.6.4.13. Equipment – operating theatre sterile supply store:

- (a) General purpose trolleys, trays
- (b) Gen.surg-Suture set
- (c) Gen.surg- Basic surgery set
- (d) Orthopedic set
- (e) Thyroidectomy set
- (f) Cholecystectomy set
 - (s) Orthopedic set-
 - (t) Thomas splint
 - (u) Traction set
 - (v) /power drill
 - (w) Steinmann pin
 - (x) /locked intra medullary nail set
 - (gg) POP cutter
 - (hh) POP spreader
 - (ii) K-Wires and cerclage wire set
- (g) Thoracotomy set ,etc
- (y) Orthopedic bed with fixtures
- (z) Rush nail set
- (aa) Flexible nail set
- (bb) Basic orthopedic /bone set
- (cc) Large fragment plating set
- (dd) Small fragment plating set
- (ee) Humby knife with blade
- (ff) amputationset
- (h) Gen.surg- Laparotomy set
- (i) Gen.surg- Small dissection set
- (j) Gen.surg- Minor surgical set
- (k) Gen.surg- Suprapubic puncture set

4.6.4.14. Equipment – clean utility room, surgical suite:

- (a) General purpose trolley, trays
- (b) Worktable, laminated top
- (c) Refrigerator,
- (d) Shelves
- (e) cabinets

4.6.4.15. Equipment – operating theatre sluice room

- (a) Soiled linen trolley
- (b) General purpose trolley, trays
- (c) Bin with lid
- (d) Worktable with laminated top
- (e) Wash basins
- (f) Bedpans
- (g) Kidney basin, 475 ml

4.6.4.16. Equipment – cleaners’ room, operating theatre:

- (a) Cleaning trolley
- (b) Mop rack
- (c) Worktable
- (d) Pail with handle
- (e) Brooms
- (f) Mop

4.6.4.17. Operating Room Linen:

- (a) Apron Surgical, rubber
- (b) Trousers, Surgical, woven, Small, Medium & Large
- (c) Top(shirts), Surgical, woven, Small, Medium & Large
- (d) Gown, Surgical, woven(Plain)
- (e) Cap, Surgical, woven
- (f) Masks, surgical, woven
- (g) Drape:
 - Surgical, woven(1 x 1 m)
 - Surgical, woven(1 x 1.5 m)
 - Surgical, woven(1.5 x 1.5 m)(fenestrated)
- (h) Pillow case
- (i) Pillows
- (j) Sheet, Bed
- (k) Sheet, draw, white
- (l) Cellular Blanket
- (m) Mayo cover
- (n) Towel Bath
- (o) Towel Hand

4.6.4.18. Equipment recovery area:

- (a) Vacuum aspirator
- (b) Oxygen Flow meter, 0 - 15 l/min
- (c) Oxygen (one cylinder per bed)
- (d) Oxygen concentrator
- (e) Patient transfer, (stretchers)
- (f) Dressing trolley, trays
- (g) Bed with mattress
- (h) Stools
- (i) IV stands
- (j) Bed screen, 3 sections, mobile
- (k) Pedal bin
- (l) Oxygen trolley, complete
- (m) Pulse oximeter
- (n) Resuscitator, hand operated
- (o) Suction machines
- (p) Mobile examination light
- (q) Dual head stethoscope

4.6.4.19. Equipment-Central sterilization room

- (a) Auto claves ;big
- (b) Autoclaves ;small
- (c) Drums
- (d) Metallic shelves
- (e) Cabinets

4.7. Gynecology and Obstetrics Care Services

4.7.1. Practice

- 4.7.1.1. The gynecology and obstetrics service shall have written protocols and procedures including:

- | | |
|---|-------------------------------|
| a) Antenatal care | h) Assisted delivery |
| b) Follow up of delivery | i) Manual removal of placenta |
| c) New born care | j) Infertility |
| d) Postnatal care | k) Admission and discharge |
| e) Immunization | l) Transfer and referral |
| f) Pre and post operative care | m) Infection prevention |
| g) Administration of antibiotics, oxytocics and anticonvulsants | |

4.7.1.2. Normal delivery and comprehensive emergency obstetric care (CEmoc) shall be available 24 hours a day, 365 days a year.

4.7.1.3. Essential newborn care and newborn resuscitation care shall be available 24 hours a day, 365 days a year. This service shall have written Protocol and procedures to transfer or refer neonates to neonatal unit that require further care.

4.7.1.4. Emergency gynecological services shall be available 24 hours a day, 365 days a year. This includes, but is not limited to, services for the medical and/or surgical management of:

- a) Bleeding in early pregnancy
- b) Acute pelvic inflammatory disease
- c) Ruptured or torsion of ovarian cyst

4.7.1.5. Management of minor and major gynecological conditions shall be available including but not limited to:

- | | |
|---|--|
| a) Vaginal bleeding | f) Ovarian pathology (cyst, torsion) |
| b) Pelvic infection or abscess | g) Gynecological cancers |
| c) Uterine pathology (fibroids, polyps etc) | h) Cervical cytology |
| d) Endometriosis | i) treatment of cervical intraepithelial neoplasia |
| e) Pelvic organ prolapsed | |

4.7.1.6. Non emergency maternal health services shall be available during regular working hours. This includes:

- a) Antenatal care
- b) Post natal care

c) Family planning services including counseling and the provision of:

- Barrier contraceptives
- Oral contraceptives
- Intra-uterine contraceptive devices
- Injectable contraceptives
- Sterilization (vasectomy & tubal ligation)
- Implant contraceptives

4.7.1.7. There shall be a mechanism of interdepartmental consultations with internal medicine, pediatrics, surgery and other relevant services with documentation.

4.7.1.8. Gynecology and obstetrics records shall be kept for each patient and the patient's record shall be integrated with the patient's over-all hospital record.

4.7.1.9. All gynecologic and obstetrics surgical procedures (except in life-threatening emergencies) are performed only after appropriate history, physical examination, and indicated diagnostic tests are completed and documented in the patient's medical record.

4.7.1.10. The preoperative diagnosis shall be recorded in the medical record for all patients prior to surgery.

4.7.1.11. The gynecologist/obstetrician shall explain the disease condition, possible surgical intervention and outcome possibilities in clear, simple and understandable terms to the patient and/or family.

4.7.1.12. Except in life-threatening emergencies, the gynecologist/obstetrician shall obtain an informed consent and this must be documented in the patient's medical record. For the case with life threatening condition, consent shall be obtained from spouse, family, guardian or based on the surgeon's clinical judgment. If there is no body to sign the consent for the patient who is in life-threatening condition, the reason for not having the consent shall be stated on patient's medical record.

4.7.1.13. The nursing care of patients undergoing gynecologic/obstetrics surgery shall be planned and documented in the medical record, directed by a trained nurse/midwife, and includes the following:

- (a) Pre-operative care,
- (b) Location of post-operative care,
- (c) Type of post-operative care and monitoring needed,
- (d) Pain management, and

(e) Patient's understanding of discharge instructions.

4.7.1.14. The gynecological and obstetrics related surgical services shall follow practices standards stated under the surgery section of this standard

4.7.1.15. The gynecological and obstetrics services shall strictly follow the infection prevention section of this standard.

4.7.2. Premises

4.7.2.1. The Maternity Departments is comprised of the maternity ward, delivery suite, nursery and operating theatre.

4.7.2.2. The delivery suite shall be comprised of a 6 bedded labour bay for women in first stage labour , a /three bedded delivery room(s) to conduct three deliveries and 6 bedded post natal room simultaneously. In case of 100% occupancy of the delivery rooms, the labor bays, shall be equipped in such a way that patients can be accommodated there to deliver.

4.7.2.3. The delivery room shall have neonatal resuscitation corner.

4.7.2.4. The wall and floor of the delivery room shall be clean, easily washable and resistant to disinfectants.

4.7.2.5. The maternity ward and delivery suite shall be located close to each other to make the transfer of obstetric cases to and from the delivery suite as uncomplicated as possible.

4.7.2.6. The delivery room and maternity ward shall be easily accessible to an operating theatre. An operating table shall be specifically designated for obstetric and emergency gynaecology cases.

4.7.2.7. The maternity unit shall have the following facilities:

a) Maternity Ward:

- Facilities shall be provided for antenatal and postnatal care including high dependency care and rooming in facilities for mother and newborn. These can be organized into patient bays +/- separate one or two bedded rooms for high risk patients.
- Curtain tracks shall be installed around each bed, or in their absence bed screens shall be provided.

- Sinks shall be provided in each patient bay or room. Patient toilets and showers shall be provided, in or adjacent to the ward. If this is not possible then covered walkways should lead from the ward to the ablution facilities.
 - A nurses' station shall be set up to enable nursing staff to monitor all visitors entering or leaving the unit.
- b) Maternity Ward clean utility room: This is used for:
- The storage of supplies , both clean and sterile
 - Preparing and storing dressing trolleys used on the ward
 - The storage, preparation and assembly of items of equipment for diagnostic and therapeutic procedures
 - IV fluid preparation
 - Injection preparation
- c) Maternity Ward inpatient store: This is used for the storage of equipment required on the maternity ward that requires shelves, cabinets and sufficient electrical plugs should be available to keep the electrical equipment plugged in and keep batteries charged.
- d) Maternity Ward soiled utility room: This is used for:
- Temporary storage point for urine and stool specimens to be sent to laboratory for analysis
 - Dipstick urinalysis
 - Temporary storage point for soiled linen
 - Temporary storage point for contaminated items for destruction at a later stage
 - Temporary storage point for used safety boxes prior to incineration
- e) Maternity Ward cleaner's room
- f) Maternity Ward kitchen/optional/: This is used to temporarily store and prepare food from the main kitchen and to prepare patient beverages. It requires stainless steel sink, drainer and cabinets
- g) Staff toilet, shower and changing facilities: These shall be separate from patient ablution facilities. Staff lockers shall be included. Facilities shall be sufficient for staff working on the maternity ward, delivery suite and obstetric operating theatre.
- h) Nursery
- The nursery unit shall have a room for milk preparation

- The nursery shall have a single entrance to control access.
 - Work surface for washing, drying and changing babies
 - Sink, cabinets and shelves
- i) Delivery Suite shall have the following
- Sink, cabinets and toilet facilities
 - Delivery room store: This shall be located within the delivery suite, with easy access from the labor and delivery rooms. It requires shelves and cabinets
 - Delivery Room (s) (/three beds): Delivery rooms are used for all stages of labor including recovery following birth. Transfer to obstetric theatre shall be easy.
 - Soiled Utility – delivery room
- j) The obstetric gynecology services shall have separate operating theater (OR) for gynecologic cases. In the event that the gynecologic services does not have separate OR there shall be clear Protocol and procedures on using the OR available in the hospital.
- k) Midwifery station.
- l) Entrance/Patient transfer area
- This area shall be large enough to allow for the transfer of patients from a bed to a trolley.
 - A line shall be clearly marked in red on the floor, beyond which no person from outside the operating department should be permitted to set foot without obtaining authority and putting on protective clothing.
 - Holding bay: space shall be located to allow for the supervision of waiting patients to go into theatre.
- m) Changing room
- Suitable separate changing room facilities shall be provided for male and female staff.
 - The changing room shall have one door that opens into the restricted access area, and must have a separate entrance from outside the restricted access area.
 - Storage facilities for the personnel's personal clothing and effects.
 - Storage of clean theatre attire and inside shoes and operation theatre gum boots.

- Provision must also be made for soiled theatre apparel.
- Wash hand basins: Toilets, showers, shelves, lockers

n) Operating theatre shall have the following:

- Patient entrance into theatre and exit out of theatre shall be through double self-closing doors situated in the centre of the operating room entrance.
- Scrub area
- Operating theatre equipment and sterile supply store
- Operating theatre sterile supply store.
- Clean Utility, Surgical Suite.
- 2-Bed Recovery
- Soiled Utility/Sluice room
- Cleaner’s Room

4.7.3. Professionals

4.7.3.1. The gynecology and obstetrics services shall be directed by a licensed obstetrician and gynecologist.

4.7.3.2. There shall be adequate qualified medical and nursing/midwife professionals in the gynecology and obstetrics unit available at all times to meet the service needs

4.7.3.3. The number and type of technical staff shall be determined by the volume and type of work carried out (Workload Analysis).

4.7.3.4. A licensed obstetrician and gynecologist shall be available at all times. The midwife with administrative responsibility for obstructive care in obstetrics shall be a registered professional The nurse/midwife with administrative responsibility for nursing care in gynecology shall be a registered professional nurse/midwife.

4.7.3.5. Minimum number of professionals for obstetrics and gynecology service at OR for 24 hours services:

- | | |
|------------------------|---------------------------------|
| (a) Anesthesiologist | 1 (can be shared with surgery) |
| (b) Anesthetist | 4 (can be shared with surgery) |
| (c) Scrub nurses | 10 (can be shared with surgery) |
| (d) Circulating nurses | 10 (can be shared with surgery) |
| (e) Cleaners | 4 (can be shared with surgery) |
| (f) Technicians | 1 (can be shared with surgery) |

(g) Porters

4.7.3.6. Minimum number of professionals for obstetrics and gynecology service at recovery:

- (a) Recovery nurses 4 (can be shared with surgery)
- (b) Porters 2 (optional) (can be shared with surgery)

4.7.3.7. Minimum number of professionals for obstetrics and gynecology service at CSR:

- (a) nurse 2 (can be shared with surgery)
- (b) Technician 1 (can be shared with surgery)
- (c) Cleaner 2 (can be shared with surgery)

4.7.3.8. Minimum number of professionals for obstetrics and gynecology ward:

(a) Obstetrician and gynecologist (can be shared for all units of gynecology and obstetrics)

(b) HO and IESO/optional/ for obstetrics and gynecology services

(c) General practitioner 1 mandatory IPD (and 1 other appropriate professional for can be shared for all units of gynecology and obstetrics, ANC, gynecology OPD, OPD,EMERGENCY /)

(d) Professional Midwifery -----3

(e) professional Nurses optional

(f) Cleaners

(g) Porters

4.7.3.9. Minimum number of professionals for delivery service:

- (a) Professional Midwives 8
- (b) Cleaner
- (c) Porter

4.7.3.10. Minimum number of professionals for outpatient obstetrics and gynecology service:

- (d) Midwives 3
- (e) Cleaner 3
- (f) Porter 2

4.7.4. Products

4.7.4.1. Equipment – Clean Utility Room

- a) Trolley for vital sign monitoring with thermometer and sphygmomanometer
- b) Dressing trolley

- c) Refrigerator for medication with temperature control
- d) IV stand
- e) Wheelchair

4.7.4.2. Equipment - Clean linen room

- a) Trolley to be used for bed linen changes during patient hygiene
- b) Cabinet

4.7.4.3. Equipment - maternity ward:

- | | |
|--|---------------------------|
| a) Beds and mattresses | g) Over bed tables |
| b) Vacuum aspirator, 0 - 250mm/Hg with bottle and tubing | h) Bed screen, 3 sections |
| c) Oxygen flow meter, 0-15 /min | i) Footstools |
| d) Oxygen source | j) IV stands |
| e) Baby cot | k) Wheelchair |
| f) Bed side cabinets | |

4.7.4.4. Equipment - Nurses station

- a) Crash cart, with sufficient equipment and medicines for the resuscitation of mother and neonate, including defibrillator, intubation sets and oxygen
- b) Diagnostic set with ophthalmoscope and otoscope
- c) Adult sphygmomanometer
- d) Paediatric sphygmomanometer
- e) foetal stethoscope,
- f) Stethoscope, dual head
- g) Stethoscope, pediatric head
- h) Thermometer

4.7.4.5. Equipment - maternity ward soiled utility room:

- | | |
|---------------------------------|---------------------------------------|
| a) Soiled linen trolley | e) General purpose trolley, two trays |
| b) Bin with lid | f) Bedpans |
| c) Worktable with laminated top | g) Kidney basin, 475 ml |
| d) Wash tub (65L) | |

4.7.4.6. Equipment – maternity ward cleaner’s room:

- a) Cleaning trolley
- b) Mop rack
- c) Worktable
- d) Cabinets and shelves
- e) Pail with handle
- f) Broom
- g) Mop

4.7.4.7. Equipment – maternity ward kitchen:

- a) Pedal bin
- b) Worktable with laminated top
- c) Stove or kettle to prepare beverages for patients

4.7.4.8. Equipment – milk formula room:

- a) Worktable with laminated top
- b) Refrigerator
- c) Kitchen scale
- d) Sterilizing equipment or solutions
- e) Stove or kettle to heat water for warming feeds
- f) Baby bottles, teats and bottle brushes
- g) Pedal bin
- h) Stool

4.7.4.9. Equipment – nursery

- a) Vacuum aspirator, 0 - 250 mm/Hg, w bottle and tubing
- b) Flow meter, 0 - 15 l/min
- c) Oxygen source
- d) Baby cot
- e) Chair
- f) Stool
- g) IV stand
- h) Infusion pump, drop controlled
- i) Pedal bin
- j) Baby warmer or overhead heater
- k) Incubator, automatic
- l) Breast pump
- m) Neonatal resuscitation kit
- n) Infant scale

4.7.4.10. Equipment – labour bay:

- a) Vacuum aspirator, 0-250mm/Hg with bottle and tubing
- b) Flow meter, 0-15l/min
- c) Oxygen source
- d) Wall clock
- e) Worktable with laminated top
- f) Bed
- g) Bedside cabinet
- h) Chair
- i) IV stand
- j) Bed screen, three sections
- k) Waste paper basket
- l) Fetoscope
- m) Stethoscope, dual head

4.7.4.11. Equipment –delivery room (s)

- a) Vacuum aspirator, 0 - 250 mm/Hg, w bottle and tubing
- b) Trolley, oxygen, complete
- c) Flow meter, 0 - 15 l/min
- d) Wall clocks
- e) Dressing trolley, two trays
- f) Soiled line trolley, 2 rings
- g) Baby cots
- h) Delivery couches
- i) IV stands
- j) Bed side ultrasound
- k) Kick bucket, stainless steel
- l) Bowl and stands
- m) Instrument table, Mayo type, mobile
- n) Infusion pump, volumetrics
- o) Newborn care tables
- p) Operating light, ceiling mounted or mobile
- q) Neonatal resuscitation kit
- r) Fetoscopes

4.7.4.12. Equipment – soiled utility room, delivery suite:

- a) Soiled linen trolley
- b) Bin with lid
- c) Worktable with laminated top
- d) Wash tub (65L)
- e) General purpose trolley, two trays
- f) Bedpans
- g) Kidney basin, 475 ml

4.7.4.13. Equipment – reception/nurse station, operating theatre suite:

- a) Wall clock
- b) Desk
- c) Desk chair
- d) Cabinet
- e) Chair, stackable, without armrests

- f) Basket, waste-paper, metal

4.7.4.14. Equipment – entrance, patient transfer area, operating theatre suite:

- a) Patient transfer, roller system
- b) Patient stretcher

4.7.4.15. Equipment –staff changing room, operating theatre suite:

- a) Soiled linen trolley
- b) Waste basket

4.7.4.16. Equipment, for one operating theatre:

- a) Elapsed time clock
- b) Anaesthesia trolley and Oxygen cylinders
- c) Worktable with laminated top
- d) Stool
- e) IV stand
- f) Kick bucket
- g) Swab rack with drip tray
- h) Swab count record board
- i) Bowl and stand
- j) Instrument table, Mayo type
- k) Framed board with pencil tray
- l) Infusion pump and Suction pump
- m) Blanket, warming
- n) Tourniquet x 1 and Tongue depressor
- o) Coagulation unit, electro, mobile, 200 W
- p) Light, operating, 1 large copula, ceiling mounted
- q) Operating table, 3 sections,
- r) IV fluid pressure bag
- s) Anaesthesia machine with ventilator, 2 vaporizers, and gas cylinders
- t) Laryngoscope set (Mackintosh)
- u) Magill forceps (adult)
- v) Laryngeal mask set and Mask holder
- w) Mouth gauge
- x) Patient monitor
- y) Dual head stethoscope

4.7.4.17. Equipment – scrub area:

- a) Soap dispenser
- b) Scrub-up brushes

4.7.4.18. Equipment: set up area

- a) Worktable with laminated top
- b) Cabinets and shelves

- c) Dressing trolley
- d) Instrument table, Mayo type
- e) Blood warmer
- f) IV fluid warmer

4.7.4.19. Equipment – operating theatre sterile supply store:

- a) General purpose trolley, 2 trays
- b) Gen.surg-Suture set
- c) Gen.surg- Abdominal set
- d) Gen.surg- Basic surgery set
- e) Gen.surg- Laparotomy set
- f) Gen.surg- Small dissection set
- g) Gen.surg- Minor surgical set
- h) Gen.surg- Suprapubic puncture set
- i) Gen.surg- Circumcision set, newborns x 1 (part of general surgery)
- j) Gyn/Obs-IUD set
- k) Gyn/Obs- Cranioplasty/ craniotomy set
- l) Gyn/Obs- Dilation & curettage (D&C) set
- m) Gyn/Obs- Manual vacuum aspiration set
- n) Gyn/Obs- Obstetric forceps
- o) Gyn/Obs- Caesarean section set
- p) Gyn/Obs- Abdominal hysterectomy set
- q) Gyn/Obs- Vaginal hysterectomy set, extras
- r) Gyn/Obs- Gynaecology examination set (EUA)
- s) Gyn/Obs- Cervical biopsy set

4.7.4.20. Equipment – clean utility room, surgical suite:

- a) General purpose trolley, two trays
- b) Worktable, laminated top
- c) Refrigerator, 140 l + 20 l
- d) Steam sterilizer

4.7.4.21. Equipment recovery area:

- a) Vacuum aspirator
- b) Oxygen Flow meter, 0 - 15 l/min
- c) Oxygen (one cylinder per bed)
- d) Patient transfer, roller system
- e) Dressing trolley, two trays
- f) Bed with mattress
- g) Stool
- h) Bed screen, 3 sections, mobile
- i) Pedal bin
- j) Oxygen trolle, complete
- k) Ventilator
- l) Resuscitator, hand operated
- m) Mobile examination light

- n) Dual head stethoscope

4.7.4.22. **Equipment – operating theatre sluice room**

- a) Soiled linen trolley
- b) General purpose trolley, two trays
- c) Bin with lid
- d) Worktable with laminated top
- e) Wash tub, 65 L
- f) Mobile bedpan trolley
- g) Bedpan
- h) Kidney basin, 475 ml x 5

4.7.4.23. **Equipment – cleaners’ room, operating theatre:**

- a) Cleaning trolley
- b) Mop rack
- c) Worktable
- d) Pail with handle
- e) Broom
- f) Mop

4.7.4.24. **Operating Room Linen:**

- a) Apron Surgical, rubber
- b) Trousers, Surgical, woven, Small, Medium & Large
- c) Top, Surgical, woven, Small, Medium & Large
- d) Gown, Surgical, woven(Plain)
- e) Cap, Surgical, woven
- f) Drapes:
 - Drape, Surgical, woven(1 X 1 m)
 - Drape, Surgical, woven(1 X 1,5 m)
 - Drape, Surgical, woven(1.5 x 1,5 m)(fenestrated)
 - Drape, Surgical, woven(45 cm X 70 cm)(fenestrated)
- g) Bed
- h) Sheet, draw, white
- i) Cellular Blanket (Recovery and outside blankets)
- j) Mayo cover
- k) Towel Bath
- l) Towel Hand

4.8. Anesthesia Services

4.8.1. Practices

4.8.1.1. There shall be a written Protocol about administration of local anesthesia infiltration, sedation, minor regional block ,regional and general anesthesia in the hospital,

4.8.1.2. Anesthesia services shall be administered in accordance with written SOP and procedures that are reviewed at least every two years, and revised more frequently as needed. They shall include at least the following :

- (a) Anesthesia care, which includes local anesthesia infiltration, sedation, minor regional block, regional and general anesthesia, is planned and documented in the patient's record.
- (b) A pre-anesthesia/sedation assessment shall be done by anesthesia care provider prior to the Induction Administration
- (c) Administration of anesthesia.
- (d) The patient shall be reassessed immediately prior to administration of anesthesia by an anesthesia care provider. The plan shall be consistent with the patient assessment and shall include the anesthesia to be used and the method of administration.
- (e) Prior to administration of any pre-anesthesia medication, a written informed consent for the use of anesthesia shall be obtained and documented in the medical record.
- (f) Each patient's physiologic status shall be continuously monitored during anesthesia or sedation administration and the results of the monitoring shall be documented in the patient's medical record on an anesthesia form, every ten minute a minimum of :
 - Pulse rate and rhythm.
 - Blood pressure.
 - Oxygen saturation.
 - Temperature
 - End tidal CO2(optional
 - Urine output(every hour or end of the procedure)

- Any blood loss

(g) The anesthesia record shall be as per the national anesthesia guideline

(h) The patient shall be monitored during the post-anesthesia/surgery recovery period and the results of monitoring shall be documented in the patient's medical record.

(i) The time of arrival and discharge from anesthesia recovery room shall be recorded.

(j) The observation at recovery room shall be done by qualified registered nurses with training of basic advanced cardio-pulmonary support.

(k) The decision of discharge shall be done by anesthesiologist, or anesthetist or other qualified physician based on the documented results of monitoring during the recovery.

(l) The discharge order from the recovery shall be documented on patients chart and signed by anesthesiologist or anesthetist or other qualified physician before transfer.

4.8.1.3. At all times, at least one anesthetist shall be on-site

4.8.1.4. The anesthetist shall visit the patient before the operation and assess the general medical fitness of the patient, receives any medication being taken, and assess any specific anesthesia problems.

4.8.1.5. The anesthetist shall discuss possible plans of management with the patient and explains any options available, to enable the patient to make an informed choice.

4.8.1.6. Information on any medicines or treatments such as blood transfusion shall be discussed with the patient.

4.8.1.7. The anesthetist shall ensure that all the necessary equipment and medicines are present and checked before starting anesthesia.

4.8.1.8. The anesthetist shall confirm the identity of the patient before inducing anesthesia.

4.8.1.9. The anesthetist shall be present in the operating theatre around the patient throughout the operation and shall be present on-site until the patient has been discharged from the recovery room.

- 4.8.1.10. The conduct of the anesthesia and operation is monitored and recorded in line with the monitoring standards and formats, to a minimum these shall contain:
- a) A continuous display of the ECG,
 - b) Continuous pulse oximeter, and
 - c) A written record of the anesthetic shall be kept as a permanent record in the case notes.
- 4.8.1.11. Pain shall be assessed in discussion with surgeon and/ or the patient and pain control shall be provided.
- 4.8.1.12. Patients shall be managed in a recovery room, except patients requiring transfer for intensive care in ICU, until overcome effect of anesthetic.
- 4.8.1.13. Written discharge criteria shall be in place, including satisfactory control of pain and nausea, spontaneous breathing, to determine when patients can be safely discharged from the recovery room, making it clear that the final responsibility is always with the anaesthetist or any qualified physician for transfer.
- 4.8.1.14. The protocols and guidelines used for anesthesia service shall be available and well understood by the surgical team.
- 4.8.1.15. Anesthetic agents administered with the purpose of creating conscious sedation, deep sedation, major regional anesthesia, or general anesthesia shall be in accordance with anaesthesia policies and procedures.
- 4.8.1.16. There shall be a written protocol to assure that surgery shall not proceed when there are disabled alarms on the monitors,
- 4.8.1.17. The body temperature of each patient under general or major regional anesthesia lasting 45 minutes or more shall be continuously monitored and recorded at least every 15 minutes.
- 4.8.1.18. Pulse oximetry shall be performed continuously during administration of general anesthesia, regional anesthesia, and conscious sedation at all anesthetizing locations, unless such monitoring is not clinically feasible for the patient. Any alternative method of measuring oxygen saturation maybe substituted for pulse oximetry if the method has been demonstrated to have at least equivalent clinical effectiveness.
- 4.8.1.19. Blood pressure, pulse rate, and respiratory rates shall be determined and charted at least every five minutes for all patients receiving anesthesia at any anesthetizing location, except for local anesthesia and minor regional blocks.

4.8.2. Premises

4.8.2.1. The general anesthesia service shall be provided in the Operation theatre (OR), together with the surgical services.

4.8.2.2. **Operation theatre;** refer to the standards prescribed under the Surgical service standard

(a) There shall be a mechanism for taking exhaust air from anesthesia machine to outside of OR; important when performing open system for pediatric anesthesia,

(b) There shall be central oxygen system or a system where there is a continuous supply of charged Oxygen cylinders,

4.8.2.3. **Anesthesia store:** refer to the standards prescribed under the Surgical service standard

(a) Shall be well ventilated and illuminated room with shelves and cabinets,

(b) The anesthetic shall be kept on shelves and/ or cabinets, separate from medicines, properly labeled,

(c) There shall be at least 4 electric plugs in the room,

(d) Anesthetic equipments shall be stored clean and being ready for use,

(e) Ambu bags and resuscitation kits shall be kept labeled in easily reachable place,

(f) There shall be separate place for keeping new and rechargeable Batteries and dry cells. Used batteries and cells shall be stored and discarded properly, refer to IP and waste disposal protocol,

4.8.3. **Professionals**

4.8.3.1. Anesthesia service shall be directed by licensed anesthesiologist/Msc anesthetist or BSc in anesthesiology with experience.

4.8.3.2. All anesthesia providers who administer and/or supervise the administration of general anesthesia, major regional anesthesia, or conscious sedation anesthesia shall maintain current training in Advanced Cardiac Life Support.

4.8.3.3. General or major regional anesthesia shall be administered and monitored only by the following:

a) An anesthesiologist;

b) Msc anesthetist

c) BSc in anesthesiology;

- d) A physician resident (anesthesiology), a student nurse anesthetist, a student anesthetist under the supervision of a licensed anesthesiologist, BSc in anesthesiology and/or nurse anesthetist.

4.8.3.4. The supervision of general or major regional anesthesia shall be provided by a licensed anesthetist or nurse anesthetist or anesthesiologist who is immediately available. The supervising person may concurrently be responsible for patient care, with the exception of performing major surgery, administering general anesthesia, or major regional anesthesia.

4.8.3.5. Minor regional blocks shall be administered by the following licensed professionals:

- a) An Anesthesiologist or BSc in anesthesiology or
- b) An anesthetist, or nurse anesthetist, or
- c) A physician or podiatrist (foot doctor) or dentist;
- d) A medical intern, a physician resident, a dental resident, or a student nurse anesthetist, or student anesthetist, or a health officer, or a registered nurse, midwife, under the supervision of at least nurse anesthetist.

4.8.4. **Product:**

4.8.4.1. Anesthesia supplies, equipment and safety systems shall include the following:

- a) All medical gas hoses and adapters shall be color-coded and labeled according to current national standards.
- b) An oxygen failure-protection device ("fail-safe" system) shall be used on all anaesthesia machines to announce a reduction in oxygen pressure, and, at lower levels of oxygen pressure, to discontinue other gases when the pressure of supply oxygen is reduced.
- c) Vaporizer exclusion ("interlock") system shall be used to assure that only one vaporizer, and therefore only a single agent, can be actuated on any anaesthesia machine at one time.
- d) To prevent delivery of excess anaesthesia during an oxygen flush, no vaporizer shall be placed in the circuit downstream of the oxygen flush valve.
- e) All anaesthesia vaporizers shall be pressure-compensated in order to administer a constant non-pulsatile output.

- f) Accurate flow meters and controllers shall be used to prevent the delivery to a patient of an inadequate concentration of oxygen relative to the amount of nitrous oxide or other medical gas.
- g) Alarm systems shall be in place for high (disconnect), low (sub atmospheric), and minimum ventilator pressures in the breathing circuit for each patient under general anaesthesia.

4.8.4.2. Anaesthesia supplies, equipment and patient monitoring shall include:

- a) A respirometer (volumeter) measuring exhaled tidal volume shall be used whenever the breathing circuit of a patient under general anesthesia allows.
- b) A difficult airway container or trolley shall be immediately available in each anesthesia department for handling emergencies. The following items are required to be included in the difficult airway container or trolley:
 - resuscitation equipment like ambu bag, laryngoscope, defibrillator, laryngeal mask and endotracheal tube stylet
 - Airway,
 - emergency medicine,
 - Laryngeal mask airway, and/or other items of similar technical capability.
- c) A precordial stethoscope or oesophageal stethoscope shall be used when indicated on each patient receiving anesthesia. If necessary, the stethoscope may be positioned on the posterior chest wall or tracheal area.
- d) Supplemental oxygen and a delivery system appropriate to the patient's condition shall be immediately available for patient transport from the operating room to the post anesthesia care /recovery unit.
- e) Recording and reporting forms

4.8.4.3. Equipments:

- a) Anesthesia machine with ventilator, 2 vaporizers, and gas cylinders
- b) Adult and pediatric anesthesia circuits with filters
- c) Mechanical ventilators
- d) Oxygen cylinders, oxygen trolley and oxygen regulator
- e) Worktable with laminated top
- f) Resuscitation equipments; Ambu bags (adult/ pediatric/ neonates), with inflatable bag,
- g) Refrigerator,

- h) Time clock
- i) Stools
- j) Clips
- k) Weight scale; adult & pediatric
- l) Resuscitation trolley
- m) Syringe pump
- n) Defibrillator
- o) Blood gas analyzer (optional)
- p) Dust bin
- q) Blankets
- r) Framed boards with pencil trays
- s) IV stands, infusion pumps, IV fluid pressure bags, blood warmer and IV fluid warmer
- t) Tourniquets, tongue depressors, disposable
- u) Operation table with minimum of smoothly adjustable 3 sections and accessories:
 - Pillows, abduction
 - Support, head, operating table
 - Positioner bag, small, medium, large
 - Adjustable Head screen
 - Patient transferring Stretchers
 - Suction machines
- v) Patient monitor
 - ECG monitor
 - 12 leads Electrode, Monitor
 - Pulse oximeter
 - Temperature monitor
 - Nerve stimulator
 - Dual head stethoscope
 - BP apparatus with different size cuffs
- w) Intubation gadgets:**
 - a) Airway Guedel, pediatric & adult size: 0, 00, 3, 4 & 5
 - b) Laryngeal mask set

- c) Mask holder
- d) Cannula - Nasal-Oxygen,
- e) Face mask- Oxygen,
- f) Masks – Oxygen 40 %
- g) Laryngoscope sets with different size blades (Mackintosh)
- h) Magill forceps (adult & pediatrics)
- i) Intubation stylet, adult, 15 Ch,/ Endo-tracheal tube guide
- j) Mouth gauge
- k) Tube, Endo-tracheal, different size with connectors:
- l) Tube, Trachea, balloon, different size
- m) Tube, Suction,CH08,L50cm,ster,disp, CH08, CH10, CH14, CH16
- n) Extractor, mucus,20ml,ster,disp
- o) Safety Pins Large & Medium
- p) Connector, Biconical, Autoclavable
- q) Connector, T/Y
- r) Connectors - Plastic – Tapered
- s) Masks - Nebulizer/Oxygen
- t) Other accessories/ supplies:
- u) Braun Splints (Arm)
- v) Drawsheet, plastic,90x180cm
- w) Clinical thermometer
- x) Fridge thermometer
- y) Tourniquet, latex rubber,75cm

4.8.4.4. All medicines and supplies shall be available as per the national medicines list for this level of hospital

4.8.4.5. Operating Room Linen:

- | | |
|--|---------------------------------|
| a) Apron Surgical, rubber | d) Gown, Surgical, woven(Plain) |
| b) Trousers, Surgical, woven; Small, Medium & Large | e) Caps, Surgical, woven |
| c) Top(shirts), Surgical, woven; Small, Medium & Large | f) Masks, surgical, woven |
| | g) Pillow case |
| | h) Pillows |
| | i) Sheet, Bed |

- j) Sheet, draw, white
- k) Cellular Blanket
- l) Organ protections,
- m) Shelves
- n) cabinets

4.9. Intensive Care unit (ICU) Services

4.9.1. Practice

4.9.1.1. The ICU service shall be available for 24 hours a day, and 365 days a year with Advanced Life Support (ALS) service round the clock with shift.

4.9.1.2. The ICU shall have written protocol and procedures that are reviewed at least once every year and implemented. They shall include at least:

- (a) Criteria for admission to ICU,
- (b) Criteria for discharge
- (c) A list of procedures that physicians may or may not perform;
- (d) Infection control procedures and/or protocols as indicated under infection prevention standards;
- (e) A visitors policy that specifies visiting hours and number which subject to the discretion of the patient's physician or primary care nurse;
- (f) A policy on the removal of a patient's life support system;
- (g) A policy defining the physician, specialist and consulting physician to be called for patient emergencies, including a response time for physicians to respond to patient emergencies;
- (h) Standing orders for patient emergencies;
- (i) Policies and procedures which ensure that priority laboratory services will be available to critical care patients at all times if medically indicated;

4.9.1.3. Complete medical records shall be kept for each patient: pertinent history, physical examination, diagnosis, diagnostic procedures, medication administration, and treatment to facilitate continuity of care. And the patient's medical service record shall be integrated with the patient's over-all hospital record,

4.9.1.4. There shall be a means of promoting harmony between critical care providers and families.

This 5-part system, known by the mnemonic VALUE, includes:

- (a) valuing and appreciating what the family members communicate,

- (b) acknowledging their emotions by using reflective summary systems,
- (c) listening to family members,
- (d) understanding who the patient is as a person by asking open-ended questions and listening carefully to the responses, and
- (e) Eliciting questions from the family more effectively than by simply asking “Any question?”.

4.9.1.5. There shall be portable life-support equipment for use in patient transport, both within the hospital and for transfer. All ventilators in use shall be equipped with an integral minimum ventilation pressure (disconnect) alarm. There shall be a system for obtaining immediate emergency replacement or repair of equipment in the critical care service.

4.9.1.6. There shall be a system in the hospital of assuring the functionality of the ICU gadgets/ equipments according to manufacturer recommendation and labeling for the check service.

4.9.1.7. There should be mechanism in place for the critical care service to have access to nutritional support services for advice on both enteral and parenteral nutritional techniques.

4.9.2. Premises

4.9.2.1. The ICU shall be located in access restricted area of the hospital and well identified.

4.9.2.2. **ICU room:** The size of the room depends on the number of ICU beds. The ICU shall be at least 60 sq.m in size that accommodate a maximum of 4 electrically or manually operated ICU patient beds fitted with full range of monitors and a screen.

- a) The header of beds shall be 1 m away from the wall
- b) There shall be a 2m wide free traffic area by side of beds and between any of two beds.
- c) There shall be a nurse station within the ICU having a computer and a computer point, telephone and telephone point, cabinets and shelves, and lockers for controlled drugs.

4.9.2.3. Nurse station in the ICU:

- a) Nurse station shall be full visual access to monitor admitted patients on monitors,
- b) Equipped with chairs, working laminated top tables, drawers and computers, Linen boards, shelves, lockers

c) Telemetry monitoring for critical or post operative patients with transmitters,(optional)

4.9.2.4. The ICU shall have easily accessible hand wash basin around the entrance-exit door.

4.9.2.5. . The ICU area shall be generally regarded as a sterile zone and there shall be shoe and cloth change point for staff and attending families.

4.9.2.6. In summary, the ICU shall have the following premise set up

Required rooms	# required	Area required
o IC room	1	60 sq. m
o Nurse station (inside IC room)	1	Included
o Change room/ Nurse locker room	1	6 sq. m
o Soiled Utility/ Sluice room	1	6sq. m
o Staff tea room (optional)	1	12sq. m
o ICU mini- store room	1	6 sq. m
o Toilets with hand washing basin		
o Cleaner’s closet		

4.9.3. Professionals

4.9.3.1. The hospital ICU shall be directed by a licensed anesthesiologist or ntensivist or Msc anesthetist or ICU trained internist or ICU trained general practitioner.

4.9.3.2. There shall be a registered professional nurse with administrative responsibility for the ICU or combination of units who is accountable for all critical care nursing rendered in the unit or units.

4.9.3.3. The nursing staff of each unit within the ICU service shall have special training in critical care nursing or took on job training.

4.9.3.4. All practicing nurses in the ICU shall be trained and certified in basic cardiac life support.

4.9.3.5. Nurse staffing shall be determined by the number and acuity of illness of the patients (workload analysis) on the critical care unit.

4.9.3.6. A ratio of 2 patients to 1 nurse shall be available at a general ICU.

4.9.3.7. At least the following professionals are required:

Required professionals	# required
Anesthesiologist/Intensivist/Msc anesthetist/ICU trained internist	1
Nurse anesthetist (shared with OR)	1
ICU trained nurse/ICU nurse professional/ emergency and	3

critical care nurse	
Cleaners	
Porters	

4.9.4. Products

4.9.4.1. Medicines selected for ICU services by the hospital shall be available at all times

4.9.4.2. The hospital ICU shall have the following equipment, instruments and system:

- a) The ICU beds shall have removable side protections; functional wheels; shall be easily adjustable to multipurpose positions
- b) Mechanical ventilator to assist breathing through an endotracheal tube or a tracheotomy opening; at least 2, All ventilators shall be equipped with an integral minimum ventilation pressure (disconnect) alarm.
- c) Different size endotracheal tubes and tracheotomy sets, at least 4 sets,
- d) monitoring equipment, equipment for the constant monitoring of bodily functions;
- e) cardiac monitors 4
- f) Telemetry, (optional)
- g) Standard 12 lead ECG machine
- h) external pacemakers (optional),
- i) defibrillator
- j) Reliable Oxygen delivery systems: Oxygen cylinder or oxygen concentrator,
- k) Oxygen regulator,
- l) pulse oximeter,
- m) end-tidal carbon dioxide monitoring, (optional)
- n) A web of intravenous lines for medicines, infusions fluids or total parenteral nutrition,
- o) Infusion pump
- p) Laryngoscopes with different size blades,
- q) Ophthalmoscope,
- r) Mouth gags, different size
- s) Air ways, different size
- t) Resuscitation trolleys,
- u) Exam coaches,

- v) Syringe pump,(optional)
- w) Endotracheal tubes ,(different sets)
- x) Wheel chair,
- y) Patient transport stretcher,
- z) Sphygmomanometer, with adult and pediatric cuffs,
- aa) Sthethoscopes: pediatric and adult,
- bb) Electrical suction machine 2
- cc) Pedal suction machine,
- dd) Nasal CPAP,(optional)
- ee) Bed pan
- ff) Pacing boxes (at least 2),optional
- gg) X-ray viewer
- hh) Wall clock
- ii) Leak proof garbage bin
- d) Patient screen per bed and
- jj) IV stands, at least one per bed

4.10. Mental Healthcare Services

4.10.1. Practices

- 4.10.1.1. There shall be a dedicated outpatient and inpatient services for mental health service
- 4.10.1.2. Psychiatry service shall have written policies Protocol and procedures that shall include
 - a) Admission and discharge criteria specific to the service;
 - b) Visitors policy that allows for 24 hour visitation by designated visitors specifying the number of visitors permitted for each patient at any time
 - c) Infection control specified under this standard and National and or Hospital IP guideline
 - d) Transfer and referral of patients
 - e) Monitoring and follow-up of patients
- 4.10.1.3. Psychiatric patients shall receive all medical, surgical, diagnostic and treatment services as ordered by a physician
- 4.10.1.4. There shall be written protocols and procedures for the management of the psychiatry conditions in the hospital
- 4.10.1.5. There shall be written SOPs regarding the admission, consultation, discharge, transfer and follow-up of psychiatric patients
- 4.10.1.6. There shall be an integrated psychiatry emergency service for 24 hours a day and 365 day a year in the hospital.
- 4.10.1.7. There shall be psychiatry follow-up service during working hours
- 4.10.1.8. There shall be pharmacotherapy and should be Electro Convulsive
- 4.10.1.9. The psychiatric team shall be responsible wherever the psychiatric patient is referred and treated for other medical illnesses within the hospital
- 4.10.1.10. The following services shall be available as part of the program of the psychiatry care Department
 - a) Individual, group and family therapy;
 - b) Psychological services and

- c) Recreational therapy
 - d) Electroconvulsive therapy (ECT) optional
- 4.10.1.11. The hospital shall have complete a psychosocial assessment for each patient which includes at least the following:
- a) Identified problems;
 - b) Social and family history;
 - c) Educational and employment history;
 - d) Financial status; and
 - e) Present living arrangements.
 - f) Social support
- 4.10.1.12. Psychiatric evaluation shall be documented in the medical record and shall include at least the following:
- a) The chief complaint;
 - b) History of present illness;
 - c) Pertinent medical history including previous /response to psychotropic medications;
 - d) Past psychiatric history
 - e) Family history;
 - f) A mental status and;
 - g) A diagnostic impression
- 4.10.1.13. An individual, comprehensive, multidisciplinary care plan shall be developed for each patient based on an assessment of the patients' strength and limitations. The written care plan shall include at least the following:
- a) A psychiatric diagnosis specifying undercurrent /disorder.
 - b) Observable treatment goals
 - c) The specific treatment methods to be used and;
 - d) The responsibilities of each member of the interdisciplinary care team.
- 4.10.1.14. Nursing services shall be the responsibility of licensed /mental health professional/mental health professional specialist and other mental health workers and shall be directed by an experienced professional psychiatry nurse.

- 4.10.1.15. The multidisciplinary care plan shall be discussed with the patient and/or the patient's next of kin and implemented accordingly.
- 4.10.1.16. Written discharge plan shall be developed for each patient by the members of a multidisciplinary team, who either meet or make notes individually in the patient's record.
- 4.10.1.17. There shall be Infection control practices for the day/dining room, equipment and rooms used by more than one patient based on the hospital wide infection prevention and control policies and procedures manual.
- 4.10.1.18. There shall be Safety and security precautions for the prevention of suicide, assault, elopement/escape and patient injury.
- 4.10.1.19. There shall be mechanisms for providing immediate security assistance to staff and patients.
- 4.10.1.20. Patients/caregivers shall be advised on their diagnosis and option of management and for patients who require medication onset of action, medication side effect shall be discussed. .
- 4.10.1.21. Every medical record relevant to psychiatric illness shall be kept for each patient stated under the medical records section of this standard
- 4.10.1.22. An accurate schedule of activities shall be posted conspicuously in the unit.
- 4.10.1.23. Authorized security personnel shall have immediate access to locked units.
- 4.10.1.24. There shall be a system for summoning help from other areas of the unit in an emergency.
- 4.10.1.25. The hospital shall have services for substances use disorder' detoxification, treatment.
- 4.10.1.26.
- 4.10.1.27. There /should be a pediatric and adolescent psychiatric care and service
- 4.10.1.28. .

4.10.2. **Premises**

- 4.10.2.1. A private setting shall be available for interviewing patients.(One room =12 meter square)
- 4.10.2.2. There shall be a separate psychiatry emergency room (s). The psychiatry emergency room(s) shall have additional doors through which escape is possible for mental health professional working there in the case of imminent assault by acutely disturbed violent patient. Restraint of such patients shall be carried out by trained paramedical staff so that emergency medication shall be possible (OPD 16)
- 4.10.2.3. There shall be psychiatric ward dedicated for psychiatry service.
- 4.10.2.4. There shall be an Electro Convulsive Therapy procedure room with instruments and materials needed together with documentation forms and documentation book and a cupboard for bed sheets and mattresses with pillows the equipment
- 4.10.2.5. The psychiatry unit shall have a day room/dining room that allows for social interaction, dining, and therapy.
- 4.10.2.6. Space for structured physical exercise programs shall be available to patients.
- 4.10.2.7. There shall be space in each patient room for storage of patient's personal belongings. There shall be a system for securing patient's valuable belongings.
- 4.10.2.8. The outpatient layout shall include the following:

a) Waiting area of the psychiatric wing: room /lobby with public telephone, TV area, drinking tap water, and gender specific toilets	b) Reception and Recording area/desk	c) Dedicated patient examination rooms
d) Room for providing	e) Storage place for	f) Utility room for

injections	sterile supplies	cleaning and holding used equipments and disposing patients specimen
g) Staff room (for changing cloth)	h) Janitors closet	i)

4.10.2.9. The psychiatry service unit shall have a isolation room for treatment of conditions that require isolation for inpatients.

4.10.3. Professionals

4.10.3.1. The Psychiatry service shall be directed by a licensed psychiatrist/psychiatric professional specialist.

4.10.3.2. A psychiatrist or psychiatric professional specialist shall be responsible for the follow-up clinics.

4.10.3.3. The number, type and skills of clinicians and support staff shall ensure that patients are appropriately treated and cared for at all times.

4.10.3.4. A licensed psychiatry nurse shall be available at all times to assess, evaluate, and follow the nursing care provided

4.10.3.5. Mental health services professionals for 8 hours only

4.10.3.6. Profession	4.10.3.7. Number require	4.10.3.8. Note
Psychiatrist/mental health professional specialist	1	
Psychiatry professional	1	
Professional nurses	2	
Psychology professional		Optional
Social worker		Optional

4.10.3.9.

4.10.4. Products

- 4.10.4.1. The restraint equipment needed by the unit shall be immediately available on the unit and accessible to unit staff.
- 4.10.4.2. Recreational and therapy equipment and supplies needed for psychiatry care shall be available on the unit and stored in locked storage.
- 4.10.4.3. Locked storage areas shall be available for supplies and the safekeeping of the individual, ongoing projects of patients.
- 4.10.4.4. The psychiatric OPD/patient interviewing room shall have the following supplies and functional equipment in addition to office furniture's
 - a) Torch,
 - b) Weighing scales for adults and/or children
 - c) thermometer
 - d) Stethoscopes
 - e) Sphygmomanometer
 - f) Examination couch
 - g) Hand washing basin
 - h) Emergency ECT access when inpatient treatment is not possible/optional
 - i) Spatula, disposable gloves, cotton, gauze
 - j) Prescription, certificate, and appropriate referral forms, request forms for laboratory, X-ray and other imaging investigations
 - k) Equipments listed below are for OPD,EMERGENCY, INPATIENT**
 - a) ECT machine, gags, electrode application rubbers, electrodes, gel for electrode placement/optional
 - b) Torch,
 - c) Weighing scales
 - d) Tape meter, thermometer, patella hammer
 - e) Stethoscopes and Sphygmomanometer
 - f) Examination couch, medicine trolley, Cup board
 - g) Tourniquets and IV stands
 - h) Oxygen cylinder, Flow-meters for oxygen, Nasal prongs catheters
 - i) Self inflating bags for respiratory support, Masks, endotracheal tubes,
 - j) Cannulas, oral air way and Nasogastric tube
 - k) Beds for patients and hand washing basin
 - l) Glucometer

4.10.4.5. Locked storage areas shall be available for supplies and the safekeeping of the individual, ongoing projects of patients.

4.10.4.6. Psychotropic medications and other drugs shall be available in line with the hospital drug list.

4.11. Dentistry Services

4.11.1. Practices

4.11.1.1. The dental service shall be available during working hours.

4.11.1.2. There shall be written protocols and procedures for the management of dental conditions as well as consultation, referral and transfer of inpatients /outpatients to other services inside/outside the hospital.

4.11.1.3. The dental unit shall be functional for dental for emergency cases on call basis after working hours.

4.11.1.4. Emergency oral and maxillofacial surgery services may be available 24 hours a day and 365 days a year. This includes:

- a) Facial and dent alveolar infections (cellulitis)
- b) Treatment for facial injuries and associated injuries
- c) Lower or upper jaw fractures

4.11.1.5. Non emergency oral and maxillofacial surgery services may be available during the regular working hours. This includes:

- a) Treatment for craniofacial and jaw deformities
- b) Implants and pre-prosthetic surgery
- c) Temporo-mandibular joint therapy
- d) Facial cosmetic surgery
- e) Surgery for oral pathological lesions, including oral cancer
- f) Physical therapy for oro-facial pain
- g) Removal of mal-positioned or impacted teeth
- h) Surgery for cleft lip and palate (team work)
- i) Apicectomy & Cystectomy etc.

4.11.1.6. Non emergency dental services (general dental services) shall be available during the regular working hours.

- 4.11.1.7. For admitted dental patients, the dental service shall be responsible to arrange availability of care with the surgical department to cover all the shifts.
- 4.11.1.8. Adequate dental records shall be kept for each patient and the patient's dental service record shall be integrated with the patient's over-all hospital record
- 4.11.1.9. Information contained in the dental record shall be complete and sufficiently detailed with respect to the patient's history, physical examination, oral (Intra & Extra) examination, diagnosis, diagnostic procedures, medication administration, and treatment to facilitate continuity of care.
- 4.11.1.10. Informed Consent (written/verbal) shall be complete for every dental procedure in addition to minor & major surgery.
- 4.11.1.11. The dental service shall be provided in accordance with infection prevention standards

4.11.2. Premises

- 4.11.2.1. The dental service shall be located in the outpatient service unit of the hospital.
- 4.11.2.2. There shall be an arrangement for in-patient service sharing with surgical department.
- 4.11.2.3. There shall be a waiting area for oral health education.
- 4.11.2.4. There shall be an X-ray mounted dental unit with leaded door and lead apron. The design of rooms for dental x-ray equipment shall be in accordance with the guidelines of Ethiopian Radiation Protection Authority and this standard.
- 4.11.2.5. There should be a dental laboratory room for orthodontics and prostodontics
- 4.11.2.6. In addition to the rooms mentioned above dental services shall have the following rooms:

Required room	#required	Area required
Waiting area (can be shared)		
Examination and treatment room	1	16 sq.m
Dental laboratory (optional)	1	9 sq.m
Sterilization area/store room	1	9 sq.m
Guarded place or roo for air compressor	1	2 sq.m

- 4.11.2.7. The dental service shall use the hospital operation theatre, ICU & anesthesia services.

4.11.3. Professionals

- 4.11.3.1. The dental service shall be directed by a licensed dental surgeon or a maxillofacial surgeon

- 4.11.3.2. There shall be adequate qualified dental and auxiliary personnel in the dental service unit available at all times to meet the service needs.
- 4.11.3.3. The number and type of technical staff shall be determined by the volume and type of work carried out (Work load Analysis).
- 4.11.3.4. A dental surgeon or doctor shall be available (Physically present) during working time in the dental unit.
- 4.11.3.5. A dental surgeon or maxillofacial surgeon shall be available on call at all times. The surgeon shall be able to be present at the service unit within thirty (30) minutes upon call.
- 4.11.3.6. dental professionals (BDS. Dental Therapist and dental technician) shall be available during working hours to assess, evaluate, and follow the dental care provided.
- 4.11.3.7. There shall be a mechanism for exchange of scientific knowledge, skills and services in line with upgrading standard of dental services

Required professionals	#Required
Orthodontist (optional)	1
Endodontist (optional)	1
Periodontologist (optional)	1
Implantologist (optional)	1
Prosthodontist (optional)	1
Dental surgeon	1
Bachelor of dental science (BDS) or dental therapist	2
Dental technician (optional)	1

4.11.4. Products

4.11.4.1. The dental services shall have the following equipment and instrument:

- a) Dental unit(s) with compressor
 - Air-water syringes
 - Operating light
 - Saliva ejector (oral evacuator system)
 - Dental Chair
 - Operator’s stool
 - Assistant stool

- b) Instruments for examination
 - Dental mirror, Cotton pliers & Spoon excavator
 - Explorers
 - Periodontal pocket probe
 - Examination probe
- c) Instrument for filling treatment
 - Condenser (serrated & plain, Medium, and big size)
 - Beaver tail
 - Burnisher (ball type, football type, interproximal type)
 - Carve (Hollenback,tanner, ward, discoïd-cleoid).
 - Trimmers
 - Knife (interproximal, finishing gold foil)
 - Amalgam carriers (doubled ended, guntype)
 - Matrix retainer (different types tofflemire, ziqueland)
 - Proximal trimmer
- d) Plastic instruments for filling treatment
 - Carriers for restorative materials
 - Carvers
 - Condenser Beaver tail
- e) Materials & instruments to keep the area free from moistures & to improve visibility
 - Rubber dam equipment
 - Clamps (different type, posterior & anterior, mandibular & maxillar)
 - Universal rubber-Dam clamps forceps
 - Rubber- dam punch
 - Holder young frame
 - Automation
- f) Dental hand pieces or Rotating handily cutting instruments;
 - Low speed hand pieces
 - Straight hand pieces
 - Contra angle hand pieces
 - High speed hand pieces
 - Burrs
- g) Instruments and Materials for root canal treatment

- Glass bead sterilizer (optional)
 - Endodontic rotating motor (optional)
 - Apex locator (optional)
- h) Instrument for Oral Surgery (optional)
- Cheek and lip retractors (different types, austin mennisota, weider)
 - Irrigation syringe
 - Aspirating tip
 - Local anesthetic equipment (metal anesthesia syringe) Hemostats (curved , straight ,mosquito, Kelly needle holder)
 - Scissors (different types like Crow, ligature ,surgical scissors)
 - Scalpel or blade holder
 - Periosteal elevator.
 - Adson tissue forceps
 - Allis tissue forceps
 - Rongeurs or bone-cutting forceps
 - Bone file
 - Tooth elevators (different type like straight, curved, root elevators)
- i) Forceps for Dental Extractions (Deciduous teeth)
- Upper extraction forceps;
 - Upper extraction forceps for incisors
 - Upper extraction forceps for canine
 - Upper extraction forceps for premolars
 - Upper extraction forceps for left side molars
 - Upper extraction forceps for left side molars
 - Extraction forceps for upper wisdom tooth.
 - Universal root extraction forceps
 - Lower extraction forceps;
 - Lower extraction forceps for incisors
 - Lower extraction forceps for canine
 - Lower extraction forceps for premolars
 - Lower universal extraction forceps for molars
 - Extraction forceps for lower wisdom tooth.
 - Pediatric extraction forceps
 - Upper anterior extraction forceps
 - Upper posterior extraction forceps
 - Lower anterior extraction forceps
 - Lower posterior extraction forceps
- j) Periodontal instruments
- Manual scaler (different type for upper anterior, lower anterior, upper posterior or lower posterior teeth)
 - Ultrasonic scaler with different tips.
 - Gingivectomy knife
 - Sharpening stone
 - Bristles for polishing

- Currettes (Universal, Gracey)
 - Alveolar bone file
- k) Basic Dental Laboratory Equipments (optional)
- l) Equipment for Radiology Department
- Intraoral X-rays system
 - Panoramic radiography (optional)
 - View box for radiography (Negatoscope)
 - Film processing
 - Lead Apron
- m) Equipments for sterilization
- Super heated steam under pressure (Autoclave)
 - Dry heat sterilization (Oven)
 - Cotton roll sterilizer
 - Different pans use for disinfections & sterilization of instruments
- n) Equipment used for amalgam restoration:
- Amalgam mixing machine (Amalgamatory)
- o) Different operatory cabinets
- Mobile cabinets and\or Fixed cabinet
- p) Central Air compressor
- q) Other rotating instruments:
- Mandrel (straight and latch type)
 - Carborundum, Silica, Crocus, discs and stones
- r) Hand cutting instruments:
- | | |
|------------------|-------------------|
| • Enamel Hatches | • Gingival margin |
| • Enamel chisel | • Trimmer |
| • Discoid-cleoid | • Angle former |
| • Dental Hoe | |
- s) Other surgical instruments
- | | |
|---|----------------------------------|
| • Currettes (Angled, Straight, different Sizes) | • Bone-file |
| • Rongeurs (Bone-cutting forceps) | • Scalped and Handle for scalped |
| | • a) Farabeut |

- b) 3rd molar retractors
- Mouth props
- Cheek and Tongue retractors
- Bone chisels
- Mallets
- Suture needles
- Irrigation syringe
- Aspirating tip

- Local anesthetic equipment (metal anesthesia syringe)
- Pliers flat nose and serrated
- Contouring pliers (Number 112,114,118,800,417)

t) Orthodontics instrument

- Band removing pliers
- Band pusher
- Band adapter
- How pliers (straight and curved)
- Bird-beak pliers
- Ligature cutter
- Distal end cutler
- Band removing pliers
- Wire bending pliers-

- Lingual arch forming pliers
- Loop pliers
- Clasp bending pliers
- TP pliers (110,130)
- Assorted orthodontics band
- Preformed edgewise arch wires/

u) Periodontal instruments

- Scalers- different types, sickle, Jaquete, Chisel, Hoe, file scaler
- Curettes (Universal, Gracey)

v) Prosthodontics Instruments:

- Crown remover
- Trays-(perforated, rim lock, acrylic, metallic, different sizes, for the upper & lower jaws)
- Rubber bowel
- Metallic spatula
- Articulator (optional)

4.12. Otorhinolaryngology (ORL) Services

4.12.1. Practices

- 4.12.1.1. The ORL service shall have written policies and procedures.
- 4.12.1.2. There shall be written protocols and procedures for the management of the medical and surgical conditions in the unit as well as consultation and transfer of patients admitted to this unit or other departments.
- 4.12.1.3. Every medical record shall be kept for each patient as specified in the medical records of this standard.
- 4.12.1.4. Integrated emergency ORL services shall be available 24 hours a day and 365 days a year.
- 4.12.1.5. Outpatient and Elective surgical interventions for ORL Service shall be available during working hours.
- 4.12.1.6. The ORL service shall include the following.
 - a) Daily outpatient services.
 - b) Minor and major surgical services.
 - c) Inpatient services
 - d) ORL diagnostic tests and procedures.
 - e) Pre operative investigations and Postoperative follow ups.
 - f) Outpatient and inpatient consultations from other departments.
 - g) ORL emergency cases management.
- 4.12.1.7. Infection prevention standards shall be implemented in the ORL service as per the IP section of this standard.
- 4.12.1.8. The ORL service shall have access to laboratory, imaging, blood transfusion service, pharmacy, medical record and other services.

4.12.2. Premises

- 4.12.2.1. The ORL service shall have the following:
 - a) The outpatient ORL service unit shall have at least 3 rooms reserved /allocated at the general OPD or in a separate area. It shall include the following:
 - Examination room,
 - Staff office (can be shared with general OPD),
 - Waiting room/ area for patients (can be the general OPD waiting area),

- Nurses station,
- Toilets for staff and for patients (can be shared with general OPD),

b) In patient ORL service may have its own ward or may be integrated with surgical ward as per the inpatient section of this standard.

c) Nurses' station as per the inpatient section of this standard.

4.12.2.2. The ORL service shall share the operation theatre (OR), Minor OR, ICU, recovery room, changing room and staff room with the general surgical services.

4.12.2.3. There shall be a mechanism for taking exhaust air from anesthesia machine to outside of OR; important when performing open system for pediatric anesthesia,

4.12.3. Professionals

4.12.3.1. The ORL service shall be directed by a licensed ORL/ ENT specialist.

4.12.3.2. Students and other staff on attachment shall work under the direct supervision of licensed ENT specialist.

4.12.3.3. ORL service staff shall, at all times, perform their functions with adherence to the highest ethical and professional standards of the medical profession

4.12.3.4. The ORL service management shall provide adequate training, continuing medical education or access to further training for technical staff, and assess staff competency at regular intervals.

4.12.3.5. The ORL services shall have the following professionals and staffs to the minimum:

- a) licensed ORL specialists,
- b) ENT trained or OPD nurses with ENT experience,
- c) OR nurses trained in ENT shared with general OR staff,

4.12.4. Products

4.12.4.1. The ORL OPD shall have:

- a) One ORL diagnostic unit, each integrated with
 - Suction machine
 - Compressed air system
 - Warm water irrigation
 - Cold light source for endoscopes
 - Instrument cabin
- Container for used instruments.
- b) Flexible patient chair.
- c) mobile doctor's chair
- d) Sterilizer.
- e) Table and two chair.
- f) X-ray viewer
- g) Head light
- h) Tongue depressors

- | | |
|---|--|
| i) Rhinoscopes (nasal specula) | n) Aural forceps |
| j) Oscopes (ear specula) | o) Packing forceps |
| k) Laryngeal mirrors | p) Minor surgical sets |
| l) Tuning forks
(256,512,1000,2000,4000,8000Hzs) | q) Ear hooks |
| m) Metallic suction tips | r) Nasal packing forceps |
| | s) Biopsy forceps
(Laryngeal, Nasopharyngeal) |

4.12.4.2. Equipments and supplies for ORL inpatient service shall be as per standards prescribed under the surgical service.

4.12.4.3. The ORL surgical service shares the hospital Major OR facilities with the following additions:

- Operating microscope ceiling mounted or mobile
- OR Table flexible in all sides, with Head Rest.
- Cold light source and head lights
- ENT OR stools (mobile)
- ORL Surgical Instrument Sets:
 - Myringoplasty sets
 - Typanoplasty sets
 - Mastoidectomy sets
 - Surgical drill and tips
 - Otoplasty sets
 - FESS sets
 - Rhinoplasty sets
 - Septoplasty sets
 - Cald -wel- luc sets
 - Nasal polyp sets
 - Total laryngectomy sets
 - Neck dissection sets
 - Laryngoscopy sets(adult)
 - Laryngoscopy set(pediatric)
 - Laser laryngoscopy set(adult)
 - Laser laryngoscopy set (pediatric)
 - Tracheostomy sets
 - Tracheostomy tubes metallic (weith inner canula)
 - Tracheostomy tubes plastic(with inner canmula)
 - Parotidecomy set

○ Adeno-tonsillectomy
sets

○ Suture materials

4.12.4.4. Minor OR shall have (standalone ORL minor OR or shared with the general minor OR)

- ENT OR Table with head rest,
- Light Source & head lights,
- ENT OR stool (Mobile),
- Resuscitation trolley,

4.12.4.5. The ORL diagnostic service shall have the followings:

- a) audiometer,
- b) tympanometer,

4.13. Ophthalmology Services

4.13.1. Practice

4.13.1.1. The Ophthalmology service shall have written protocol and procedures including:

- (a) Admission and discharge criteria specific to the service;
- (b) Transfer and referral of patients
- (c) Monitoring and follow-up of patients
- (d) Infection prevention and control as per the IP section of this standards

4.13.1.2. The Ophthalmology service shall provide at least the following services

- (a) Visual acuity testing
- (b) Slit lamp examination
- (c) Keratometry and ultrasound examinations
- (d) Laser therapy (optional)
- (e) Visual field examination
- (f) Minor and major ophthalmologic surgical procedures (Tarsoraphy, cataract, enucleation etc)
- (g) Medical and surgical management of glaucoma
- (h) Optometry service (optional)

4.13.1.3. The ophthalmology service shall have protocols and procedure at least for the following:

- (a) Penetrating eye injury
- (b) Glaucoma management
- (c) Red eye
- (d) Corneal laceration
- (e) Surgical interventions

4.13.1.4. The Ophthalmology service shall be available during the regular working hours. .

4.13.1.5. Integrate emergency ophthalmology service shall be rendered within the general emergency service at all times.

4.13.1.6. Information contained in the medical record shall be complete and sufficiently detailed relative to the patient's history, physical examination, diagnosis, diagnostic procedures, medication administration, and treatment. Refer to the medical record section of this standard.

4.13.1.7. For admitted patients the medical service shall be organized in a way that it covers all the shifts (24 hours of the day and 365 days a year)

4.13.2. Premises

4.13.2.1. The ophthalmology service shall have outpatient service areas as specified below

	Rooms	Area	# required
1	Examination room	20 sq.m	1
2	Physician room	12 sq.m	1
3	Minor room with changing area	20 sq.m	1
4	Clean utility/Sterilization area/store	9 sq.m	1
5	Optometry workshop with dispensary/ optional	12 sq. m	1

4.13.2.2. The admission corner shall have the following service areas:

(a) The number of rooms and beds shall be determined depending on the nature of the work to be performed.

(b) Admission room shared with other services

4.13.2.3. The Ophthalmology service shall have major facility which may be standalone or shared with the general OR of the hospital.

4.13.3. Professionals

4.13.3.1. The Ophthalmology Service shall be directed by a licensed ophthalmologist.

4.13.3.2. An ophthalmologist shall be available at all working hours and he/she shall be also available on call at duty hours.

4.13.3.3. Nursing service shall be the responsibility of licensed nurse and shall be supervised by the ophthalmologist.

4.13.3.4. A licensed nurse shall be available at all times to assess, evaluate, and follow up the nursing care provided.

4.13.3.5. Anesthesiologist or nurse anesthetist or anesthetist or BSc in anesthesiology shall be available, as appropriate.

4.13.3.6. The service shall have the following staff

Required Profession	Required No.
Ophthalmologist	1

Cataract Surgeon / optional	1
Ophthalmic Professionals	1
Nurse level IV	1
Optometrist/refractionist	1
Ophthalmic Nurse / optional	1

4.13.3.7. The service shall have supporting staff such as cleaners and porter

4.13.4. **Products**

4.13.4.1. The ophthalmology service shall have the following functional equipment

a) Diagnostic Equipment/Instrument

- Slit lamp
- Trial set with trial frame (children and adult), Cross cylinder
- Slit lamp biomicroscopy with schiottz tonometry
- Snellen test chart (Distance chart)
- Near point Acuity test card
- Color test (Ishara)
- Lang stereo test
- Retinoscopy
- Lensometer
- Torch (light)
- Ophthalmoscope (direct)
- Gonioscopy lens
- Lacrimal dilator and probe
- Probung set
- BP apparatus
- Glucometer
- Tonometer /Schiottz
- Autoclave,
- examination bed

b) Therapeutic Equipment/Instrument

- OR microscope
- Cataract set
- Glaucoma operation set
- Tarsotomy set
- Chalazion set
- Enuclation set
- IOL (both Posterior chamber and anterior chamber lenses of different diopters)
- Suture different size (3.0, 4.0, 9.0, 10.0)
- Viscoelastic

- Eye pad
- Ringer, saline
- Ambu bag and oxygen cylinder

c) Diagnostic Medicines

- | | |
|-------------------------|-----------------------------|
| • Phenynephrine | • Fluorescein strips /drops |
| • Tropicamide eye drops | • Cyclopentlate drops |
| • Atropin drops | • Tetracaine drops |

4.13.4.2. Consumables

- Intraocular lens, extraocular lens, povidone Iodine, Alcohol 70 %, gloves of different size, syringes, cotton, gauze, plaster and other commonly applicable consumables

4.13.4.3. Both emergency and non-emergency medicines and supplies shall be available in line with hospitals medicines list.

4.14. Dermatology Services

4.14.1. Practice

- 4.14.1.1. Dermatological services shall be available during working hours.
- 4.14.1.2. There shall be written procedures patient admission, discharge, referral, appointment, care, management and ward rounds of patients.
- 4.14.1.3. There shall be an agreed definition of a day case and recognition of the time required to perform the various surgical procedures.
- 4.14.1.4. The dermatologist who is responsible to direct and coordinate the service shall ensure that there is full medical cover for inpatients at all times.
- 4.14.1.5. There shall be a system for the handover of clinical problems when other practitioners take over the care of patients.
- 4.14.1.6. There shall be a system in place to ensure that the dermatologist is consulted when there is any problem that needs his/her expertise.
- 4.14.1.7. Thorough, contemporaneous records shall be kept and systems are in place to ensure continuity of care when patients are transferred between assessment and admission units or from other wards and hospitals.
- 4.14.1.8. Dermatologists shall give information to patients in a way they can understand and ensure that patients give informed consent to their clinical care.
- 4.14.1.9. There shall be a teamwork involving other disciplines when necessary.
- 4.14.1.10. The outpatient services shall have general skin disease clinic.
- 4.14.1.11. The inpatient service for dermatology shall be integrated with Medical and pediatric wards.
- 4.14.1.12. Dermatologic interventions shall be rendered by licensed dermatologists
- 4.14.1.13. There shall be a mechanism that ensures consultation of a dermatologist out of duty hours.
- 4.14.1.14. There shall be consultation with the pharmacy services for the preparation of topical medicaments.

4.14.2. Premises

- 4.14.2.1. The dermatology service shall at least have an outpatient and inpatient service parts shared with the internal medicine and pediatric services.
- 4.14.2.2. The dermatology examination room shall have the following requirements:

- a) Good natural light and illumination.
- b) Well shaded patient waiting area.

4.14.2.3. There shall be staff office.

4.14.3. **Professionals**

4.14.3.1. The dermatology services shall be directed by a licensed dermatologist

4.14.3.2. The following professionals shall be available:

- a) Dermatologist
- b) Nurse
- c) General Practitioners

4.14.4. **Products**

4.14.4.1. The following products shall be available to provide dermatological services

- | | |
|-----------------------------------|--|
| a) Dermatology examination kit | m) Surgical packs of appropriate instruments |
| b) Examination lamp | n) Equipment for electrocautery |
| c) Cautery machine, | o) Equipment for cryosurgery and storage for liquid nitrogen |
| d) Cryotherapy machine, | p) weighing scale (pediatric and adult), |
| e) Wood lamp | q) Thermometer, |
| f) Dermojet, | r) BP apparatus (different size), |
| g) Dermatoscope, | s) Bed screen |
| h) Magnifying glass | |
| i) Specula | |
| j) Punch biopsy set and minor set | |
| k) Phlebotomy set and others | |
| l) Examination couches. | |

4.15. Oncology Services

4.15.1. Practices

4.15.1.1. The oncology outpatient services shall include:

- (a) New patient services,
- (b) Follow-up services,
- (c) Radiotherapy planning services,
- (d) Radiotherapy treatment sessions,
- (e) Weekly Radiotherapy treatment checks,
- (f) Chemotherapy sessions,
- (g)
- (h) Oncologic emergency services including emergency procedures,
- (i) Health education on cancer related topics
- (j) Pain clinics if possible,

4.15.1.2. The oncology inpatient services shall include:

- (a) Delivering chemotherapy sessions,
- (b) Nursing care according to individual patient's needs
- (c) Brach therapy (Low dose rate or high dose rate, preferably high dose rate sources)

4.15.1.3. There shall be a multidisciplinary cancer committee, chaired by a physician that is responsible for at least the development of oncology policies and procedures, cancer review, and tumor registry.

4.15.1.4. The multidisciplinary team shall consist of clinical oncologist, surgeon who deals with the respective tumor type, pathologist, radiologist, depending on the type of malignancy, oncology nurse and there shall be meetings on a regular basis.

4.15.1.5. The service shall have protocols and procedures that are reviewed at least once every three years, revised more frequently as needed, and implemented. They shall include at least:

- a) Criteria for admission
- b) Guidelines for mixing chemotherapy, when performed on the unit,
- c) Guidelines for administering chemotherapy
- d) Training of nursing and housekeeping staff in the handling disposal of chemotherapeutic agents;

- e) Use, handling, storage, and disposal of specific chemicals, agents, and body wastes;
- f) Assuring informed consents to chemotherapy; and
- g) Psychological/social and spiritual aspects of patient care.

4.15.1.6. There shall be a formal mechanism for communication between the oncology service and each of the following clinical areas: nursing, dietary, social work, nuclear medicine and pharmacy.

4.15.1.7. All patients with cancer shall be managed by a multidisciplinary process. It includes diagnosis and all aspects of treatment and care, including symptom management and end-of-life care. It considers each individual patient's need and preference for care and treatment. The multidisciplinary process shall include the followings:

- a) There shall be a multidisciplinary management protocols covering systems for referral (including to medical, surgical, oncology and palliative care services), investigation, diagnostics, staging for treatment, treatment, follow-up and end-of-life care for patients with cancer.
- b) All patients shall have access to palliative and supportive care appropriate to their needs
- c) There shall be written local protocols for discharge planning, which includes details for pre-discharge, actual discharge and post-discharge arrangements.
- d) All patients with cancer shall have individualized care plans, developed jointly and agreed between the patient and members of the multidisciplinary care team, documenting clinical and non-clinical issues and the proposed action to address such issues.
- e) A comprehensive, single care plan shall be available to the patient and members of the multidisciplinary care team including health professionals

4.15.1.8. Care, support and services for cancer shall be provided in partnership with patients and care givers. There shall be a clear record of what the patient or care givers has been told about the condition, treatment and care options, outcomes, risks and side-effects.

4.15.1.9. Patients with cancer shall be enabled and supported to make decisions throughout their care experience. All patients with cancer shall have access to a healthcare worker with experience and knowledge of their current care needs and the skills to facilitate informed decision-making.

- 4.15.1.10. Patient and family teaching shall be provided in any case where the patient and family are in need of and able to receive instruction.
- 4.15.1.11. Criteria shall be developed in consultation with the social work department for identifying patients in need of social work services and/or discharge planning and making referrals as needed.
- 4.15.1.12. There shall be a system to refer patients, family, and staff to in-house and community support groups and services.
- 4.15.1.13. There shall be a program of continuous quality improvement for oncology that is integrated into the hospital continuous quality improvement program and includes regularly collecting and analyzing data to help identify health-service problems and their extent, and recommending, implementing, and monitoring corrective actions on the basis of these data.
- 4.15.1.14. There shall be a pain clinic if possible, but there should be the national pain management guidelines and be utilized properly and accordingly.
- 4.15.1.15. Pain shall be considered as a 5th vital sign. The Oncology nurse shall utilize appropriate pain assessment tools and will encourage the patient “self-report” of pain.
- 4.15.1.16. Principles of pain management including non-pharmacological methods of pain management may be taught.
- 4.15.1.17. The oncology nurse shall document pain assessment and interventions.
- 4.15.1.18. The patient will be protected from infection and cross contamination according to infection prevention standards mentioned in this document. Nursing personnel shall institute specific precautions to prevent infection in patients with an absolute neutrophil count (ANC) of less than 1,000
- 4.15.1.19. Medications shall be administered per written policies and procedures.
 - a) Chemotherapy shall be administered as per written procedures.
 - b) The pharmacist and nursing staff shall wear protective gloves and approved chemotherapy gowns when compounding/preparing and administering chemotherapy to patients
 - c) Treatments, medications, and IV’s ordered by the physician shall be instituted
- 4.15.1.20. Patients shall be admitted to patient care areas according to their physical and psychosocial needs, unit admission criteria, and bed availability.

- 4.15.1.21. Nursing personnel shall provide information to patients regarding administered chemotherapeutic agents
- 4.15.1.22. Nursing staff shall seek input from the patient and other health care professionals to plan and implement care. Oncology nursing staff shall utilize the nursing process to provide for the physical, emotional, and spiritual needs of oncology patients and make referrals as appropriate.
- 4.15.1.23. The nurse shall utilize available resources to facilitate an optimal transition between health care settings. The patient or family who is complex, unable to cope, or being discharged which requires coordination by the multidisciplinary team will be followed by Integrated Case Management.
- 4.15.1.24. Patient's comfort level shall be assessed and comfort measures/pain management will be provided to meet patient needs.
- 4.15.1.25. Consent for procedure and patient understanding shall be verified prior to implementation.
- 4.15.1.26. Additional information regarding advance directives shall be provided as requested by patient.
- 4.15.1.27. Patient's spiritual and cultural beliefs shall be considered when planning and implementing care. The nursing staff shall utilize the nursing process to assess the patient and family's ability to cope with his/her diagnosis and treatment of disease. Interventions shall be congruent with the patient/family belief system.
- 4.15.1.28. Available resources shall be utilized to maximize patient's support and care giver as needs are identified. Patients who are assessed by oncology staff as unable to cope shall be referred to the social worker or appropriate support group.
- 4.15.1.29. Chemotherapy
- a) All chemotherapy regimens shall be given according to the treatment guidelines and protocol
- Staff dealing with cytotoxic medicines shall follow the safety guidelines;
 - Goggles, masks, gloves shall be worn when dealing with chemotherapy.
 - Office of Occupational Medicine shall be used to develop procedures for preparing chemotherapy. Example using Fume hood for chemotherapy mixing
- b) Inpatient chemotherapy shall only be given in wards where it is agreed as the whole of, the wards allowed activities.

- c) Out-patient chemotherapy shall only be given in outpatient areas where it is agreed as part of, or the whole of, that areas allowed activity.
- d) While out-patient chemotherapy is being given the area shall only be used for this purpose and other aseptic treatments and procedures on cancer patients.

4.15.1.30. Psychological and psychiatric services shall be available in the premises

4.15.1.31. Chaplin or related religious counseling may be facilitated upon patient request

4.15.2. Premises

4.15.2.1. Minimal requirements for outpatient section

- a) Nurses station
- b) One examination rooms (12 sq.m)with indirect laryngoscope head lights, spirit lamps & screen, a gynecology examination coach in at least one of the rooms
- c) Dedicated Chemotherapy room with reclining chairs four chair ,12 sq.m

4.15.2.2. Minimum requirements for inpatient section

- (a) Nurses office
- (b) Single bed rooms with ensuite bath room with toilets. the single bedrooms shall be available as needed to accommodate patients with Neutrogena, or critically ill patient and the other single bed room will be a septic room for those with offensive smelling wounds, that needs wound care (12 sq.m)
- (c) Room(s) with multiple beds (maximum of 4 beds per room with a minimum of one meter between the beds and wall)
- (d) Duty rooms for nurses
- (e) Separate toilet for patients (male and female)

4.15.3. Professionals

4.15.3.1. The oncology service shall have at least the following licensed professionals

- a) Clinical oncologist 1
- b) General practitioners with on job training in the care of malignancies
- c) Oncology trained nurse (MSC) (optional)

4.15.3.2. Professional nurse with on job training: #4

4.15.4. Products

4.15.4.1. Supplies

- a) Lead Bars (supply)
- b) Goggles for chemotherapy
- c) Orfit Packs 5 per year
- d) Molding foams
- e) Lead Aprons at least 3, for RT planning, and simulation and C-Arm imaging

4.15.4.2. Equipments

- a) Teletherapy machines
 - CO-60 machine
 - Linac Accelerator, optional
 - CT simulator, optional
 - C-Arm machines
- b) Brach therapy machines
 - High dose rate source of CO-60 or low dose rate Cesium source
 - Immobilization devices
 - Breast Board Minimum 2, Plastic head rests A, B, C, D, E, F Total Two Sets, head and neck uniframe immobilizer set
 - Digitizer
 - Molding Machine(cutter)
 - Planning computers with color printers and with backup system
 - Boiler for orfit preparation
 - Lead Melting machine for molding lead
 - Fume hood for chemotherapy mixing
 - Perfuser

4.16. **Physical therapy service**

4.16.1. **Practices:**

- 4.16.1.1. There shall be outpatient and inpatient service for musculoskeletal conditions, neurology conditions, pediatric condition
- 4.16.1.2. There shall be specific treatment and/or procedure protocols for each service available and rendered in the unit,
- 4.16.1.3. There shall be a protocol for patient referral and inter discipline consultation,
- 4.16.1.4. There shall be a policy that the therapist (physical therapist/ physiotherapist) shall document the entire plan in the patient's medical records.
- 4.16.1.5. The physical therapist shall discuss the plan of care with the patient and family,
- 4.16.1.6. The physical therapy service shall be available during working time.
- 4.16.1.7. Visual and Auditory privacy shall be offered and provided to all patients during evaluation and treatment.
- 4.16.1.8. There shall be a protocol that states written orders shall be given to patients when patients are discharged with exercise or treatment to continue at home.
- 4.16.1.9. There shall be patient education on prevention of:
 - a) pressure sores in clients with sensory loss,
 - b) contractures in clients with limb and/or trunk paralysis,
 - c) phantom limb pain for amputees and others

4.16.2. **Professionals:**

- 4.16.2.1. The service shall be directed by a licensed doctor of physiotherapy or physiotherapy specialist or physiotherapy professional.
- 4.16.2.2. The hospital shall have the following:

Required professionals	#Required
Doctor of physiotherapy/physiotherapy specialist /physiotherapy professional	1
Physiotherapy technician	1

4.16.2.3. Trained and certified therapist shall be available and supervise daily sessions of physiotherapy.

4.16.3. Premises

4.16.3.1. There shall be physically separated room or area for physiotherapy service,

4.16.3.2. There shall be at least one room designated for each service unit

Required rooms	#required	Area required
Examination room	1	12 sq.m
Exercise therapy section	1	20sq.m
Treatment room	1	10 sq.m
Toilet		

4.16.3.3. The premises shall be person with disability friendly and smooth pavement rail for wheelchairs.

4.16.3.4. Separate toilet with hand washing facility in an accessible location, handicapped accessible, handicapped adapted and well-ventilated shall be available.

4.16.3.5. Call bells should provided to patients in the physical therapy service who are not under visual supervision.

4.16.4. Product:

4.16.4.1. Equipment shall be clean and functional, stored in a safe and accessible place and shall not be stored in a public walkways and hallways.

4.16.4.2. Equipment which shall be available for rehabilitation services include:

- (a) Physiotherapy treatment bed #2
- (b) exercise mat
- (c) Electrical stimulator
- (d) Therapeutic Ultrasound
- (e) Hot pack/infrared modality
- (f) Bobath balls/ gym ball
- (g) Stationary bicycle
- (h) Trade mall
- (i) Balance boards

- (j) Mirror
- (k) Parallel bar (adjustable)
- (l) Goniometers
- (m) Measuring tape
- (n) Reflex hammer
- (o) Educational toys
- (p) Sticks
- (q) Crutches
- (r) Walking aids/ walking frames, (adjustable)
- (s) Dumbbells set with different weight #3
- (t) Pillows, different size
- (u) Pulley
- (v) Thera band with different strength

4.17. Radiology Services

4.17.1. Practices

4.17.1.1. The radiology service shall have written policies and procedures that are reviewed at least once every three years and implemented. These policies and procedures shall include at least:

- a) Safety practices;
- b) Emergencies;
- c) Adverse reactions;
- d) Management of the critically ill patient;
- e) Infection control, including patients in isolation;
- f) Timeliness of the availability of diagnostic imaging procedures and the results
- g) Quality control program covering the inspection, maintenance, and calibration of all equipment

- 4.17.1.2. Policies and procedures for radiology services shall be available to all staff in the radiology unit.
- 4.17.1.3. There shall be a written protocol for managing medical emergencies in the radiological suite. All radiological staff shall be instructed in this protocol and know their roles in the case of such an emergency.
- 4.17.1.4. Radiologists shall supervise and interpret all radiological procedures, unless performed by clinical practitioners in specialty areas who are trained and experienced in the procedures.
- 4.17.1.5. All radiological examinations shall be interpreted on a preliminary basis within eight hours at all times. Emergency examination shall be given as early as possible.
- 4.17.1.6. Ultrasound service shall be given by a radiologist or any health professional trained and certified on ultrasound
- 4.17.1.7. The radiology service of the hospital shall have the following services at all times
 - a) Digital X-Ray service
 - b) Ultrasound service
 - c) Computer tomography service, CT (optional)
 - d) Magnetic resonance imaging, MRI (optional)
 - e) Certain interventional procedures.(optional)
- 4.17.1.8. The radiology staffs shall make every effort to ensure that patients waiting for radiology services or transport from radiology are comfortable while waiting and that the service responsible for transporting the patient back to the unit is notified when the patient is ready to be returned.
- 4.17.1.9. The radiology service unit shall be free of hazards to patients and personnel.
- 4.17.1.10. Proper safety precautions shall be maintained against fire and explosion hazards, electrical hazards, and radiation hazards.
- 4.17.1.11. The hospital shall get approval from the Ethiopian Radiation Protection Authority through periodic inspection and hazards shall be promptly corrected if identified

- 4.17.1.12. Radiation workers shall be checked periodically for amount of radiation exposure by the use of exposure meters or badge tests and this shall be documented
- 4.17.1.13. With fluoroscopes, attention shall be paid to modern safety design and operating procedures and records all fluoroscopes' output shall be maintained.
- 4.17.1.14. Signed reports shall be filed with the patient's medical record and duplicate copies kept in the service unit.
- 4.17.1.15. Requests by the attending physician for x-ray examination shall contain a concise statement of reason for examination.
- 4.17.1.16. Reports of interpretations shall be written or dictated and signed by the radiologist.
- 4.17.1.17. Reporting form shall have minimum information such as date, patient name, age, gender, findings and name and signature of radiologist
- 4.17.1.18. X-ray reports and roentgenographies shall be preserved or microfilmed.
- 4.17.1.19. X-ray films shall be labeled with minimum information such as date, name, age, gender, right/left mark, name of the institution and name of radiology professional who took the film.
- 4.17.1.20. A radiation safety program including timely reporting of radiation safety findings shall be in place, followed, and documented.
- 4.17.1.21. The professional/practitioner who delivered the radiology service shall be responsible for claims arising from wrong findings
- 4.17.1.22. Radiology services shall be accessible to all requiring medical service units.
- 4.17.1.23.
- 4.17.1.24. Safety provision shall be available based on minimum criteria set by the Ethiopian Radiation Protection Authority and these standard
- 4.17.1.25. Radiological equipment quality assurance/control test shall be available
- 4.17.2. Premises
 - 4.17.2.1. Design requirements for radiology rooms shall be according to Ethiopian Radiation Protection Authority guidelines and this standard.
 - 4.17.2.2. The hospital shall have policies and procedures for the availability of digital image archiving and printing

4.17.2.3. The radiology service shall have the following minimum number and size of rooms

Type of premises	Number required	Size(m ²) Each
Digital X-Ray room	1	As per the Ethiopian Radiation Protection Authority standards
Fluoroscopy room	1	
CT room (optional)**	1	
MRI room (optional)**	1	
Mammography room	1	
Ultrasound room	2	
Patients toilets (female and male)	2	
Patient dressing rooms (female and male)	2	
Waiting room/area	1	
Reporting room	1	
Doctors room (optional)	1	
Duty room	1	
Store room	1	
Conference and data room (optional)	1	

** The number of rooms shall depend on the requirement of the specific equipment.

4.17.3. **Professionals**

4.17.3.1. The radiology service shall be directed by a licensed radiologist or radiology technologist.

4.17.3.2. A radiologist may be available in the hospital during working hours all the time or if on call shall arrive within 30 minutes of being summoned

4.17.3.3. A licensed radiology technologist or radiographer shall be present in the hospital at all times.

4.17.3.4. A licensed professional nurse may be available in the radiology service to administer medications and perform other nursing care.

4.17.3.5. A receptionist, cleaners shall be available in radiology service as full time.

4.17.4. **Products**

- 4.17.4.1. Equipment which shall be available for radiology services includes:
- a) Color duplex ultrasound machines for general purpose
 - b) Dedicated echocardiography ultrasound machine with cardiac probe (optional)
 - c) Simple gray scale ultrasound machine.
 - d) Digital x-ray machine and standard fluoroscopy machine or combined x-ray machine with fluoroscopy
 - e) Mobile x-ray machine
 - f) Standard CT machine (optional)
 - g) Standard MRI machine (optional)
 - h) Mammography machine(optional)
 - i) Resuscitation equipments
 - j) Quality control kits
 - k) Dark room with accessories as appropriate
 - l) A refrigerator
 - m) Procedure sets
 - n) Actinic marker
- 4.17.4.2. All diagnostic equipment shall be regularly inspected, maintained, and calibrated, and appropriate records are maintained.
- 4.17.4.3. Radiology service equipments shall be installed at central areas to all clinical services
- 4.17.4.4. At least the following radiation protection equipments shall be available in radiology services:
- a) lead gloves
 - b) lead aprons
 - c) Gonadal shield
 - d) Other shields eg for pregnant women if highly indicated
 - e) Dosimeter
- 4.17.4.5. Safety procedures during practices and disposal of unfit for use equipments shall be installed as per the requirements set by the Ethiopian Radiation Protection Authority and this standard.

4.18. Medical Laboratory Services

4.18.1. Practices

4.18.1.1. The hospital laboratory service shall be available for 24 hrs and 365 day.

4.18.1.2. The laboratory shall have written policies and procedures and include at least the followings:

- a) For all tests
- b) Times for results (Established turnaround time)
- c) Quality assurance and control processes
- d) Inspection, maintenance, calibration, of all equipment
- e) Management of reagents and consumable
- f) Procedures for collecting, identifying, processing, and disposing of specimens
- g) There shall be documentation of quality and technical record

4.18.1.3. The laboratory shall have policies and procedures for the management of paper based or electronic laboratory information management system (LIMS). The data management system shall include the followings:

- a) Periodic reporting(monthly, quarterly)
- b) Preliminary analysis and utilization of results
- c) Collection of useful and appropriate information
- d) Archiving and retrieval

4.18.1.4. The hospital laboratory shall have standardized data collection instruments and including at least the followings:

- a) Laboratory request forms/electronic request form
- b) Laboratory report forms
- c) Laboratory specimen tracking sheet and results registers
- d) Quarterly/monthly reporting forms including
 - Summary of tests conducted
 - Summary of tests referred
 - Summary of quality audit report

- e) Equipment and supplies inventory registers
 - f) Quality assurance record forms
 - g) Sample referral forms
- 4.18.1.5. The hospital laboratory shall monitor and evaluate the listed activities at least annually ;
- a) adherence to SOPs
 - b) adherence to safety guidelines
 - c) QA activities
 - d) Laboratory performance and workload
 - e) Laboratory services
- 4.18.1.6. The hospital shall get consultation from laboratory service unit on selection, quantification, procurement and storage of medical laboratory equipment and supplies.
- 4.18.1.7. The hospital shall have policies and procedures for the availability of laboratory services including the emergency services for 24 hours a day and seven days a week, including holidays.
- 4.18.1.8. Policies and procedures shall be documented and communicated to all personnel.
- 4.18.1.9. The laboratory shall have a policy for making amendments and corrections to laboratory procedures and all amended laboratory procedures shall be reviewed and approved for use.
- 4.18.1.10. Test procedures developed by the laboratory (in-house procedures) must be validated and fully documented before being put into use. All procedures shall be in a language commonly understood by laboratory staff.
- 4.18.1.11. The laboratory department shall have routine review of quality and technical records.
- 4.18.1.12. Laboratory management shall review all operational procedures at regular intervals.
- 4.18.1.13. The Laboratory staff shall test quality control materials as per manufacturer recommendation and lab policy.
- 4.18.1.14. Requests for testing shall provide:
- a) Name of patient
 - b) The name of the ordering physician or other person authorized to order testing
 - c) Medical record number
 - d) The clinician's working address

- e) Type of primary sample collected
 - f) The anatomic site where appropriate
 - g) The test requested
 - h) Patient gender
 - i) Age
 - j) Request type urgent or stat
 - k) Pertinent clinical information as appropriate for purposes of test interpretation (Clinical Diagnosis)
 - l) Date and time of sample collection and receipt in the laboratory
- 4.18.1.15. There shall be SOP or criteria developed for acceptance or rejection of clinical samples.
- 4.18.1.16. Laboratory shall monitor the transportation of samples to the laboratory such that they are transported, within time frame, within temperature interval specified in the primary sample collection manual or SOP and in a manner that ensures safety for carrier.
- 4.18.1.17. The laboratory shall maintain a record of all samples received based on laboratory policy.
- 4.18.1.18. Laboratory shall have a procedure for storage of clinical samples if it is not immediately examined.
- 4.18.1.19. Patient samples shall be stored only for as long as necessary to conduct the designated tests (or other permitted procedure) according to fixed storage times, and shall be destroyed safely and confidentially after storage.
- 4.18.1.20. Once a sample is used, it shall be maintained in the laboratory for a specified period of time (or as required by regulation) and at a temperature that ensures stability of the sample in the event the sample is needed for retesting.
- 4.18.1.21. The laboratory shall establish an internal quality control system for all tests.
- 4.18.1.22. The laboratory should establish an external quality control system with accredited agencies and should participate nationally or internationally in EQA at least once yearly.
- 4.18.1.23. Laboratory report
- a) All laboratory test result/reports shall have reference (normal) ranges specific for age and gender.
 - b) The test report shall be maintained in the laboratory for one year and the result registration book or soft copy shall be maintained according to national policy.

- c) In the case of laboratory tests performed by an outside laboratory, the original report from such laboratory shall be contained in the medical record.
 - d) Test results shall be reported on standard forms to the physician with the following minimum information:
 - a) Patient identification (patient name, age, gender,)
 - b) Date and time of specimen collection
 - c) The test performed and date of report.
 - d) The reference or normal range
 - e) The laboratory interpretation where appropriate,
 - f) The name and initial of the person who performed the test, and the authorized signature of the person reviewing the report and releasing the results.
 - g) Hospital address
 - e) Laboratory results shall be legible, without transcription mistakes and reported only to persons authorized to receive them such as the ordering physician or nursing staff in a hospital environment
 - f) The laboratory shall have policies and procedures in place to protect the privacy of patients and integrity of patient records whether printed or electronic. Policies shall be established which define who may access patient data and who is authorized to enter and change patient results, correct billing or modify computer programs.
- 4.18.1.24. When reports altered, the record shall show the time, date and name of the person responsible for the change.
- 4.18.1.25. Safe disposal of samples shall be according to national infection prevention guideline.
- 4.18.1.26. No eating, drinking, smoking or other application of cosmetics in laboratory work areas or in any area where workplace materials are handled.
- 4.18.1.27. Wearing of protective clothing of an approved design(splash proof), always fastened, within the laboratory work area and removed before leaving the laboratory work area
- 4.18.1.28. At regular intervals, the laboratory shall review any contracts for services to its clients (including but not limited to clinicians, health care bodies, pharmaceutical companies, other departments such as pharmacy or nursing within the hospital structure) to ensure that the laboratory can meet the contractual requirements such as methodologies, turn-

around times, availability of expert opinion, etc. Records of these reviews shall be kept and maintained by the laboratory, including deviations from contracts.

- 4.18.1.29. The medical laboratory shall have safety guideline. In addition, the laboratory shall protect the environment and public by assuring the health laboratory waste is disposed of legally and an environmentally friendly manner.
- 4.18.1.30. Where services are provided by an outside laboratory, the conditions, procedures, and availability of services offered shall be in writing and available in the hospital.
- 4.18.1.31. The laboratory shall meet regularly with clinical staff regarding services and clinical interpretations.
- 4.18.1.32. The laboratory must keep a record of the complaint. The record shall include the nature of the complaint, the date of occurrence, individuals involved, any investigations undertaken by the laboratory and resolution.

4.18.2. Premises

- 4.18.2.1. The laboratory working environment shall be kept organized and clean, with safe procedures for handling of specimens and waste material to ensure patient and staff protection from unnecessary risks at all time.
- 4.18.2.2. The laboratory shall be located and designed to
 - a) provide suitable, direct access for patients
 - b) allow reception of deliveries of chemicals
 - c) Allow safe disposal of laboratory materials and specimens.
- 4.18.2.3. There shall be effective separation between adjacent laboratory sections in which there are incompatible activities.
- 4.18.2.4. The general hospital laboratory shall have the following premises setup.

Required room	#required	Area required
Recording and reporting room	1	9 sq.m
Specimen collection room with hand washing basin	1	12 sq.m
Medical Microbiology room two sinks (optional)		30 sq.m
• Media preparation room	1	6 sq.m
• sterilization and disinfection	1	6 sq.m

Serology room Clinical Chemistry room, Parasitology and urinalysis room Hematology room	1	30 sq.m
Store-room	1	9 sq.m
Laboratory Head office,	1	9sq.m
Separate Toilets for patients (male and female)		
Separate Toilet for staff (male and female)		
There shall be emergency shower and eye wash station		

4.18.2.5. The laboratory facilities shall meet at least the following:

- a) The laboratory shall have a reliable supply of running water. At least two sinks shall be provided in each room, one for general laboratory use and the other reserved for hand washing and shall have access to hospitals reserve tank whenever there is water interruption
- b) Continuous power supply
- c) Suitable stools for the benches. Bench tops shall be impervious to water and resistant to moderate heat and the organic solvents, acids, alkalis, and chemicals used to decontaminate the work surface and equipment.
- d) Internal surfaces, i.e. of floors, walls, and ceilings shall be :
 - Smooth, impervious, free from cracks, cavities, recesses, projecting ledges and other features that could harbor dust or spillage
 - Easy to clean and decontaminate effectively
 - Constructed of materials that are non-combustible or have high fire-resistance and low flame-spread characteristics
- e) Laboratory furniture is capable of supporting anticipated loading and uses. Spaces between benches, cabinets, and equipment are accessible for cleaning.
- f) Lockable doors and cupboards
- g) Closed drainage from laboratory sinks (to a septic tank or deep pit)

4.18.3. Professionals

4.18.3.1. All laboratory services shall be directed by a licensed medical laboratory technologist or microbiologist.

4.18.3.2. Students and other staff on attachment shall work under the direct supervision of a registered medical laboratory technologist.

- 4.18.3.3. The Laboratory service shall have and maintain job descriptions, including qualifications to perform specific functions.
- 4.18.3.4. The Laboratory management shall provide adequate training, continuing education or access to training for technical staff, and assess staff competency at regular intervals and documented.
- 4.18.3.5. The general hospital laboratory shall have the following minimum staffing requirements.

Required professional	#required per 8 hrs
Medical Laboratory Technologist	7
Microbiologist (optional)	1
Medical Laboratory Technicians	1
Clerk and cleaners	

4.18.4. Products

- 4.18.4.1. When equipment is removed from the direct control of the laboratory or is repaired or serviced, the laboratory shall ensure that it is checked and shown to be functioning satisfactorily before being returned to laboratory use.
- 4.18.4.2. Laboratory shall have a documented and recorded programme of preventive maintenance which at a minimum follows the manufacturer’s recommendation.
- 4.18.4.3. The equipment is found to be defective, it shall be taken out of service and clearly labeled.
- 4.18.4.4. There shall be a written chemical hygiene plan that defines the safety procedures to be followed for all hazardous chemicals used in the laboratory. The plan defines at least the following:
 - a) The storage requirements
 - b) Handling procedures
 - c) Requirements for personal protective equipment
 - d) Procedures following accidental contact or overexposure
 - e) The plan is reviewed annually, and updated if needed, and is part of new employee orientation and the continuing education program.

4.18.4.5. The following minimum equipments and consumables shall be required

Tests	Major Equipment
<p>Clinical chemistry:</p> <ul style="list-style-type: none"> • Blood glucose • Uric acid • Lipid profile <ul style="list-style-type: none"> ○ Cholesterol ○ Triglyceride ○ LDL ○ HDL • Serum electrolytes <ul style="list-style-type: none"> ○ Na⁺,K⁺,Cl⁻ • Liver function tests <ul style="list-style-type: none"> ○ ALP ○ AST ○ ALT ○ G GT ○ Total bilirubine ○ Direct bilirubine ○ Total protein ○ Albumin • Renal function tests <ul style="list-style-type: none"> ○ Urea ○ Creatinine • Cardiac function tests <ul style="list-style-type: none"> ○ LDH ○ CK-MB ○ Troponine ○ CPK • Hormonal tests <ul style="list-style-type: none"> ○ T3 ○ T4 ○ TSH ○ FSH ○ LH 	<ul style="list-style-type: none"> • Autoclave • Clinical chemistry analyzer(Automated) Glucometer • PC and a printer • Power surge protectors • Weighing balance • Micropipettes of different volumes • Timer with alarm • Hormonal assay analyzer
<p>Parasitology:</p> <ul style="list-style-type: none"> • Stool microscopy • Blood film for malaria and other hemoparasite/ Malaria Rapid Test • Occult blood 	<ul style="list-style-type: none"> • Binocular microscope
<p>Urine body fluid analysis:</p>	<ul style="list-style-type: none"> • Binocular microscope

<p>Mycology:</p> <ul style="list-style-type: none"> • KOH test 	<ul style="list-style-type: none"> • Binocular microscope
<p>Hematology:</p> <ul style="list-style-type: none"> • CBC • Peripheral blood film • ESR • Bleeding time • Reticulocyte count • prothrombin time • aPTT • INR 	<ul style="list-style-type: none"> • Haemoglobinometer • Hematology analyzer (Automated) • Blood roller/mixer • Water bath • Coagulometer • Refrigerator • Binocular microscope • Haemocytometer • Microhematocrit centrifuge (optional) • Microhematocrit reader (optional) • Differential counter • Tally counter • Deep freezer • Centrifuge • Vortex mixer • Distillation unit • Shaker
<p>Serology:</p> <ul style="list-style-type: none"> • H.Pylori • Troponin • HBs Ag • HCV • Toxoplasma latex • ASO • RF • RPR • TPHA • CRP • Salmonella Typhi-O • Salmonella Typhi-H • Proteus-OX19 • HIV-test • HCG • Blood Group <ul style="list-style-type: none"> ○ Anti-A ○ Anti-B ○ Anti-D ○ Compatibility testing ○ Cross match 	

<p>Bacteriology: (optional)</p> <ul style="list-style-type: none"> • Gram stain • Ziehl Neelson stain • India Ink • Culture 	<ul style="list-style-type: none"> • Biosafety cabinet • Incubator • Cylinder • Refrigerator
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4.19. Pathology Services

4.19.1. Practices

- 4.19.1.1. There shall be written procedures and protocols for pathology service.
- 4.19.1.2. The pathology service shall be available for at least during working hours
- 4.19.1.3. In the absence of a pathology service in the hospital, there shall be an established procedure for sending all tissues requiring examination to a pathologist outside the hospital.
- 4.19.1.4. All tissues removed during surgery and sent to pathology unit shall be subjected to examination by the pathologist macroscopically, and/or microscopically.
- 4.19.1.5. A list of tissues which routinely require microscopic examination shall be developed in writing by the pathologist or designated physician with the approval of the medical staff
All pathology result reports shall be signed by the pathologist
- 4.19.1.6. All pathological reports shall be signed by pathologist
- 4.19.1.7. Signed reports of tissue examinations shall be sent back to the requesting physician to be filed in the patient's medical record and duplicate copies kept in the pathology service unit.
- 4.19.1.8. A tissue file paraffin blocks and slides shall be maintained in the hospital.
- 4.19.1.9. There shall be quality assurance system for pathological investigations.
- 4.19.1.10. The pathology service shall be provide the following services
- a) Cytophatology
 - b) Histopathology
 - c) Hematopathology
 - d) Autopsy (optional)

4.19.2. Premises

- 4.19.2.1. The hospital shall have an organized separate pathology service area including

Required room	#required	Area required
Specimen reception and recording	1	9 sq.m

room		
Grossing and Sectioning room	1	20 sq.m
Preparation/tissue processing and staining room.	1	20 sq.m
Microscopic room and recording	1	9 sq.m
Cytology room		
• Procedure room	1	8sq.m
• Preparation and staining room	1	6 sq.m
• Microscopic room and recording (can be shared)	1	9 sq.m
Pathologists office	1	8sq.m
Laboratory staff room with lockers	1	9 sq.m
Chemical Reagent Store	1	6 sq.m

4.19.3. Professionals

4.19.3.1. The pathology service shall be directed by a licensed pathologist.

4.19.3.2. The pathology service shall have the following staffing

- (a) Pathologist
- (b) Laboratory technologist or technician with training in tissue processing
- (c) Receptionist

4.19.3.3. The number and type of technical staff shall be determined by the volume and type of work carried out (Workload Analysis).

4.19.4. Products

4.19.4.1. The pathology service shall have the following|:

(a) Gross Room:

- Dissection table with cold and warm water
- Wheeled chair
- Tissue shelf store
- Leak proof garbage container

(b) Tissue Processing Room:

- Embedding system
- laboratory tables

- Tissue processor –vacuum processor and Rotary processor
- Dry air oven
- Refrigerator
- Microtom

(c) Microscopy Reading Room:

- microscope
- 2 metal stools

(d) Chemical Reagent Store:

- Fume extractor
- shelf

4.19.4.2. Cytology Examination room:

- Coach table
- Microscope (shared)
- Office table
- Reading table

- Water bath
- HE staining table
-
- Beakers and containers
- Fume extractor
- Knife sharpener (optional)

- Mobile examination light
- Rotary chair
- Locker

4.19.4.3. Procedure room

- Coach and table
- Sink
- Chair
- Preparation room
- Sink
- table

4.20. Pharmaceutical Services

4.20.1. Practices

Dispensing and Medication Use Counseling

- 4.20.1.1. Standard operating procedure for dispensing and medication use counseling shall be established and posted to ensure patients' safety and correct use of medications.
- 4.20.1.2. Dispensers shall make sure that prescriptions are legible, written by authorized prescriber and complete. Prescription papers shall be standardized and must contain at least the following information and the prescriber and dispenser shall complete all these information:
- a) Name of patient, sex, age, weight and card number
 - b) Diagnosis and allergy
 - c) Name of the medicines, strength, dosage form, dose, frequency, and route of administration
 - d) Duration of treatment
 - e) Prescriber's name, qualification, and signature
 - f) Dispenser's name, qualification and signature
 - g) Hospital name and address
 - h) Serial number
- 4.20.1.3. The pharmacist shall check the correctness of prescriptions in terms of appropriateness for the patient, dosage, and medicine interactions based on approved standard treatment guidelines before use.
- 4.20.1.4. All medicines shall be dispensed with adequate and appropriate information and counseling to patients for correct use of their medications.
- 4.20.1.5. The containers used for dispensing shall be appropriate for the product dispensed and all containers intended for medicine shall be protected and kept free from contamination, moisture and light.
- 4.20.1.6. All medicines to be dispensed shall be labeled and the labels shall be unambiguous, clear, legible and indelible. The following minimum information shall be indicated on the label/sticker:
- a) The generic name of the medicine;
 - b) The name of each active ingredient for compounded preparations;
 - c) The strength, dose, frequency of administration and total quantity;
 - d) The name of the person for whom the medicines are dispensed;
 - e) The directions for use and route of administration tailored to patient or caregiver literacy and language;
 - f) The name and business address of the dispenser;

- g) Date of dispensing;
- h) Expiry date/beyond use date and
- i) Special precautions as applicable

- 4.20.1.7. Filled prescriptions shall be signed and accountability must be accepted by the dispensing pharmacist.
- 4.20.1.8. Each hospital shall establish and implement policies, guidelines and procedures for reporting any errors or any suspicion in administration or provision of prescribed medications.
- 4.20.1.9. The pharmacy shall keep individualized information for patients with chronic illnesses medication program using standardized information tracking formats and update patient medication profile during each refill visit.
- 4.20.1.10. The pharmacist shall assess each patient's ability to understand the information imparted by question and answer and must be able to modify his/her approach accordingly. Care shall be taken with counseling where understanding is likely to be a problem.
- 4.20.1.11. Cautionary instructions and ancillary information about medications shall be communicated in writing to the personnel responsible for administering medications.
- 4.20.1.12. Emergency pharmacy service shall be opened for 24 hours and directed by a licensed pharmacist who is accountable to the emergency unit of the hospital.

Control of Drug Abuse, Toxic or Dangerous Drugs

- 4.20.1.13. The general hospital shall establish Policies and procedures to control the administration of narcotic drugs and psychotropic substances with specific reference to the duration of the order and the dosage in accordance with relevant laws.
- 4.20.1.14. A record of the stock on hand and of the dispensing of all these drugs shall be maintained in such a manner that the disposition of any particular item may be readily traced.
- 4.20.1.15. All controlled substances (narcotic and psychotropic drugs) shall be dispensed to the authorized health professional designated to handle controlled substances by a licensed pharmacist in the hospital. When the controlled substance is dispensed, the following information shall be recorded into the controlled substances (proof-of-use) record.
- a) Name and signature of pharmacist dispensing the controlled substance
 - b) Name and signature of designated licensed person receiving the controlled substance.
 - c) The date and time controlled substance is dispensed.
 - d) The name, the strength, and quantity of controlled substance dispensed.
 - e) The serial number assigned to that particular record, which corresponds to same number recorded in the pharmacy's dispensing record.
- 4.20.1.16. When the controlled substances are not in use, they shall be maintained in a securely locked, substantially constructed cabinet or area. All controlled substance storage cabinets shall be permanently affixed. Controlled substances removed from the controlled substance cabinet shall not be left unattended.
- 4.20.1.17. The administration of all controlled substances to patients shall be carefully recorded into the standard record for controlled substances and returned back to the pharmacist upon refill of controlled substances. The following information shall be recorded during administration to patients.
- a) The patient's name, card number
 - b) The name of the controlled substance and the dosage administered.
 - c) The date and time the controlled substance is administered.
 - d) The signature of the practitioner administering the controlled substance
 - e) The wastage of any controlled substance, if any.

- f) The balance of controlled substances remaining after the administration of any quantity of the controlled substance
 - g) Day-ending or shift-evening verification of count of balances of controlled substances remaining and controlling substances administered shall be accomplished by two (2) designated licensed persons whose signatures shall be affixed to a permanent record.
- 4.20.1.18. All partially used quantities of controlled substances shall be registered in to the control substance record and returned back to the responsible pharmacist for control substances for disposal.
- 4.20.1.19. All unused and unopened quantities of controlled substances which have been removed from the controlled substance cabinet shall be returned to the cabinet by the practitioner at the end of each shift.
- 4.20.1.20. Any return of controlled substances to the pharmacy in the hospital shall be documented by a registered pharmacist responsible for controlled substance handing in the hospital.
- 4.20.1.21. The hospital shall implement procedures whereby, on a periodic basis, a registered pharmacist shall reconcile quantities of controlled substances dispensed in the hospital against the controlled substance record. Any discrepancies shall be reported to the Director of the respective medical services and to the Chief Clinical Officer/Chief Executive Officer of the hospital. Upon completion, all controlled substance records shall be returned to the hospital's pharmacy by the designated responsible person.
- 4.20.1.22. The hospital shall submit regular report to the appropriate organ regarding the consumption and stock of controlled drugs.

Hospital Based Medicine Preparations (optional)

- 4.20.1.23. Written procedures/SOPs for hospital based pharmaceutical preparations shall be established for preventing errors, medicine/medicine interactions and medicine contamination. This SOP shall contain an approved Master Formula for each type of preparation that shows the list of ingredients and their quantities required for the formulation of a specified amount of the preparation
- 4.20.1.24. licensed pharmacists shall be responsible for the preparations of various pharmaceutical formulations such as eye drop preparations, dosage form changes, extemporaneous preparations, IV infusions and IV admixture when deemed necessary by the hospital.

- 4.20.1.25. The hospital shall have a pharmacy-based intravenous infusion admixture program, which includes services related to preparation of total parenteral nutrition, antineoplastic agents, and large and small, continuous or intermittent volume products for infusion. A pharmacist licensed to practice pharmacy shall prepare, sterilize if necessary, and label parenteral medications and solutions.
- 4.20.1.26. Ingredients used in preparations shall have their expected identity, quality, purity and shall be from legally registered sources.
- 4.20.1.27. medicine preparations shall be of acceptable strength, quality, and purity, with appropriate packaging and labeling, and prepared in accordance with good compounding practices, official standards, and relevant scientific data and information. Labels on compounded products for individual patient shall have a minimum of the following information:
- h) Patient's name
 - i) Name of the compounding pharmacist
 - j) Name and address of the compounding institution
 - k) A complete list of ingredients and preparation name
 - l) Strength
 - m) Quantity of each ingredients and total quantity
 - n) Directions for use
 - o) Date of preparation
 - p) Beyond-use date
 - q) Storage condition
 - r) Batch number
- 4.20.1.28. Critical processes shall be validated to ensure that procedures, when used, will consistently result in the expected qualities in the finished preparation.
- 4.20.1.29. Appropriate stability evaluation shall be performed or determined using international standards for establishing reliable beyond-use date to ensure that the finished preparations have their expected potency, purity, quality, and characteristics, at least until the labeled beyond-use date.
- 4.20.1.30. Written procedures and records shall exist for investigating and correcting failures or problems in compounding, testing, or in the preparation itself.

4.20.1.31. Medicine preparations compounded in the hospital shall be packaged in containers meeting standard requirements mentioned under the official national or international standards for such preparations.

Clinical Pharmacy Services

4.20.1.32. The hospital through drug and therapeutic committee shall establish protocol and procedures for the provision of clinical pharmacy services

4.20.1.33. Depending on the number of beds available and convenience for service delivery, the hospital shall have inpatient pharmacy or ward pharmacies each managed by a registered clinical pharmacist or a registered pharmacist trained on clinical pharmacy practice.

4.20.1.34. The responsible pharmacist for clinical pharmacy services shall have access to patient specific medication therapy information

4.20.1.35. Patient-specific medication therapy information must be evaluated and a medicine therapy plan shall be developed by the pharmacist mutually with the patient, the prescriber and nurse.

4.20.1.36. The pharmacist shall review, monitor and propose for modification of the therapeutic plan in case of adverse effects, patient noncompliance, evidence based efficacy problem and as appropriate, in consultation with the patient, prescriber and nurse.

4.20.1.37. Through prescription and medication history monitoring, the pharmacist shall identify problems or opportunities for optimizing treatment and hence safeguard the patient and ensure the optimal use of medicines

4.20.1.38. The processes of prescribing, dispensing and administering medicines are inherently risk-laden and hence the clinical pharmacy services shall take responsibility for ensuring safe, appropriate and effective use of medicines (minimizing risk) at all stages of the patient medication journey.

4.20.1.39. Medication education shall be delivered to patients or their caregivers upon discharge by the clinical pharmacist.

4.20.1.40. The pharmacist shall make sure that the patient has all supplies, information and knowledge necessary to carry out the medicine therapy plan.

4.20.1.41. As a member of the health care team, the pharmacist shall attend and participate at multidisciplinary ward rounds/morning meetings and contribute to patient care through the provision of medicine information, dose calculations and adjustment,

assisting in the rational prescribing decision, alternative regimens and reducing the frequency and duration of medication errors.

- a) The drug and therapeutic committee of the hospital shall develop/adopt and implement antimicrobial prescribing, dispensing and usage policy.

Adverse Drug event, ADE/ Pharmacovigilance

- 4.20.1.42. The general hospital pharmacy shall appoint an ADE (adverse drug event) focal person responsible for the collection, compilation, analysis and communication of adverse drug reaction, medication error and product quality defects related information to the DTC and then to regulatory body.
- 4.20.1.43. Health professionals of the hospital shall be responsible to report suspected ADE cases to the ADE focal person.
- 4.20.1.44. DTC shall discuss and make necessary recommendations to the hospital management for decision on adverse drug event reported within the health facility.
- 4.20.1.45. The general hospital pharmacy shall consistently update the safety profile of medicines included in the formulary list for immediate medicines use decisions and consideration during the revision of the list.
- 4.20.1.46. Adverse medication effects shall be noted in the patient's medication record.
- 4.20.1.47. All the ADE reports, patient identity, reporters and medicine trade names shall be kept confidential.
- 4.20.1.48. The reporting of ADE shall be done by the national ADE prepaid yellow form prepared by regulatory body.

Medicine Supply and Management

- 4.20.1.49. A drug and therapeutics committee (DTC) representing different service units of the hospital shall be in place for selection of pharmaceuticals and other medical items and developing the formulary list as well as policies and guidelines on managing medicines based on the general hospitals medicines list..
- 4.20.1.50. The purchase of pharmaceuticals shall be the responsibility of a pharmacist who is assigned to manage and control the hospital central medical store.
- 4.20.1.51. The general hospital shall have written policies for the procurement of medicines from government and private suppliers shall be available in the pharmacy. These policies

shall be prepared by the DTC and approved by the management/board of the hospital.
The procurement policy must ensure at least:

- a) The right source of medicines
- b) Medicines availability
- c) Safety, quality and efficacy of medicines
- d) Transparency of the procedure and documentation
- e) Minimal decision points
- f) Flexibility to respond for emergency situations
- g) Compatibility with the state and national laws of the country
- h) Effective batch recall of medicines when necessary

- 4.20.1.52. A pharmacist shall not purchase any medicinal product where he/she has any reason to doubt its safety, quality or efficacy.
- 4.20.1.53. The pharmacist shall ensure that both the supplier and the source of any medicine purchased are reputable and licensed by the appropriate organ.
- 4.20.1.54. The hospital central medical store shall be responsible to display or disseminate new arrivals or alternative medicines to each service delivery points.
- 4.20.1.55. The hospital shall introduce and maintain stock control system (manual and/or computerized system) in the central medical store and dispensaries.
- 4.20.1.56. The hospital shall be responsible to make sure that medicines promotion made by suppliers or manufacturers in the hospital premises is made by a registered pharmacist in accordance with the relevant medicine related laws.
- 4.20.1.57. The hospital shall be responsible to make sure that donation of pharmaceuticals has been made in accordance with the country's laws.
- 4.20.1.58. There shall be a pharmacist assigned as medicine Supply Management Officer that is responsible for the procurement, stock management, warehouse management, distribution of medicines and disposal of medicine waste. There shall be also a responsible pharmacy personnel assigned for receiving, storage, issuing, recording, monitoring and reporting
- 4.20.1.59. The storage condition shall provide adequate protection to the medicine from all environmental factors until the medicine is delivered to the patient.
- 4.20.1.60. The responsible pharmacist must ensure that all areas where medicines are stored are of acceptable standards (palletized or shelved, ventilated, easy for movement, rodent free, temperature and moisture controlled and others) for a medicine store.

- 4.20.1.61. The responsible pharmacist shall ensure that all medicine storage areas are inspected regularly to ensure that:
- a) medicines are stored and handled in accordance with the medicines manufacturer's requirements and this standard
 - b) expired or obsolete pharmaceuticals are stocked separately until disposition
 - c) medicines requiring special environmental conditions shall be stored accordingly
 - d) Temperature and humidity are maintained according to manufacturer's requirement
 - e) stock levels are adequate to ensure the continuous supply and acceptability of medicine at all times, including the availability of essential medicine
 - f) inflammable substance are stored separately and in an appropriate manner
 - g) disinfectants and preparations for external use are stored separately from medicines for internal use
- 4.20.1.62. Special storage conditions shall be maintained for pharmaceuticals requiring cold chain system, controlled substances, radiopharmaceuticals and medical gases.
- 4.20.1.63. Firefighting equipment or system shall be installed to medicines storage places
- 4.20.1.64. Distribution of medicines within a hospital shall be under the direction and control of a pharmacist and must be in accordance with the policy developed by DTC. All issuing activities shall be made using official and serially numbered vouchers.
- 4.20.1.65. There shall be written SOPs on how supplies of stock are to be obtained from the medical store. Procedures must define normal action to be taken by pharmacy staff for routine stock replacement and action to be taken in the case of incomplete documentation or other queries.
- 4.20.1.66. Written procedures shall be available for the return of expired, damaged, leftover and empty packs from outlets to medical store to prevent potential misuse.
- 4.20.1.67. The hospital shall maintain stock control system (manual and/or computerized system) in the central medical store and dispensaries.
- 4.20.1.68. The responsible pharmacist shall ensure that adequate control procedures are in place for all stock circulating at all outlets within the hospital.
- 4.20.1.69. Daily medicine consumption at different outlets of the hospital shall be recorded, compiled and analyzed for the appropriate supply and use of medicines.

- 4.20.1.70. The hospital pharmacist who is responsible for the management of medicines should conduct regular medicine use studies to ensure maximum patient benefit.
- 4.20.1.71. The general hospital shall make every attempt to minimize the amount of medicines waste generated in the hospital.
- 4.20.1.72. The DTC should be responsible for developing policies and guidelines on how to organize and conduct medicine use studies.

Medicine/Drug Information Services

- 4.20.1.73. The hospital shall establish a medicine information center which provides medicine information services and shall be directed by a licensed pharmacist trained in the provision of medicine information services.
- 4.20.1.74. The medicine information pharmacist shall be member of the hospital DTC
- 4.20.1.75. The medicine information service shall be part and parcel of the day-to-day activities of a health facility and shall provide objective and unbiased information to health care professionals and the public. It shall receive and respond to medicine information queries as per written SOPs and provide continuing education on medicine-related topics to health professionals.
- 4.20.1.76. Provision of medicine information services to patients and community shall be in accordance with the standard operating procedures that will be developed by the Authority and adopted by the hospital. Procedures shall include:
- h) Details of standards of practice;
 - i) Range of services provided;
 - j) Availability of service;
 - k) Procedures for enquiry receipt and retrieval of data;
 - l) Details of available resources;
 - m) Quality assurance practices;
 - n) Job descriptions for all staff and local practices including site-specific regulations or procedures.
- 4.20.1.77. The medicine information center shall provide reference materials such as medical and medicine related books, journals, medicines profiles, electronic information, CD-ROM, relevant formularies and manufacturers' information and updated list of drugs available in the hospital central medical store to health care professionals
- 4.20.1.78. The service shall be available at least during normal working hours.

Medicine Waste Management and Disposal

- 4.20.1.79. The disposal of medicine wastes shall be in compliance with the medicines waste management and disposal directives issued by regulatory body.
- 4.20.1.80. Hospital pharmacy shall take responsibility, through supportive policies and procedures for the environmental and societal safety by efficiently managing the medicine wastes.
- 4.20.1.81. All personnel involved in medicines waste handling shall be trained and/or well informed about the potential risks of hazardous medicines waste and their management
- 4.20.1.82. All personnel involved in medicine waste handling shall wear protective devices like apron, plastic shoes, gloves, head gears and eye glasses when appropriate.
- 4.20.1.83. General wastes shall be collected daily from the pharmacy and placed in a convenient place outside the pharmacy to facilitate coordinated disposal by the hospital.
- 4.20.1.84. Solid wastes from the pharmacy shall be categorized as “hazardous” and ‘non-hazardous” and shall be collected separately for proper treatment.
- 4.20.1.85. All hazardous chemicals spills shall be immediately reported to head of the pharmacy or responsible person for safety (if available) to minimize the risk and take immediate action.
- 4.20.1.86. Spillages of low toxicity shall be swept into a dust pan and placed into a suitable container for that particular chemical and dispose accordingly.
- 4.20.1.87. medicines in single dose or single use containers which are open or which have broken seals, medicines in containers missing medicine source and exact identification (such as lot number), and outdated medications shall be returned to the pharmacy for disposal.
- 4.20.1.88. The hospital shall form a medicine disposal committee to ensure safety, accountability and transparency.
- 4.20.1.89. Disposal of medicine wastes shall be supported by proper documentation including the price of the products for audit, regulatory or other legal requirements.
- 4.20.1.90. Those items which can't be disposed by the capacity of the hospital shall be managed by one central body (e.g. radiopharmaceuticals).

Recording

- 4.20.1.91. Each hospital shall maintain records to assure that patients receive the medications prescribed by a prescriber and maintain records to protect medications against theft and loss.
- 4.20.1.92. There shall be a standardized Prescription Registration Book for recording prescriptions and dispensed medicine. A computerized dispensing and registration system with backup can be used instead if available.
- 4.20.1.93. Each patient with a chronic disease shall have a separate Patients Medication Profile Card (PMP) that should be filled appropriately with all the relevant information for each patient. A computerized system with backup can be used instead if available.
- 4.20.1.94. Controlled and non-controlled prescriptions shall be documented and kept in a secure place that is accessible only to the authorized personnel for at least five and three years respectively.
- 4.20.1.95. Patient and medication related records and information shall be documented and kept in a secure place that is easily accessible only to the authorized personnel
- 4.20.1.96. Every transaction related with medicines should be recorded on stock control cards and/or computerized stock control system in the medical store and dispensaries.

Billing

- 4.20.1.97. Medicines shall be received and issued using standard receiving and issuing vouchers with serial number registered by the appropriate finance bureau of the government. Issuing and receiving of medicines has to be signed by both the receiver and issuer and approved by an authorized pharmacist. Receiving and issuing vouchers shall have the following minimum information.
- a) Name of medicines received and issued
 - b) Unit of measurement, quantity and source (supplier's or manufacturer's name) of medicines
 - c) Expiry date and batch number
 - d) Unit and total prices
 - e) Date received and issued
 - f) Name and signature of receiver and issuer
 - g) Address of the hospital

- 4.20.1.98. All medicines issued from the dispensary shall be dispensed/sold using standard sales ticket with serial number registered by the appropriate finance bureau. Sales tickets have to be signed and stamped.
- 4.20.1.99. Dispensing pharmacies shall use a standard stamp and seal for approving legal transactions
- 4.20.1.100. Writing one bill for two clients shall be forbidden
- 4.20.1.101. The consumer has the right to know the exact price of a prescription before it is filled
- 4.20.1.102. The hospital shall ensure that each customer has the right to get receipt which has the following minimum information about medicines dispensed.
- a) Name of patient
 - b) Name and dosage form of medicines dispensed
 - c) Unit of measurement and quantity
 - d) Unit and total prices
 - e) Date
 - f) Signature of dispenser and cashier
 - g) Address of the hospital

Organization Management and Quality Improvement

- 4.20.1.103. A multidisciplinary drug and therapeutic committee chaired by the medical director and supported by a registered pharmacist representing the hospital pharmaceutical services as a secretary must be functional for the overall improvement of pharmaceutical services in the hospital
- 4.20.1.104. The pharmaceutical services shall be represented by a licensed senior pharmacist in every management meetings of the hospital.
- 4.20.1.105. Customer satisfaction survey on pharmaceutical services shall be conducted at least once in a year and measures shall be taken in accordance with survey findings.
- 4.20.1.106. There shall be a program of continuous quality improvement for the pharmaceutical service that is integrated into the hospital continuous quality improvement program and includes regularly collecting and analyzing data to help identify pharmaceutical service problems and their extent, and recommending, implementing, and monitoring corrective actions on the basis of these data.

- 4.20.1.107. The pharmaceutical service shall have in effect a patient profile system for monitoring medicine therapy. This system shall be used by the hospital to identify inappropriate prescribing practices and develop interventions.
- 4.20.1.108. The medicines supply and management officer shall inspect all patient care areas in the hospital, where medicines intended for administration to patients are stored, dispensed, or administered at least once every two months. The pharmaceutical service shall maintain a record of the inspections and action taken for identified problems.
- 4.20.1.109. A quality improvement program of the pharmaceutical service shall monitor, at a minimum, the use of medicines, including medication errors and use of antibiotics. Serious or consistent patterns of medication error shall be reported to the drug and therapeutics committee or its equivalent for correction and this must be documented

4.20.2. Premises

- 4.20.2.1. The design and layout of the pharmacy shall permit a logical flow of work, effective communication and supervision and ensure effective cleaning and maintenance and must minimize the risk of errors, cross-contamination and anything else which would have an adverse effect on the quality of medicines and service delivery.
- 4.20.2.2. The area(s) of counseling shall be arranged or constructed in such a manner that it provides adequate space, have professional look and ensure reasonable privacy to the patient at all times and eliminate background noise as much as possible.
- 4.20.2.3. Dispensing counter shall be designed to secure patient privacy and confidentiality
- 4.20.2.4. All parts of the premises shall be maintained in an orderly and tidy condition.
- 4.20.2.5. The external appearance of pharmacies shall be painted white and inspire confidence in the nature of the health care service that is provided and portray a professional image.
- 4.20.2.6. Entrances, dispensing counters and doorways shall be accessible to persons with disability.
- 4.20.2.7. The dispensing environment (dispensing counter and counseling area) shall ensure confidentiality and allow simultaneous service delivery for multiple customers by multiple providers.
- 4.20.2.8. A waiting area(s), which is under cover, shall be situated near the dispensing area, areas for counseling/consultation and the provision of information.

- 4.20.2.9. The pharmacy premises shall be clearly demarcated and identified from the premises of any other business or practice. The location of the pharmacy premises shall take into account patient convenience and ease of loading and unloading of medicines.
- 4.20.2.10. Careful consideration shall be given to the overall security of the pharmacy. It must be lockable and shall prevent any unauthorized entry.
- 4.20.2.11. A security policy shall be implemented which is designed to ensure the safety of both staff and medicines, and shall take account of local crime prevention advice.
- 4.20.2.12. The responsible pharmacist of a pharmacy shall ensure that every key which allows access to a pharmacy is kept only with him/her or the designated personnel.
- 4.20.2.13. A procedure shall be in place to ensure access to pharmacy premises in an emergency situation.
- 4.20.2.14. Compounding premise shall be maintained adequate, clean and ventilated.
- 4.20.2.15. Ceilings and walls of dispensaries and store shall be constructed to protect safety of medicines from burglary, rodents, direct sunlight, moisture and damages.
- 4.20.2.16. Medicines shall be shelved a minimum of 20cm above the floor, 1m wide between shelves and 50cm away from the wall and ceiling.
- 4.20.2.17. Medicines shall be shelved a minimum of 20cm above the floor, 1m wide between shelves and 50cm away from the wall and ceiling. If pallets are used, there shall be 20cm above the floor, one meter between pallets and 50cm away from the wall.
- 4.20.2.18. The pharmacy premises shall have the following minimum space at different service delivery points.

Required room	#required	Area required
Waiting area	1	
Inpatient dispensing room	1	12 sq.m
Outpatient dispensing with counseling room	1	35 sq.m
Cashier area		
Emergency dispensing room	1	12 sq.m
Compounding room, as appropriate	1	6 sq.m
Medicine information center room,	1	6 sq.m
Medicine store	1	50 sq.m

Office	1	9 sq.m
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4.20.3. Professionals

4.20.3.1. The overall hospital pharmaceutical service shall be directed by a licensed pharmacist

4.20.3.2. In addition, the hospital shall have the following licensed pharmacists.

Required professional	#required
Pharmacist	5
Clinical pharmacist	2
Pharmacy technician	3

4.20.3.3. The pharmacist who is working at the inpatient pharmacy shall serve as ADR focal person for the hospital.

4.20.3.4. The hospital shall have written policies and procedures for pharmacy workforce determination for additional pharmacy staff based on the workload analysis to ensure quality service standard.

4.20.3.5. The hospital pharmacy shall have an accountant from finance division, pharmacy clerks, cashiers, cleaners and porters.

4.20.3.6. The responsible pharmacist shall ensure that written job descriptions are prepared for all staff and that all staff are acquainted with their job descriptions and responsibilities.

4.20.3.7. All staff shall receive appropriate training, information and orientation at the time of appointment to any position in the pharmacy

4.20.3.8. The requirements of the national/state medicine related laws with respect to persons handling medicines and related products shall be adhered.

4.20.3.9. Pharmacists responsible for the practical training of pharmacy students shall comply with the necessary duties and responsibilities stated in the country's medicine related laws.

4.20.3.10. The pharmacy personnel shall wear white gown or any color accepted by the hospital with easily readable name tag (badge) that include their name and status, such as junior pharmacist, senior pharmacist, pharmacy technician or any other.

4.20.3.11. A pharmacist shall be on duty or on call at all times outside working hours.

4.20.4. Products

- 4.20.4.1. The hospital may have its own medicine list within the framework of the general hospital's medicine list prepared by the FMHACA.
- 4.20.4.2. There shall be adequate, suitable dispensing equipment in the dispensary. Each item must be clean, in good repair and of suitable material. Equipment shall be specific for each service which may be provided in the pharmacy.
- 4.20.4.3. The hospital's outpatient, inpatient and emergency pharmacies and its central medical store shall have fire extinguisher, refrigerators, deep freezers, security alarms and racks/shelves.
- 4.20.4.4. Equipment used for measuring and weighing shall be designed and maintained in such a way as to be suitable for its intended use; facilitate thorough cleaning when necessary; minimize any contamination of medicines and their containers; and minimize the risk of confusion or the omission of a processing step such as filtration or sterilization.
- 4.20.4.5. There shall be a suitable, clean wash hand basin made of a smooth, washable and impermeable material which is easy to maintain in a hygienic condition and has a source of hot and cold tap water and a closed drainage system.
- 4.20.4.6. The medicine information center shall be equipped with furniture and equipment including a dedicated telephone, computer, internet and lockable filing cabinets, current collection of reference materials such as books, journals, medicine profiles, electronic information, relevant formularies and manufacturers' information.
- 4.20.4.7. Toilet facilities shall be kept clean and in good order. Hand-washing facilities shall be provided in the toilet area together. Facilities must include readily available water, soap and clean towels or other satisfactory means of drying the hands.
- 4.20.4.8. The hospital pharmacy shall be provided with consistent electricity, telephone, internet services (optional) and office facilities such as computers, furniture and other necessary supplies.
- 4.20.4.9. In general, minimum standard for pharmacy equipment and facilities at different service delivery points shall be as follows.
- 4.20.4.10. In general, minimum standard for pharmacy equipment and facilities at different service delivery points shall be as follows.

<i>Equipment and facilities</i>	<i>Pharmaceutical Service Delivery Points</i>				
	<i>Inpatient Pharmacy</i>	<i>Outpatient Pharmacy</i>	<i>Emergency Pharmacy</i>	<i>Medical Store</i>	<i>Compounding Pharmacy</i>

1. Working bench: Level, smooth, impervious, free of cracks and crevices and non-shedding; covered with protector sheets of plastic, rubber or absorbable paper when appropriate					X
2. 5. Mortar and pestle: 250 ml capacity or more; glass type and porcelain type					X
3. 6. Water distiller: Stainless steel of 20 liter capacity or more					X
4. 7. Water bath: Stainless steel of 4 openings or more					X
5. 8. Electrical hotplate: Various Sizes and Features					X
6. 9. Evaporating dish: Stainless steel (glazed inside) and porcelain type; with/without handling					X
7. Spatula: Stainless steel and plastic type, flexible and non-flexible, different blade lengths.					X
8. Gloves: disposable, non-sterile					X
9. Glass rod: Different length and thicknesses					X
10. Wash bottle: 250ml capacity, polyethylene					X
11. Funnel: Glass type and plastic type (polyethylene)					X
12. Beakers: Glass type; different capacity					X

13. Volumetric flask: Glass type; different capacity					X
14. Balances: Prescription, torsion, manual triple beam, electronic; capacities of not less than 300 gm; sensitivity of not less than 0.1 mg.					X
15. Ointment tile: Glass type					X
16. Micropipettes: Glass type; different capacities (less than 1ml); with pipette bulb					X
17. Glass type; different capacities (1ml-100ml); with pipette bulb					X
18. Cylindrical graduate: Glass and plastic type; different capacity					X
19. Conical graduate: Glass and plastic type; different capacity					X
20. Weighing dishes: Plastic, aluminum, stainless steel type					X
21. Weighing paper: Normal paper; grease-proof for semisolids					X
22. Refrigerators and deep freezers with thermometer	X	x	x	x	X
23. Wall thermometers	X	x	x	x	X
24. Ventilator or AC as required	X	x	x	x	X
25. Hygrometer	X	x	x	x	X
26. Tablet counter	X	x	x		
27. Scientific calculator	X	x	x	x	X
28. Table and chair	X	x	x	x	X
29. Scissors	X	x	x	x	X
30. Adult and pediatric weighing	X	x			

balance					
31. Electric light	X	x	x	x	X
32. Tape water access	X	x	x	x	X
33. Toilet and shower					
34. Telephone line	X	x	x	x	
35. Internet facility access (For drug information center)					

4.21. Blood Transfusion Services

4.21.1. Practices

- 4.21.1.1. The hospital shall have blood transfusion services 24 hours a day and 365 days a year
- 4.21.1.2. Transfusion of blood and blood products shall be provided or readily available consistent with the size and scope of operation of the hospital.
- 4.21.1.3. Blood shall be prescribed by a licensed physician.
- 4.21.1.4. There shall be written procedure for blood typing, cross-matching, risk assessment and testing, storage and transportation activities
- 4.21.1.5. There shall be written procedure for laboratory investigation of blood transfusion reactions.
- 4.21.1.6. The hospital shall maintain a minimum stock of blood supply at all times and there shall be a mechanism to access blood supply from nearest blood bank quickly.
- 4.21.1.7. Blood shall be transported in appropriate containers that can maintain the cold chain system from the centre to the hospital.
- 4.21.1.8. Blood storage facility shall be monitored four times a day and documented
- 4.21.1.9. Records shall be kept on file indicating the receipt and disposition of all blood provided to patients in the hospital.
- 4.21.1.10. Samples of each unit of blood used at the hospital shall be retained for further retesting in the event of reactions. Blood which has exceeded its expiration date shall be disposed promptly.
- 4.21.1.11. There shall be a hospital transfusion committee that shall review all transfusions of blood or blood products and make recommendations concerning policies governing such practices.
- 4.21.1.12. The hospital transfusion committee shall receive patient complaints and investigate all transfusion reactions occurring in the hospital and make recommendations to the medical staff regarding improvements in transfusion procedures
- 4.21.1.13. A hospital transfusion committee shall report all transfusion reactions occurring in the hospital at least on quarterly basis to the Chief Clinical Officer/Medical Director
- 4.21.1.14. Written Consent shall be signed before blood transfusion by the recipient or care giver in case the recipient is incompetent and this shall be recorded in the patient medical record.

- 4.21.1.15. Facilities and testing procedures to ensure safety of blood shall be installed in the hospital
- 4.21.1.16. The hospital shall make sure that bloods are properly labeled with all the appropriate identifications, date of collection and expiry date.
- 4.21.1.17. There shall be written procedure for the disposal of unfit-for-use blood as per the waste management section of this standard.
- 4.21.1.18. There shall be a standardized blood request paper prepared and approved by the hospital.

4.21.2. Premises

- 4.21.2.1. The hospital shall have a minimum of at list 9 sq.m room with hand washing basin for blood storage unit that can accommodate the cold chain facilities
- 4.21.2.2. The blood storage unit shall be clearly demarcated and identified from the premises of any other business or practice.
- 4.21.2.3. The hospital blood storage unit shall have record keeping and documentation facility
- 4.21.2.4. The hospital blood storage unit shall have consistent electricity, telephone and water supply

4.21.3. Professionals

- 4.21.3.1. A licensed laboratory technologist shall be responsible for blood typing and cross-matching (pull from the hospital medical laboratory)
- 4.21.3.2. A licensed laboratory technician shall be assigned to manage the blood storage unit and its stock management.

4.21.4. Products

- 4.21.4.1. The hospital blood storage unit shall have at least the following equipment and facilities:

- | | |
|-----------------------------|-----------------------|
| a) One medical refrigerator | g) Cold boxes |
| b) A deep freezer | h) Agitator |
| c) Thermometer | i) Anti A antisera |
| d) Timer | j) Anti B antisera |
| e) Pipette | k) Anti D (RH Typing) |
| f) Reagent | l) Antihuman globulin |
| | m) One heating |

n) One water bath for cross-matching

4.22. Liaison Service

4.22.1. Practice

- 4.22.1.1. The liaison office shall be provided ambulance service to every emergency patient who needs the service without any prerequisite and discrimination
- 4.22.1.2. The ambulance service shall be available 24 hrs a day and 365 days a year
- 4.22.1.3. The ambulance service shall provide the following services to patients with urgent need of medical attention or in a medical emergency
 - (a) Transportation service to the hospital and from the hospital to other health facilities
 - (b) Clinical examinations including brief history, vital signs, very pertinent physical examination and glucose test when needed
 - (c) Clinical life saving support that includes:
 - Fluid resuscitation
 - Bleeding control
 - Air way cleaning , oxygen administration, severe asthma management
 - Attending labor
 - Immobilizing a fracture
 - Providing anti-pain
 - Managing seizure
 - Providing emergency medicines like adrenaline, hydralazine, glucose etc
- 4.22.1.4. The ambulance service shall comply with the patient rights standards stated under this standard.
- 4.22.1.5. Every procedure, medication and clinical condition shall be communicated to the patient or family member or caregivers or next of kin
- 4.22.1.6. Up on arrival to the hospital the ambulance staff shall transfer the patient to the emergency service. The handover of patients shall be accompanied by written a document which at least includes identification, date, time and services provided until arrival to the hospital.
- 4.22.1.7. If death happens on the way to a hospital the dead body shall be taken to the hospital and death shall be confirmed. Dead body care shall be provided as per the standards stated under this standard.

4.22.1.8. Ambulances of the hospital shall serve only for designated emergency medical services

4.22.1.9. After providing a service the vehicle shall be cleaned and made standby.

4.22.1.10. The ambulance kit shall be checked every time after providing a service

4.22.2. **Premise**

4.22.2.1. The parking of the ambulance car shall be within the hospital around emergency service.

4.22.2.2. The hospital ambulance shall have telephone/radio communication means with the emergency service unit.

4.22.2.3. The hospital shall have ambulance service unit under the emergency service of the hospital equipped with a telephone/radio to communicate with the public and the ambulance team

4.22.2.4. The ambulance car shall have adequate space for accommodating the following:

(a) A couch

(b) One family attendant and

(c) At least two nurses

(d) Medical items needed for providing immediate life saving support

4.22.2.5. The vehicle shall be labeled and have a siren

4.22.2.6. The vehicle shall have adequate internal light and ventilation

4.22.2.7. The vehicle shall fulfill requirements of road transport authority

4.22.3. **Professional**

4.22.3.1. Minimum standards for personnel of the ambulance service shall include:

(a) nurses pulled from emergency service unit

(b) Licensed drivers for all shifts

(c) Telephone operator

4.22.3.2. The nurses shall be trained on emergency medical services

4.22.3.3. The driver shall be oriented on emergency situation management

4.22.4. **Products**

4.22.4.1. The ambulance service shall include the following medicines, supplies and medical equipments:

(a) Medicines: Anti pains, adrenaline, hydralazine, IV fluids (all types), dextrose 40%, diazepam inj., phenytoin inj., atropine inj., etc.

(b) Supplies

- IV cannula, IV stand, syringe with needle, tourniquet, plaster, gauze, bandage, spatula, antiseptic solution, catheters
- Personal protective devices (gown, mask, gloves, goggles)
- Waste disposing containers
- Support material for immobilization purpose

(c) Equipment:

- Minor surgical set (forceps, scissors, kidney dish, stitch, sterile gauze, needle holder) in a drum
- Oxygen supply, ambubag, suction machine
- Stethoscope, sphygmomanometer, thermometer
- Portable radio or telephone
- Emergency trachiotomy (wide bore needle insertion), air way, laryngeal mask, intubation set
- Glucometer

(d) Log book (stating time of call, time of arrival, time of return)

(e) Bed (couches) with fixed chair that is designed for ambulances, wheelchair, emergency light

(f) Standby ambulances (depending on the workload):

4.23. Health Care Quality Improvement and Patient safety System

4.23.1. Practices

4.23.2. The Hospital shall have the quality Unit lead by Physician

4.23.3. The Hospital shall establish a structure that the quality unit head reports to the CEO/CED/Provost.

4.23.4. Hospital shall have quality of care annual work plan

- a) The Quality Plan must include, but not be limited to, an ongoing program that shows measurable improvement in indicators for which there is evidence that it will improve health outcomes and identify and reduce medical errors
- b) The Hospital must measure, analyze, and track quality indicators, including adverse patient events, and other aspects of performance that assess processes of care, healthcare service and operations.

4.23.5. The Hospital shall have a Quality and Patient safety Committee with TOR

- 4.23.6. The hospital Quality unit Shall have a documented Patient Safety System and shall address the following:
- a) Medical error or adverse event
 - b) Incidence reporting
- 4.23.7. The CEO/CED/Provost of the Hospital shall lead or Chair the Hospital Quality and patient safety Committee and the Quality Unit head shall work as a secretary
- 4.23.8. The Hospital Quality and safety committees shall meets on monthly and monitor the quality planning, quality assurance and quality improvement on the processes of care, healthcare service and operations of the institution.
- 4.23.9. The Hospital quality unit Shall have Quality Improvement Team in each department or service area lead by the quality focal person of the respective department
- 4.23.10. The Hospital quality unit shall collect and use the data to monitor the quality of care and safety of services; and identify opportunities for improvement and changes that will lead to improvement
- a) The Hospital quality Unit Shall conduct Health Service standard audits on quarterly bases using standard audit tools (HSTQ)
 - b) The Hospital quality unit shall conduct experience of care/Patient satisfaction survey on quarterly bases
 - c) The Hospital quality unit shall take actions aimed at Quality improvement and, after implementing those actions; then must measure its success, and track performance to ensure that improvements are sustained.
 - d) The hospital quality unit must document what quality improvement projects are being conducted, the reasons for conducting these projects, and the measurable progress achieved on these projects. These achievements shall be shared to hospital staffs for learning.
 - e) The hospital Quality unit must Ensure the Hospital standards are maintained
- 4.23.11. The hospital shall set priorities for its performance improvement activities that:
- a) Focus on high-risk, high-volume, or problem-prone areas;
 - c) Affect health outcomes, patient safety, and quality of care
- 4.23.12. The Hospital top management shall identify key Quality measures in the Hospitals structures, processes, and outcomes to be used in the institution wide quality improvement and patient safety plan;

4.23.13. The Hospital Quality unit shall display Selected quality Indicators dashboard and updated on monthly and Quarterly/

4.23.14. The Hospital must maintain and demonstrate evidence of its Quality Management System.

4.24. **Premises**

4.24.1. There shall be a separate one room /office for the quality unit.

4.25. **Professionals**

4.25.1. There shall be a full-time Physician or MPH with clinical background as the Quality Head with basic QI training and computer skill.

4.25.2. The division shall have one Monitoring and Evaluation Officer(MD with MPH or BSC and MPH)

4.25.3. The Division shall have at least 3 full time staffs of different discipline (Physician, Health officer, Nurse, Pharmacy, Laboratory, MPH) which includes the head.

4.25.4. The actual number of staff shall be determined based upon the total number of active (Workload analysis)

4.25.5. The hospital shall provide basic training on DHIS 2 data base use and analysis and QI for the staffs working in the unit.

4.26. **Products**

4.26.1. The Quality Improvement Division :

- (a) Shelves
- (b) Computers
- (c) Table and Chairs
- (d) Display board
- (e) Log book for

5. OTHER HOSPITAL SERVICES

5.1. Infection Prevention

5.1.1. Practices

- 5.1.1.1. All activities performed for infection prevention shall comply with the national infection prevention guidelines.
- 5.1.1.2. Infection prevention and control shall be effectively and efficiently governed and managed.
- 5.1.1.3. The hospital shall identify the procedures and processes associated with the risk of infection and shall implement strategies to reduce infection risk.
- 5.1.1.4. Infection risk-reduction activities shall include:
 - a) equipment cleaning and sterilization, in particular, invasive equipment;
 - b) laundry and linen management;
 - c) disposal of infectious waste and body fluids;
 - d) the handling and disposal of blood and blood components;
 - e) kitchen sanitation and food preparation and handling;
 - f) Operation of the mortuary and postmortem area;
 - g) Disposal of sharps and needles;
 - h) Separation of patients with communicable diseases from patients and staff who are at greater risk due to immunosuppression or other reasons;
 - i) management of hemorrhagic (bleeding) patients; and
 - j) Engineering controls, such as positive ventilation systems, biological hoods in laboratories, and thermostats on water heaters.
- 5.1.1.5. The following policies and procedures shall be maintained
 - a) Hand hygiene
 - Standard precautions for hand hygiene
 - Personal protective measures
 - Monitoring and surveillance of hand hygiene practices
 - b) Transmission-based precautions

- Contact precautions
 - Droplet precautions
 - Airborne precautions
- c) Post-Exposure Prophylaxis programs (PEP) for some communicable diseases like rabies, HIV, meningitis, hepatitis
- Standard precautions to follow
 - PEP policy
 - Procedures for PEP
- d) Environmental infection prevention
- General hospital hygiene
 - Structural infection prevention
 - Physical hospital organization
- e) Waste management
- Cleaning medical instruments
 - Implementation of a disposal system
 - Handling medical waste
 - Waste removal

5.1.1.6. Standard precautions shall be practiced and the hospital shall have its own guidelines including the following:

- a) Hand hygiene shall be performed after touching blood, body fluids, secretions, excretions, and contaminated items, both immediately after removing gloves and between patient contacts.
- Consider every patient infectious:
 - Thorough hand washing:
 - Use high-level disinfectants:
 - Standard procedure for using a high-level anti-septic cleaner:
- b) Personal protective equipment shall include gloves, mask, eye protection (goggles) and face shield
- c) Gloves shall be worn in the following situations but not limited to:
- When there is direct contact with exposed wounds, blood, body fluids, body organs or any type of lesion.

- When drawing blood or handling medical instruments involved with invasive procedures (catheters, IV insertion, probes, etc.).
 - When there is contact with a patient who might be infectious.
 - When handling contaminated items.
 - When cleaning patient areas.
- d) Gowns shall be worn when but not limited to:
- Performing surgical procedures,
 - Splattering of blood or body fluids is possible,
 - Handling bulk soiled linen (housekeeping),
 - Performing waste collection for infectious waste,
 - Handling any type of medical waste, and
 - Conducting hospital laundry washing.
- e) Masks, goggles, or other types of face shields shall be worn when but not limited to:
- Splattering of blood or body fluids to the face is possible,
 - Handling biohazardous, soiled linens, and
 - Performing waste collection for hazardous or non-hazardous waste.
- f) Soiled patient-care equipment, textiles, and laundry shall be handled appropriately
- g) Any type of face shield that is apparently soiled or splattered with body fluids shall be washed and sterilized with a disinfectant.
- h) Procedures shall be developed and implemented for routine care, cleaning, and disinfecting environmental surfaces, especially frequently touched surfaces in patient care areas.
- i) Used needles shall not be recapped, bent, broken, or manipulated by hand. Handed scoop technique only shall be used when recapping is required.
- j) Safety features shall be used when available and used "sharps" shall be placed in a puncture-resistant container specially designated bin for hazardous waste.

5.1.1.7. There shall be transmission-based precautions and the hospital shall have its own guideline for the followings:

- a) Contact precautions as described in article 7.1.1.6.
- b) Droplet precautions
- c) Airborne precautions(for diseases like SARS ,TB, Swine flu, etc)
 - Isolation room

- Negative pressure in relation to surrounding areas
- A minimum of 6-9 air exchanges per hour
- Air discharged outside the building and away from intake ducts, or through a high-efficiency filter if re-circulated
- Door kept closed whether or not patient is in the room
- After discharge door kept closed until sufficient time has elapsed to allow removal of airborne organisms
- Patient confined to room
- Room shall have toilet, hand washing and bathing facilities

5.1.1.8. The hospital shall train all staff on how to minimize exposure to blood-borne infections.

These includes:

- a) Immediate first aid
- b) Reporting exposures
- c) Counseling and testing for exposed staff
- d) Reporting and monitoring protocols
- e) Evaluate PEP program.

5.1.1.9. The hospital shall have procedures in place to minimize crowding and manage the flow of patient's & visitors. This shall include:

- a) Patient crowd control
- b) Assess urgent and non-urgent cases
- c) Patient sign-in
- d) Caregiver and visitor control.

5.1.1.10. The hospital shall provide regular training on infection prevention and control practice to staff, patients, and as appropriate, to family, visitors and caregivers including the followings.

- a) Prevention of the spread of infections,
- b) Improving the quality of patient care,
- c) Promoting safe environment for both patients and staff

5.1.2. **Premises**

5.1.2.1. There shall be the following facilities:

- (a) Working Office for IP officer

(b) Meeting rooms for IP-committee

5.1.2.2. The hospital shall have a designated sterilization room

5.1.3. **Professionals**

5.1.3.1. The hospital shall have an IP committee coordinated by a full-time infection prevention and control officer.

5.1.3.2. The officer shall be a licensed infectious diseases specialist or IP trained health professional (physician or health officer or BSc nurse), or a public health specialist knowledgeable of infection prevention principles and hospital epidemiology.

5.1.3.3. IP committee shall be trained on infection prevention as well as hospital epidemiology

5.1.3.4. The IP committee shall be composed of professionals at least from the following service units

- a) Nursing care
- b) Medical services
- c) Environmental health
- d) Housekeeping
- e) Administration
- f) Pharmacy
- g) Laboratory
- h) Laundry
- i) Kitchen
- j) Instrument sterilization and supply
- k) Occupational health and safety
- l) Quality management

5.1.3.5. The infection prevention committee or designate shall have written protocols, procedures and shall oversee the following activities and this shall be documented:

- a) Developing the health facility annual infection prevention and control plan with costing, budgeting and financing
- b) Monitoring and evaluating the performance of the infection prevention program by assessing implementation progress as well as adherence to IPC practice
- c) Conducting surveillance to monitor nosocomial infections, antimicrobial resistance, antimicrobial use, and outbreaks of infectious diseases.

- d) Formulating a system for surveillance, prevention, and control of nosocomial infections.
- e) Reviewing surveillance data, reporting findings to management and other staff and identifying areas for intervention
- f) Assessing and promoting improved practice at all levels of the hospital
- g) Developing an IEC strategy for health-care workers
- h) Ensuring the continuous availability of supplies and equipment for patient care management
- i) Monitoring, providing data and measuring the overall impact of interventions on reducing infection risk
- j) The hospital's overall quality improvement program and shall receive formal advice from all other services upon its request.

5.1.4. **Products**

5.1.4.1. The hospital shall insure that equipment & supplies necessary for infection prevention are available

5.1.4.2. The hospital shall have the following adequate supplies and equipment needed for infection prevention and control practice.

a) Waste management equipment and supplies:

- | | |
|----------------|-----------------------------------|
| • Incinerator | • Garbage bins |
| • Placenta pit | • Large garbage bin |
| • Wheelbarrows | • Plastic garbage bags (optional) |
| • Ash pit | • Safety boxes |
| • Burial pit | |

b) Cleaning

- | | |
|------------|------------------|
| • Mop | • Cleaning cloth |
| • Bucket | • Detergent |
| • Broom | • Bleach |
| • Dust mop | |

c) Laundry

- Washing machine
- Sink

- Washing basin (for decontamination of linens)
 - Drying rack/line
 - Dryers
 - Irons
- d) Instrument processing
- Autoclaves and steam sterilizers,
 - Test strips
 - Chemicals
 - Commercial steamer
 - Boiler
 - Oven
- e) Hand hygiene
- Sinks (ward and other areas)
 - Water container with faucet
- f) Personal Protective Equipment
- Heavy duty glove
 - Surgical glove
 - Examination glove
 - (latex or nitrile)
 - Other types (ex. those worn by cleaning and laundry staff)
 - Eye shield
 - Goggle
 - Visors
 - Dust mask
- Wheelbarrows (to transport linens to/from wards)
 - Detergent
 - Bleach
- 0.5% chlorine solution (diluted bleach)
 - Storage shelves for the medical equipment
 - Disinfectant chemicals
 - Brushes (tooth brush for small items)
- Soap
 - Alcohol based hand rub
 - Personal Towels
 - Paper Towels
- Surgical/Disposable
 - Respiratory mask
 - Other type of face mask
 - Plastic apron
 - Other types
 - Boots
 - Nurse shoes
 - Other protective shoes
 - Caps
 - Face shield

5.2. **Medical Recording**

5.2.1. **Practices**

- 5.2.1.1. Medical record shall be maintained in written form for every patient seen at all points of care.
- 5.2.1.2. The hospital shall maintain individual medical records in a manner to ensure accuracy. A patient shall have only one medical record in the hospital.
- 5.2.1.3. The hospital shall establish a master patient index with a unique number for each patient
- 5.2.1.4. Each piece of paper that contains a medical record shall have the appropriate identification on the paper
- 5.2.1.5. The hospital shall have a written policy and procedure that are reviewed at least once every three years which include at least:
 - (a) Procedures for record completion
 - (b) Conditions, procedures, and fees for releasing medical information
 - (c) Procedures for the protection of medical record information against the loss, tampering, alteration, destruction, or unauthorized use.
- 5.2.1.6. Any medical record shall be kept confidential, available only for use by authorized persons or as otherwise permitted by law.
- 5.2.1.7. All entries in the patient's medical record shall be written legibly in permanent ink, dated, and signed by the custodian/recording person.
- 5.2.1.8. The medical record forms shall be prepared in line with the national/state guideline and approved by the hospital management.
- 5.2.1.9. Each medical record shall at least contain the following information:
 - (a) Identification (name, age, sex, address)
 - (b) History, physical examination, investigation results and diagnosis, nursing care plan
 - (c) Medication, procedure and consultation notes
 - (d) Name and signature of treating physician
 - (e) Consent form where applicable which shall be signed by the patient. In case where someone other than the patient signs the forms, the reason for the patient's not signing it shall be indicated on the face of the form, along with the relationship of the signer to the patient.

- 5.2.1.10. Any consent form for medical treatment that the patient signs shall be printed in an understandable format and the text written in clear, legible, non technical language.
- 5.2.1.11. There shall be a mechanism for medical record controlling and tracing, whenever patients medical records are taken from and returned to the central medical record room.
- 5.2.1.12. The patient's death shall be documented in the patient's medical record upon death.
- 5.2.1.13. Original medical records shall not leave hospital premises unless they are under court order or in order to safeguard the record in case of a physical plant emergency or natural disaster.
- 5.2.1.14. If a patient or the patient's legally authorized representative requests, in writing, a copy of the medical record shall be given.
- 5.2.1.15. If the patient is provided with medical certificates, copies of certificates and other records shall be documented and/or recorded on the original medical record
- 5.2.1.16. If the patient is transferred to another hospital on a non emergency basis, the hospital shall maintain a transfer record reflecting the patient's immediate needs and send a copy of this record to the receiving hospital at the time of transfer.
- 5.2.1.17. If the hospital ceases to operate, the regulatory body shall be notified in writing about how and where medical record will be stored at least 15 days prior to cessation of operation. The patient choice on where to transfer his/her medical record shall be respected. Patient will get information from the regulatory body regarding the location of their medical records.
- 5.2.1.18. The hospital shall establish a procedure for removal of inactive medical records from the central medical record room.
- 5.2.1.19. Medical records shall be destroyed as per the law by using techniques that are effective enough to assure confidentiality of medical records. However, records which are active for more than ten years shall not be destroyed.

5.2.2. **Premises**

- 5.2.2.1. There shall be a separate medical record room
- 5.2.2.2. The premises shall have one meter wide space in between and around shelves. The medical records shall be shelved 20-30cm above from the floor.
- 5.2.2.3. The medical record room shall have adequate space to accommodate the following:
 - (a) Central filing space
 - (b) Work space
 - (c) Archive space

(d) Supply/Storage room

- 5.2.2.4. The medical record room shall have adequate light and ventilation
- 5.2.2.5. The medical record room shall be built far from fire sources
- 5.2.2.6. There shall be a room for archiving dead files until they are permanently destroyed

5.2.3. **Professionals**

- 5.2.3.1. There shall be a full-time custodian/medical record personnel (Health Information Technician) with basic computer skill and ability to organize medical records responsible for medical records management
- 5.2.3.2. Other additional staffs (like card sorter and runner) to perform patient registration, retrieving, filing and recording chart location.
- 5.2.3.3. The actual number of staff shall be determined based upon the total number of active charts in a day (Workload analysis)
- 5.2.3.4. The hospital shall provide basic training on medical record keeping to the staffs

5.2.4. **Products**

- 5.2.4.1. The Medical record room shall have:

- | | |
|--------------------------------|-----------------------|
| (f) Shelves | (k) printer |
| (g) Master patient index boxes | (l) Ladder |
| (h) Computer | (m) Patient folder |
| (i) Cart | (n) MPI Cards |
| (j) Tracer card | (o) Log book |
| | (p) Fire extinguisher |

5.3. Food and Dietary Services

5.3.1. Practices

5.3.1.1. The hospital shall provide nutritionally adequate meals, food supplemental supplies for inpatients and staffs on duty

5.3.1.2. The dietary service shall be available for 24 hours a day and 365 days a year

5.3.1.3. The dietary service shall have written policies and procedures for all dietary services including

- a) Preparation and handling
- b) Meal distribution and/or request and receive special event service for inpatients.
- c) Special diet order
- d) Holidays
- e) A diet manual detailing nutritional and therapeutic standards for meals and snacks, and a nutrient analysis of menus.
- f) Nutritional assessment guide for patients' nutritional needs for food and food supplements.

5.3.1.4. There shall be a policy to promote the participation of the dietary service in meetings of multidisciplinary health care teams to assess patients.

5.3.1.5. All new admissions shall be listed with the dietary service.

5.3.1.6. Each patient's diet shall be recorded in the medical record. records of diet instructions shall include:

- a) The diet instruction provided to the patient and/or responsible person.
- b) Patient response, participation and understanding.
- c) Written instructional material provided to the patient and/or responsible person.

5.3.1.7. A physician shall write a specific dietary order and /or nutritional supplements for each patient.

5.3.1.8. All diets shall be prepared in conformity with the hospital's dietary manual.

5.3.1.9. At least three meals (breakfast, lunch and dinner) shall be served daily, and no more than 15 hours shall elapse between dinner and breakfast.

5.3.1.10. Nourishment may be provided between meals and at night.

5.3.1.11. Changes in physician orders for diets shall be effected by the next mealtime.

- 5.3.1.12. The dietary service shall follow the policies and procedures developed by the drug and therapeutics committee regarding possible food/medicine interactions.
- 5.3.1.13. There shall be a mechanism for evaluating patients on each nursing unit to ensure they are being adequately nourished.
- 5.3.1.14. There shall be a mechanism for the dietary service to be informed if the patient does not receive the diet that has been ordered, or is unable to consume the diet.
- 5.3.1.15. There shall be a mechanism for patients and their families to interact with the dietary service.
- 5.3.1.16. Patients with special dietary needs, based on criteria established by the hospital, shall receive dietary instruction from a physician during hospitalization.
- 5.3.1.17. The dietitian shall provide diet information to the Canteen staff to help the nursing / rehabilitation staff guide appropriate purchase selections of food items.
- 5.3.1.18. The dietitian shall provide nutrition information as requested by the patient, family, or treatment team including
 - a) diet instructions,
 - b) written instructional material,
 - c) community dietary referrals regarding special diets
 - d) current diet order,
 - e) nutritional problems,
 - f) appetite,
 - g) nutritional counseling,
 - h) comprehension of diet instruction,
- 5.3.1.19. The dietitian shall provide timely discharge diet instructions upon notification with a physician-ordered diet consultation or as planned by the treatment team.
- 5.3.1.20. Inpatient's or discharged patient's diet instructions shall include education involving:
 - a) therapeutic or modified diets
 - b) food- medicines interactions
 - c) nutritional care for certain diagnoses/conditions
 - d) recommendations for changes in diet order,
 - e) treatment plan,
 - f) significant food allergy (lactose, wheat gluten, soya ,egg, dairy)
- 5.3.1.21. Nutrition consultations

- a) The dietitian shall provide nutrition consultations upon notification with a physician-ordered consultation. The order shall include a brief reason for the consultation.
- b) Nutrition consultations shall be completed immediately after physician's order.
- c) Nutrition consultations shall be individual or group, and may include family and/or responsible person.
- d) The dietitian shall determine the type and frequency of follow-up care after the initial consultation. Follow-up consultation may include evaluation of nutritional care, diet education, or other nutritional concerns.

5.3.1.22. Treatment Planning

- a) Therapeutic goals related to nutritional needs shall be based on the following standards
 - Standard Height/Weight
 - Dietary Reference Intakes
 - Nutrition-related laboratory values
 - Body Mass Index for Adults

5.3.1.23. Diet Orders and Nutritional Supplements

- a) Physician diet orders shall be legible, concise, and written in an understandable manner. The following information shall be included in diet orders:
 - Patient Name
 - Unit
 - Date
 - Specific diet order; including food allergies/intolerances
 - Physician's signature
- b) Dietary services shall receive written notification of:
 - New diet orders
 - Change in diet order
 - Discontinued or canceled diet orders
 - Unit transfers
 - Isolation or special trays
- c) All written diet orders shall be sent to dietary services immediately.

- d) Special requests for meals or supplemental foods shall be provided as ordered to accommodate alterations in diets or meal service schedules due to new admissions, personal dietary needs, or other circumstances.
 - e) Diabetic and Calorie-Controlled diet orders shall include the calorie level desired.
 - f) The dietitian shall recommend appropriate nutritional food supplements according to physician orders.
 - g) An electronic or manual spreadsheet of all diet orders shall be maintained by the dietitian to provide a current resource of all regular and therapeutic diets.
 - h) Dietary and nursing services shall be responsible to ensure dietary compliance and quality nutritional care of patients.
- 5.3.1.24. There shall be appropriate food safety and sanitations to ensure safe food service for the patients
- 5.3.1.25. Dry or staple food items shall be stored at least 12 inches off the floor in a ventilated room which is not subject to sewage or waste water back-flow, or contamination by condensation, leakage, rodents or vermin.
- 5.3.1.26. All perishable foods shall be refrigerated at the appropriate temperature and in an orderly food safety manner (cold and hot holding principle).
- 5.3.1.27. Each refrigerator shall contain a thermometer in good working order.
- 5.3.1.28. Foods being displayed or transported shall be protected from contamination.
- 5.3.1.29. Three compartments dish washing procedures and techniques shall be developed and carried out in compliance with the national hotel and restaurants sanitary control guideline.
- 5.3.1.30. All garbage and kitchen refuse which is not disposed of shall be kept in leak proof non-absorbent containers with close fitting covers and be disposed of routinely in a manner that will not permit transmission of disease, a nuisance, or a breeding place for flies.
- 5.3.1.31. All garbage containers shall be thoroughly cleaned inside and outside each time emptied.
- 5.3.1.32. Requests for alternative food supplies shall be considered on an individual basis.
- 5.3.1.33. Foods shall be transported and served as close to preparation/ Re-thermalization time as possible. Maximum cold food temperatures shall be 5°C and minimum hot food temperatures shall be 60° C at time of service.

- 5.3.1.34. Dietary Services shall ensure prescribed diet compliance as well as minimize food-borne illness.
- 5.3.1.35. Cancellations of ordered diets shall be made as soon as possible to avoid possible spoilage and/or waste of food items.
- 5.3.1.36. Hospitals may provide dietary services by one of the followings:
- a) In traditional configuration where the kitchen is located in the hospital premise;
 - b) Provide the service directly, but may prepare the bulk of the meals in a kitchen owned by the hospital, located off-site; and
 - c) Contract out for dietary services through an off-site vendor and the contract shall be documented. However, regardless of how the hospital provides the service, the hospital shall ultimately be responsible for meeting the dietary service standards.
- 5.3.1.37. When dietary services are provided from an off-site location, the hospital shall be responsible to ensure:
- a) Compliance with the quality assurance system,
 - b) Compliance with the infection prevention standards
 - c) Compliance with the dietetic policies and procedures in regards to meal service for off hours' admissions, late trays, food substitutions, reasonable meal schedules, posting of current menus in the hospital as well as in the off-site kitchen, tray accuracy, food handling safety practices, emergency food supplies and deliveries, staffing and patient satisfaction,
 - d) The presence of a current therapeutic diet manual approved by the dietitian and medical staff,
 - e) The presence of nutritional assessment indicating nutritional needs are in accordance with recognized dietary practices as well as with orders of the practitioners responsible for the care of the patients.
- 5.3.1.38. Catering hygiene shall fulfill the following conditions
- a) There shall be guidelines for pest control and restricting the presence of animals (eg. cats, dogs etc) visibly posted in the kitchen.
 - b) There shall be a system to screen and control the health of kitchen personnel.
 - c) The responsible kitchen personnel health shall be controlled for:
 - Personal hygiene including uniform (protective clothes)

- Periodical medical check-up for acute and chronic diarrhea and other infectious diseases
- Those with infected open skin lesions are not allowed to work as kitchen personnel.

5.3.2. Premises

5.3.2.1. The following minimum facilities shall be available for dietary services

- a) Food preparation room
 - All cooking appliances shall have ventilating hood
 - Dish washing sink with three compartment
 - Pot washing sink
 - Cart cleaning sink
 - Can wash sink
- b) Storage room
- c) Cart storage.
- d) Dietitian's office.
- e) Janitor's closet
- f) Personnel toilets with hand washing facilities
- g) Approved automatic fire extinguisher system in range hood.
- h) Continuous electricity (power) supply
- i) safe and adequate water supply

5.3.3. Professionals

5.3.3.1. The hospital shall have an organized dietary service unit directed by licensed dietitian or catering chef or food science personnel.

5.3.3.2. In addition, the hospital shall have the following food personnels:

- (a) Meal distributor
- (b) Chef cooker
- (c) Kitchen workers
- (d) Store keeper
- (e) Bakers
- (f) Dishwashers

5.3.3.3. The adequate number of personnel, such as cooks, bakers, dishwashers and clerks shall be available in the hospital (based on workload analysis).

5.3.3.4. There shall be procedures to control dietary employees with infectious and open lesion.

5.3.3.5. Food handlers shall meet routine health examinations according to the Ethiopian Food Handlers' Hygiene Guideline for food service personnel.

5.3.3.6. There shall be an in-service training program on proper handling of food and personal grooming to dietary employees.

5.3.3.7. All kitchen workers shall wear protective kitchen clothes according to the Ethiopian Food Handlers' Hygiene Guideline.

5.3.3.8. Written job descriptions for all dietary employees shall be given, oriented and documented.

5.3.4. **Products**

5.3.4.1. The following products shall be available for dietary services:

- | | |
|------------------------|---|
| a) Refrigerator | j) Pressure cooker |
| b) Kitchen utensils | k) Stoves |
| c) Pots | l) Working clothes (like apron, boots, hair cover, gown, hand gloves) |
| d) Jars | m) Barrel (garbage containers) for kitchen rest handling |
| e) Carts | n) Lockers convenient to, but not in the kitchen proper |
| f) Dishes | |
| g) Oven | |
| h) Knives | |
| i) Detergent materials | |

5.4. Sanitation and Waste Management

5.4.1. Practices

- 5.4.1.1. The hospital environment shall be sanitary, clean and safe environment and there shall be access to continuous, safe and ample water supply.
- 5.4.1.2. There shall be written procedures for the use of aseptic techniques and procedures in all areas of the hospital and the procedures and techniques shall be regularly reviewed and documented by the infection prevention committee as per the infection prevention section of these standard.
- 5.4.1.3. There shall be a written policy and procedures for ground water treatment.
- 5.4.1.4. Infectious medical wastes shall be handled and managed according to the recent Health Care Waste Management National Guideline.
- 5.4.1.5. Infectious and non infectious medical waste containers shall be leak proof, have tight-fitting covers and be kept clean and in good repair until disposal.
- 5.4.1.6. Infectious and non infectious medical waste management and disposal shall be done as per recent Health Care Facility Waste Management National Guideline and this standard.
- 5.4.1.7. Placenta disposal pit shall be available in the hospital and shall be secured
- 5.4.1.8. Wastes shall be segregated and segregation of healthcare waste shall include the following procedures,
 - a) Separate different types of waste
 - b) The hospital shall provide colored waste receptacles specifically suited for each category of waste
 - c) Segregation shall take place at the source, like ward bedside, OR, laboratory etc
 - d) There shall be 3 bin systems used to segregate different types of waste in the hospital

Segregation category	Color	Container
Non risk waste	Black	bag or bin
Infectious waste	Yellow	bag or bin
Sharp waste	Yellow	safety box
Heavy Metal	Red	secure container
medicine vials, ampoules	White	bag or bin
Hazardous medicines and cytotoxic wastes	yellow	bag or bin

- 5.4.1.9. Treatment or disposal of infectious medical waste shall be performed according to *Health Care Facilities Waste Management National Guideline* by one of the following methods:
- a) By incineration
 - b) By steam sterilization
 - c) By discharge via approved sewerage system
 - d) Recognizable human anatomical remains shall be disposed of by incineration or internment, unless burial at an approved landfill is authorized.
 - e) Chemical sterilization
 - f) Gas sterilization (shall be handled safely)
- 5.4.1.10. The hospital shall routinely clean and sanitize patient areas and waiting rooms at least twice daily and more when ever needed.
- 5.4.1.11. Medical waste which is not infectious shall be disposed according to *Health Care Waste Management National Guideline* by one of the following methods:
- a) By incineration
 - b) By sanitary landfill,
- 5.4.1.12. In order to maintain a clean and safe environment, the hospital shall have an organized method for the transport and washing of linens.
- 5.4.1.13. The hospital shall have an organized waste disposal and removal system and shall ensure the safe handling of all waste
- 5.4.1.14. Chemicals and radioactive wastes shall be disposed according to national guidelines or directives up on approval appropriate organ.
- 5.4.1.15. All generators of infectious medical waste and general medical waste shall have a medical waste management plan that shall include the following:
- a) Storage of medical waste
 - b) Segregation of medical waste
 - c) Transport of medical waste
 - d) Disposal of medical waste
- 5.4.1.16. Sewage disposal shall be according to *Health Care Waste Management National Guideline* and fulfill the following conditions:
- a) Hospitals shall have a functional sewerage system

- b) Hospitals shall dispose of all sanitary waste through connection to a suitable municipal sewerage system
- c) The hospital shall have only flushing toilet system
- d) The hospital shall have a designated waste storage room for solid waste or septic tank for liquid waste
- e) There shall be written procedures defining instrument processing procedures (disinfection and sterilization).
- f) There shall be written procedures to govern the use of aseptic techniques and procedures in all areas of the hospital.
- g) All fixtures located in the kitchen, including the dishwasher, shall be installed so as to empty into a drain which is not directly connected to the sanitary house drain.
- h) Kitchen drain shall empty into a manhole or catch basin having a perforated cover with an elevation of at least 24 inches below the kitchen floor evaluation, and then to the sewer.

5.4.2. **Premises**

5.4.2.1. Placenta disposal pit shall have dimension of height 2.5m, width 2.5m and lateral to the disposal pit the two sides shall be filled with concrete.

5.4.2.2. In addition, the hospital sanitary system shall have

- | | |
|-------------------------------|--|
| a) Functional sewerage system | f) Sanitary office |
| b) Flushing toilets | g) Incinerator |
| c) Plumbing setup stores | h) Dumpster (Genda for solid waste accumulation) |
| d) Kitchen | |
| e) Laundry | |

5.4.3. **Professionals**

9.1.1.1 Hospital sanitation shall be administered by a licensed environmental health professional or any related professional trained on sanitary sciences

9.1.1.2 The hospital shall have the following personnels.

- a) Environmental health professional
- b) Housekeeping staff such as cleaners and waste handlers
- c) Laundry staff
- d) Gardeners
- e) Incinerator operator

f) Instrument processors (disinfector and sterilizer)

9.1.1.3 All staffs shall be trained on waste handling and management, and personal protection methods.

5.4.4. **Products**

5.4.4.1. The hospital shall have the following equipment and supplies required for sanitation activities:

- | | |
|--|---|
| a) Incinerator | j) Autoclave |
| b) Ash pit | k) Pressure cooker |
| c) Burial pit | l) Cleaning supplies (detergents, disinfectants |
| d) Placenta pit | m) and other cleaning solutions |
| e) Garbage bins | etc |
| f) Safety boxes | n) Laundry washers, |
| g) Trolley to transport waste | o) Laundry dryers, |
| h) Dumpster (Genda) shall be placed in a clean isolated and fenced area. | p) Mops and dust bins |
| i) PPE (personal protective equipment) | |

5.5. Housekeeping, Laundry and Maintenance Services

5.5.1. Practices

- 5.5.1.1. The housekeeping service shall have the following sanitary activities.
- a) Basic cleaning such as dusting, sweeping, polishing and washing
 - b) Special cleaning of
 - Different types of floors
 - Wall & Ceiling
 - Doors & Windows
 - Furniture & Fixtures
 - Venetian Blinds
 - c) Cleaning and maintenance of toilet.
 - d) Water treatment, filtering & purification.
- 5.5.1.2. In the housekeeping service, the types and sources of unwanted odors in hospital premises shall be identified, controlled and removed
- 5.5.1.3. Collection, transportation and disposal of hospital wastes shall be supervised and controlled
- 5.5.1.4. The safety of fire, electrical and natural hazards in the risk areas in the hospital shall be supervised and controlled and shall work closely with hospital fire brigade and safety committee.
- 5.5.1.5. The designee/ environmental health professional shall identify, supervise and organize the control and eradication of pests, rodents and animal nuisance in the hospital.
- 5.5.1.6. The housekeeping staffs shall create pleasant environment to patients, staffs and visitors
- 5.5.1.7. The housekeeping staffs shall ensure proper lighting and ventilation in different hospital areas.
- 5.5.1.8. The following LINEN services shall be provided in the hospital
- a) Maintain an adequate supply of clean linens at all times
 - b) Obtain linen from stores and laundry.
 - c) Ensure proper storage of linen.
 - d) Supervise washing, sterilization in the laundry.
 - e) Maintain linen properly
 - f) Issues linen in service units like wards.

- g) Keep proper accounting of linen.
- h) Ensure proper sorting of linen.
- i) Understand different color scheme.

5.5.1.9. There shall be 24 hours maintenance service for the facilities

5.5.1.10. The Hospital shall conduct regular routine, preventative and corrective maintenance for all facilities and operating systems (e.g., electrical, water, ventilation).

5.5.1.11. Regular surveillance of overhead and underground tank, proper cover, regular chlorination and cleaning shall be undertaken

5.5.1.12. Maintenance shall consider the infection prevention and control principles and measures.

5.5.1.13. The maintenance staffs shall ensure proper lighting, water supply, fire safety and ventilation in hospital.

5.5.1.14. Potable water and electrical services shall be available 24 hours a day and 365 days a year through regular or alternate sources.

5.5.1.15. There shall be a hospital plant safety maintenance organization as described below:

- a) A multidisciplinary safety committee that develops a comprehensive hospital-wide safety program and reviewed.
- b) A mechanism to report all incidents, injuries and safety hazards to the safety committee.
- c) The multidisciplinary safety committee shall review all reports and be responsible for ensuring that all reports are referred appropriately and follow-up action is documented.

5.5.1.16. Facility maintenance services

- a) The building maintenance service shall have written policies and procedures that are reviewed for routine maintenance, preventive maintenance and renovation maintenance.
- b) The standby emergency generator shall be checked weekly, tested under load monthly, and serviced in accordance with accepted engineering practices.
- c) Floors, ceilings, and walls shall be free of cracks and holes, discoloration, residue build-up, water stains, and other signs of disrepair.
- d) Routine inspections of elevators shall be conducted.

5.5.1.17. Construction and renovation

- a) Whenever construction and renovation projects are planned in and around a health care facility, a risk assessment shall be conducted to determine the impact of the project on patient areas, personnel, and mechanical systems.
- b) The infection control program shall review areas of potential risk and populations at risk.

5.5.1.18. There shall be written protocols and procedures for medical equipment maintenance including:

- a) Plan for equipment maintenance (both preventive and curative), replacements, upgrades, and new equipments
- b) Safe disposal procedures
- c) An effective tracking system to monitor equipment maintenance activity.
- d) A monitoring method that ensures diagnostic equipment operates with predicted specificity and sensitivity.

5.5.1.19. The maintenance personnel including the management of the hospital shall take basic trainings on the following issues and this shall be documented.

- a) Building fabrics and utilities
- b) Building services and economics
- c) Planning maintenance demand
- d) Preventive and routine maintenance practice
- e) Maintenance with regard to IP and hygiene

5.5.1.20. Fire and emergency preparedness

- a) The hospital shall comply with the National Fire Protection standard
- b) All employees, including part-time employees shall be trained in procedures to be followed in the event of a fire and instructed in the use of fire-fighting equipment and patient evacuation of hospital buildings as part of their initial orientation and shall receive printed instructions on procedures and at least annually thereafter.
- c) A written evacuation diagram specific to the unit that includes evacuation procedure, location of fire exits, alarm boxes, and fire extinguishers shall be posted conspicuously on a wall in each patient care unit.

- d) Fire extinguishers shall be visually inspected at least monthly; fully inspected at least annually, recharged, repaired and hydro-tested as required by manufacturer's instructions; and labeled with the date of the last inspection.
 - e) Fire detectors, alarm systems, and fire suppression systems shall be inspected and tested at least twice a year by a certified testing agency. Written reports of the last two inspections shall be kept on file.
 - f) There shall be a comprehensive, current, written preventive maintenance program for fire detectors, alarm systems, and fire suppression systems that includes regular visual inspection. This program shall be documented.
- 5.5.1.21. If the hospital does not have its own housekeeping, laundry and maintenance services; it may have a contract agreement with external organizations. The hospital shall check and maintain the sanitary standards of the hospital regarding the processing of its linens and shall maintain a satisfactory schedule of pickup and delivery.
- 5.5.1.22. If the hospitals contract out for housekeeping, laundry and maintenance services there shall be documentation for a contractual agreement.
- 5.5.1.23. Housekeeping equipment or supplies used for cleaning in isolation or contaminated areas shall not be used in any other area of the hospital before it has been properly cleaned and sterilized.
- 5.5.1.24. All areas of the hospital, including the building and grounds, shall be kept clean and orderly.
- 5.5.1.25. There shall be frequent cleaning of floors, walls, woodwork and windows.
- 5.5.1.26. The premises shall be kept free of rodent and insect infestations.
- 5.5.1.27. Accumulated waste material and rubbish shall be removed at frequent intervals.
- 5.5.1.28. No flammable cleaning agents or other flammable liquids or gases shall be stored in any janitor's closet or other area of the hospital except in a properly fire rated and properly ventilated storage area specifically designed for such storage.
- 5.5.2. **Premises**
- 5.5.2.1. If the hospital maintains its own laundry, it shall have separate areas for:
- a) Collection of soiled linens.
 - b) Washing, drying and ironing.
 - c) Clean linen storage and mending area.
- 5.5.2.2. The laundry design and operation shall comply with the manufacturer's requirements and/or institutional sanitation guideline

5.5.2.3. Clean linen storage shall be readily accessible to nurses' stations

5.5.2.4. Soiled linen storage shall be well ventilated and shall be located convenient to the laundry or service entrance of the hospital. The storage of appreciable quantities of soiled linens is discouraged.

5.5.2.5. There shall be separate space provided for the storage of housekeeping equipment and supplies

5.5.2.6. A separate office shall be available for the maintenance personnels and the housekeeper.

5.5.2.7. Adequate space shall be available for service specific janitor's closets and cleaning equipment & supplies which shall be maintained separately for the following areas (shall not be used for cleaning in any other location):

f) Surgical Suites.

g) Delivery Suites.

h) Newborn Nursery.

i) Dietary Department.

j) Emergency Service Area.

k) Patient Areas.

l) laboratories, radiology, offices, locker rooms and other areas

5.5.2.8. Exits, stairways, doors, and corridors shall be kept free of obstructions.

5.5.2.9. The hospital shall have an alternate emergency power supply. If such emergency power supply is a diesel emergency power generator, there shall be enough stored fuel to maintain power for at least 24 hours.

5.5.2.10. There may be a workshop as appropriate.

5.5.3. **Professionals**

5.5.3.1. The housekeeping, maintenance and laundry functions of the hospital shall be under the direction of a licensed environmental health professional or engineer.

5.5.3.2. The designated officer shall plan, organize, co-ordinate, control and monitor all housekeeping, maintenance and laundry activities.

5.5.3.3. The housekeeping, maintenance and laundry personnels shall take basic trainings on the following issues and this shall be documented in their personal profile.

a) Basic principles of sanitation and peculiarity to hospital environment.

b) Basic principles of personal hygiene

c) Basic knowledge about different detergent and disinfectants

d) Different cleaning procedures applicable to different hospital areas

- e) Basic knowledge about cleaning equipments operation techniques and their maintenance.
- f) Different processes of water treatment & purification, removing bacteria.
- g) Basic principals of ventilation, composition of Air, Air flow, Humidity and temperature.
- h) Common types of odors and their sources of origin, identification and control.
- i) Removal and control technique of different types of odors.
- j) Various equipments and materials used for odor control operation.
- k) Hospital Waste, Source and generation of waste
- l) Hazards of hospital waste to hospital population and community.
- m) Principles of collection of different types of hospital wastes
- n) Operational procedures of equipments
- o) Safety measures in operation
- p) Infection prevention principles
- q) Hospital lay out, configuration work, flow of men, material and equipment in different hospital areas. Air, water, noise, pollution, causes of pollution and their control and prevention in hospital.

5.5.3.4. The following professionals shall be available depending on the work load analysis

- a) Engineer (electrical, civil) or architect as appropriate
- b) Plumber or Painter.
- c) Maintenance technician or Biomedical engineer for equipment maintenance
- d) Cleaners

5.5.4. **Products**

5.5.4.1. There shall be appropriate tools and testing equipments for medical equipment maintenance, calibration and validation.

5.5.4.2. The hospital shall have the following tools, equipment & raw materials for housekeeping services.

- a) Equipment
 - Reserve electrical generator
 - Floor cleaning brush air
 - Floor wiping brush
 - Hockey type brush
 - Counter brush.
 - Ceiling brush
 - Glass cleaning / wiping brush.
 - Scrappers
 - Dustbins paddles.

- Waste paper basket.
 - Plastic Mug
 - Plastic Bucket
 - Plastic drum
 - Wheel barrow
 - Water trolley
 - Ladder
 - Scraping pump
 - Spraying pump
 - Flit pump.
 - Rate trapping cage
 - Gum boots
- b) Cleaning material
- c) Deodorants & disinfectant
- d) Laundry cleaning material
- e) Insecticides & rodenticides
- f) Stain removal
- Gown, Masks & Gloves
 - Torch
 - Manual sweeping machine.
 - Floor scrubbing/polishing machine
 - Wet vacuum cleaner.
 - Dry vacuum cleaner portable
 - Fumigation machine (Oticare)
 - Bed pan washer.

5.5.4.3. Workshop equipment and tools shall be available

5.6. Social Work Services

5.6.1. Practices

5.6.1.1. The hospital shall provide social work service.

5.6.1.2. The social work service shall have written policies and procedures that are reviewed regularly.

5.6.1.3. The policies and procedures concerning the social work services shall address the following areas:

- a) Counseling,
- b) Discharge management and planning,
- c) Social work assessment
- d) Consultation and referral to support groups, centers and/or organizations
- e) Patient advocacy
- f) Community liaison and education.

5.6.1.4. The social work service shall have a protocol to ensure that social work services are offered to all needy patients.

5.6.1.5. The social work services shall have criteria for identifying at the time of admission and promptly assessing high-risk patients in need of psychosocial intervention and/or discharge planning.

5.6.1.6. There shall be a system for clinical staff to refer patients directly to the social work service

5.6.1.7. Patient's families or guardians should be included in services provided by the social work service unit, where indicated.

5.6.1.8. The social work service unit shall assist patients directly or indirectly in identifying the need for implementing and verifying guardianship as part of discharge planning.

5.6.1.9. The social work service unit shall report victims of abuse to the appropriate body.

5.6.1.10. When a patient is transferred or linked to another health care facility after discharge, the social work service unit shall assure that relevant social work service documentation or information is provided to the facility in order to assure continuity of care.

5.6.1.11. The hospital shall have a program of continuous quality improvement for social work that is integrated into the hospital continuous quality improvement program and pertains to the scope of social work services provided.

5.6.1.12. Adoptions by individuals or groups shall abide the laws and regulations of the country.

5.6.2. **Premises**

5.6.2.1. The hospital shall have a well organized, adequately staffed separate social work service unit or area for Patient and family interview, Handling of confidential phone calls & archive

5.6.3. **Professionals**

5.6.3.1. All social work services given by the hospital shall be under the direct supervision of a social worker or sociologist or psychologist or a professional nurse with experience in social work.

5.6.3.2. All the social work staff shall be given multidisciplinary patient care training and the information about their training shall be documented.

5.6.4. **Products**

5.6.4.1. The social work service unit shall have the following products and facilities:

- a) Telephone
- b) The necessary forms and documenting means for referral, adoption and transfer
- c) Computer
- d) Filing cabinet

5.7. Morgue Services

5.7.1. Practices

5.7.1.1. The hospital shall have written policies and procedures for morgue (dead body care) services. These policies shall delineate the responsibilities of the medical staff, nursing, and morgue services staff, and shall include procedures for at least the following:

- a. Confirmation of death by physician, Identification of the body, recording and labeling;
- b. Safe and proper handling of the body to prevent damage and this shall be according to the patient religion and culture;
- c. Safeguarding personal effects of the deceased and release of personal effects to the appropriate individual or family;
- d. Proper handling of toxic chemicals by morgue and housekeeping staff;
- e. Infection control, including disinfection of equipment as per IP standard;
- f. Identifying and handling high-risk and/or infectious bodies;
- g. Release of the body to the family shall be as immediately as possible;
- h. Autopsy service if available

5.7.1.2. There shall be a death certificate issued by authorized physician for each death and this shall be documented.

5.7.1.3. The service shall be available for 24 hours a day and 365 days of a year

5.7.1.4. Any dead body shall pass through morgue after the confirmation of death by the physician

5.7.2. Premises

5.7.2.1. The morgue shall be equipped with refrigerated space or cold chain room to store at least two bodies. Hospitals with more than 100 beds shall provide additional space using a ratio of one space to every additional 100 beds.

5.7.2.2. In addition, the morgue premises shall fulfill at least the followings:

- (a) Dead body care taking room
- (b) Postmortem room if autopsy service available
- (c) Adequate Water supply
- (d) Well ventilated
- (e) Adequate supply of light

(f) Attendant office

5.7.3. **Professionals**

5.7.3.1. There shall be a licensed pathologist, in hospitals where autopsy service is available,

5.7.3.2. Morgue attendant/technician and cleaner

5.7.4. **Products**

5.7.4.1. Refrigerated spaces in the morgue shall be maintained at temperatures between 32 and 45 degrees Fahrenheit (0 and 6.6 degrees Celsius) and shall have an automatic alarm system that monitors the temperature.

5.7.4.2. In addition, the following products shall be available for morgue services:

- | | |
|--|---|
| (a) Plastic sheets | (g) Goggles |
| (b) Aprons | (h) Plastic bags |
| (c) Stretcher | (i) White clothes |
| (d) Knives, Scalpels, Scissor | (j) Body table with hot and cold water sink |
| (e) Formalin, Detergents, Disinfectants | (k) Cupboard for instrument |
| (f) Cotton, Gloves, Boots, Gowns, Head cover | (l) Syringe & long needle & |
| | (m) Scale |

