

**Modifications in the updated IPHS for 201 to 300 Bedded District
Hospitals document
(Major changes have been highlighted in yellow colour)**

- A. The revised IPHS [DH (201-300)] has considered the services, infrastructure, manpower, equipments and drugs in two categories of **Essential** (minimum assured services) and **Desirable** (the ideal level services which the states and UT shall try to achieve).

Services: Following services were included

Essential

- i. Psychiatry
- ii. Tobacco Cessation Services
- iii. Dialysis Services
- iv. Physical Medicine and Rehabilitation services
- v. DOT centre & Designated Microscopy centre
- vi. AYUSH services
- vii. Integrated Counselling and Testing Centre; STI Clinic; ART Centre
- viii. Blood Bank
- ix. Geriatric Services
- x. Disability Certification Services
- xi. Therapy and appliances
- xii. Accident and Emergency Services

Desirable

- i. Radiotherapy
- ii. De-addiction centre
- iii. Allergy
- iv. Neurosurgery
- v. Neurology
- vi. Gastroenterology
- vii. Oncology
- viii. Endocrinology/ metabolism

- B. Guidelines on Patient Safety and infection control and Health Care workers Safety added.

- C. ***Infrastructure:*** following were added.

- i. Factors determining number of beds is listed
- ii. Hospital building , planning, lay out updated
- iii. Signage.
- iv. Disaster prevention measures (desirable for new upcoming facilities),
- v. Environmental friendly features
- vi. Barrier free access.
- vii. Provisions for quality assurance in clinics, laboratories, blood bank, ward unit, pharmacies, and accident & emergency services.
- viii. Housekeeping services, annual maintenance contract and record maintenance.

- D.** Separate provision for examination of victims of the sexually assaulted added under Accident and Emergency Services
- E. *Manpower:*** the new manpower proposed
- i. Additional requirements for existing specialities and support staff updated.
 - ii. New man power
 1. One Orthodontist (desirable)
 2. One Radiotherapist (desirable)
 3. One PMR specialist (desirable)
 4. Medical Physicist (desirable wherever there is a radiotherapy centres)
 5. Pathologist cum Blood Bank In-charge
 6. One Clinical psychologist (desirable)
 7. One LHV
 8. One health worker male
 9. One Dental Technician
 10. One dental Hygienist (desirable)
 11. Radio therapy technician (desirable)
 12. One Dental Assistant
 13. Therapist : one occupational and one rehabilitation (desirable)
 14. One prosthetist and one orthotist (desirable)
 15. One Multi Rehabilitation workers and rehabilitation worker.
 16. Cold Chain & Vaccine Logistics Assistant
 17. Cold chain handler
 18. Psychiatric social worker
 19. Instructor for young hearing impaired.(desirable under NPPCD)
- F.** List of drugs and equipments updated; drugs and equipments for special care newborn unit added.
- G.** Annexure added.
- i. National guidelines on hospital waste management.
 - ii. Guidelines to reduce environmental pollution due to mercury waste.
 - iii. Surgical safety checklist.
 - iv. Special New born care unit.
 - v. MIS format for monthly reporting.
 - vi. List of statutory compliances.
 - vii. Seismic safety guidelines.
- H.** Annexure deleted
- i. Guidelines for scheme for financial support for hospital waste management, as the scheme has been dropped in 11th five year plan.

DRAFT

**Indian Public Health Standards (IPHS)
For
201 to 300 Bedded District Hospitals**

**GUIDELINES
(Revised 2010)**



**Directorate General of Health Services
Ministry of Health & Family Welfare
Government of India**

Executive Summary

District Hospital is a hospital at the secondary referral level responsible for a district of a defined geographical area containing a defined population. Its objective is to provide comprehensive secondary health care services to the people in the district at an acceptable level of quality and being responsive and sensitive to the needs of people and referring centres. Every district is expected to have a district hospital. As the population of a district is variable, the bed strength also varies from 75 to 500 beds depending on the size, terrain and population of the district.

Service Delivery

District Hospital should be in a position to provide all basic speciality services and should aim to develop super-specialty services gradually. District Hospital also needs to be ready for epidemic and disaster management all the times. In addition, it should provide facilities for skill based trainings for different levels of health care workers. In this IPHS document, Services that a District Hospital is expected to provide have been grouped as Essential (Minimum Assured Services) and Desirable (which we should aspire to achieve). The services include OPD, indoor and Emergency Service. Besides the basic speciality Services, due importance has been given to Newborn Care, Psychiatric services, Physical Medicine and Rehabilitation services, Accident and Trauma Services, Dialysis services and Anti-retroviral therapy. It is desirable to have facilities of selected super-specialties like Cardiology, Nephrology, Pulmonary Medicine, Neurology, Neurosurgery, Radiotherapy, Oncology, Allergy, Endocrinology, De-addiction centre, Geriatric Services at this level. Every district hospital should provide facilities of Special New Born Care Units (SNCU) with specially trained staff. Provisions for Patient Safety, infection control and Health Care workers Safety have been added.

Requirement for Delivery of the Above-mentioned Services

The requirements have been projected the basis of estimated case load for hospital of this strength. The guidelines of hospital building, planning and layout, signage, disaster prevention measures for new facilities, barrier free access and environmental friendly features have been included. Provisions for quality assurance in clinics, laboratories, blood bank, ward unit, pharmacies, and accident & emergency services have been made. Manpower has been rationalized and new manpower has been provided for Physical medicine and Rehabilitation Services, Dental, Radiotherapy, Immunization and instructor for young hearing impaired. National guidelines on hospital waste management, Guidelines to reduce environmental pollution due to mercury waste, Surgical Safety Checklist for safety of Surgical Patients in ward and Operation Theatre, Management

Information System format for monthly reporting, List of statutory compliance and Seismic safety guidelines have been included.

A Charter of Patients' Rights for appropriate information to the beneficiaries, grievance redressal and constitution of Hospital Management Committee for better management and improvement of hospital services with involvement of Panchayati Raj Institutions (PRI) and other stakeholders has also been made as a part of the Indian Public Health Standards. The monitoring process and quality assurance mechanism is also included.

Standards are the main driver for continuous improvements in quality. The performance of District Hospital can be assessed against the set standards. This would help monitor and improve the functioning of the District Hospitals in the country

1. Introduction

India's Public Health System has been developed over the years as a 3-tier system, namely primary, secondary and tertiary level of health care. District Health System is the fundamental basis for implementing various health policies and delivery of healthcare, management of health services for defined geographic area. District hospital is an essential component of the district health system and functions as a secondary level of health care which provides curative, preventive and promotive healthcare services to the people in the district. Every district is expected to have a district hospital linked with the public hospitals/health centres down below the district such as Sub-district/Sub-divisional hospitals, Community Health Centres, Primary Health Centres and Sub-centres. **However, at present there are 578 district hospitals in 636 districts of the country.**

The Government of India is strongly committed to strengthen the health sector for improving the health status of the population. A number of steps have been taken to that effect in the post independence era. One such step is strengthening of referral services and provision of speciality services at district and sub-district hospitals. Various specialists like surgeon, physicians, obstetricians and gynaecologists, paediatrics, orthopaedic surgeon, ophthalmologists, anaesthetists, ENT specialists and dentists have been placed in the district headquarter hospitals.

The district hospitals cater to the people living in urban (district headquarters town and adjoining areas) and the rural people in the district. District hospital system is required to work not only as a curative centre but at the same time should be able to build interface with the institutions external to it including those controlled by non-government and private voluntary health organization. In the fast changing scenario, the objectives of a district hospital need to unify scientific thought with practical operations which aim to integrate management techniques, interpersonal behaviour and decision making models to serve the system and improve its efficiency and effectiveness. By establishing a telemedicine link with district to referral hospital (Medical College) with video-conferencing facility, the quality of secondary and limited tertiary care **can be** improved considerably at district hospitals.

The current functioning of the most of the district hospitals in the public sector are not up to the expectation especially in relation to availability, accessibility and quality. The staff strength, beds strength, equipment supply and service availability and population coverage are not uniform among all the district hospitals.

As per Census 2001, the population of a district varies from as low as 32,000 (Yanam in Pondicherry, Lahaul & Spiti in Himachal Pradesh) to as high as 30 lakhs (Ludhiana, Amritsar districts). The bed strength also varies from 75 to 500 beds depending on the size, terrain and population of the district. As per the second phase of the facility survey undertaken by the Ministry of Health & Family Welfare, Government of India, covering 370 district hospitals from 26 states has revealed that 59% of the surveyed district hospitals have tap water facility. The electricity facility is available in 97% of the districts with a stand by generator facility in 92% of the cases. Almost all the DHs in India have one operation theatre and 48% of them have an OT specifically for gynaecological purpose. About 73% of the surveyed district hospitals have laboratories. A separate aseptic labour room is found in only 45% of the surveyed district hospitals. Only half of the total numbers of district hospitals have OPD facility for RTI/STI. As regards manpower 10% of the district hospitals do not have O&G specialists and paediatricians. 80% of the DHs have at least one pathologist and 83% of the total DHs have at least one anaesthetist. General duty Medical officers, staff nurses, female health workers and laboratory technicians are available in almost all district hospitals. Only 68% of the district hospitals have linkage with the district blood banks.

Most of the district hospitals suffer from large number of constraints such as

- ◆ Buildings are either very old and in dilapidated conditions or are not maintained properly. Because of lack of convergence with maintenance department.
- ◆ The facilities at district hospitals require continued upgradation to keep pace with the advances in medical knowledge, diagnostic procedures, storage and retrieval of information. It has been observed that development of hospitals is not keeping pace with the scientific development.
- ◆ A typical district hospital lacks modern diagnostics and therapeutic equipments, proper emergency services, intensive care units, essential pharmaceuticals and supplies, referral support and resources.
- ◆ There is a lack of trained and qualified staff for hospitals management and for the management of other ancillary and supportive services viz. medical records, central sterilization department, laundry, house keeping, dietary and management of nursing services.
- ◆ There is lack of community participation and ownership, management and accountability of district hospitals through hospital management committees.

District Hospitals have come under constantly increasing pressure due to increased utilization as a result of rapid growth in population, increase in awareness among

common consumers, biomedical advancement, resulting in the use of sophisticated and advanced technology in diagnosis and therapies, and constantly rising expectation level of the use of the services. The need for evaluating the care being rendered through district hospitals has gained strength of late. **There is a need to provide guidance to those concerned with quality assurance in district hospitals services to ensure efficiency and effectiveness of the services rendered.**

The Bureau of Indian standards (BIS) has developed standards for hospitals services for 30 bedded and 100 bedded hospitals. However, these standards are considered very resource intensive and lack the processes to ensure community involvement, accountability, the hospital management, and citizens' charter etc peculiar to the public hospitals. In this context a set of standards are being recommended for district hospitals called as **Indian Public Health Standards (IPHS) for District Hospitals**. **This document contains the standards to bring the District Hospitals to a minimum acceptable functional grade (indicated as **Essential**) with scope for further improvement (indicated as **Desirable**) in it.**

2. Objectives of Indian Public Health Standards (IPHS) for District Hospitals:

The overall objective of IPHS is to provide health care that is quality oriented and sensitive to the needs of the people of the district. The specific objectives of IPHS for DHs are:

- i. To provide comprehensive secondary health care (specialist and referral services) to the community through the District Hospital.
- ii. To achieve and maintain an acceptable standard of quality of care.
- iii. To make the services more responsive and sensitive to the needs of the people of the district and the hospitals/centres from which the cases are referred to the district hospitals

3. Definition

The term District Hospital is used here to mean a hospital at the secondary referral level responsible for a district of a defined geographical area containing a defined population.

4. Grading of district hospitals:

The size of a district hospital is a function of the hospital bed requirement, which in turn is a function of the size of the population it serves. In India the population size of a district varies from 35,000 to 30,00,000 (Census 2001). Based on the assumptions of the annual rate of admission as 1 per 50 populations and average length of stay in a hospital

as 5 days, the number of beds required for a district having a population of 10 lakhs will be around 300 beds. However, as the population of the district varies a lot, it would be prudent to prescribe norms by grading the size of the hospitals as per the number of beds.

- Grade I: District hospitals norms for 500 beds
- Grade II: District hospitals norms for 300 beds
- Grade III: District hospitals norms for 200 beds
- Grade IV: District hospital norms for 100 beds.

The disease prevalence in a district varies widely in type and complexities. It is not possible to treat all of them at district hospitals. Some may require the intervention of highly specialist services and use of sophisticated expensive medical equipments. Patients with such diseases can be transferred to tertiary and other specialized hospitals. A district hospital should however be able to serve 85-95% of the medical needs in the districts. It is expected that the hospital bed occupancy rate should be atleast 80%.

5. Functions

A district hospital has the following functions:

1. It provides effective, affordable healthcare services (curative including specialist services, preventive and promotive) for a defined population, with their full participation and in co-operation with agencies in the district that have similar concern. It covers both urban population (district headquarter town) and the rural population in the district.
2. Function as a secondary level referral centre for the public health institutions below the district level such as Sub-divisional Hospitals, Community Health Centres, Primary Health Centres and Sub-centres.
3. To provide wide ranging technical and administrative support and education and training for primary health care.

6. Services

6.1 Services that a District Hospital is expected to provide can be grouped as Essential (Minimum Assured Services) and Desirable (which we should aspire to achieve). The services include OPD, indoor and Emergency Services

Essential	Desirable
General Specialties: General Medicine	General Specialties: Radiotherapy

<p>General Surgery Obstetric &Gynaecology services FP services like IUCD, NSV, Minilap, and lap sterilization Paediatrics including Neonatology Emergency (Accident & other emergency) Critical care / Intensive Care (ICU) Anesthesia Ophthalmology Otorhinolaryngology (ENT) Dermatology and Venerology (Skin & VD) RTI/STI Orthopaedics Radiology including ultrasonologist Psychiatry Health Promotion and Counseling Services Tobacco Cessation Services Dialysis Services Physical Medicine and rehabilitation services Dental care Public Health Management: DOT centre Designated Microscopy centre AYUSH services Integrated Counseling and Testing Centre; STI Clinic; ART Centre Blood Bank Disability Certification Services¹ Services under Other National Health Programmes</p>	<p>Allergy De-addiction centre Geriatric Services</p> <p>Super Specialties:</p> <p>Cardiology Gastro-enterology Nephrology Neurology Neurosurgery Oncology Endocrinology/Metabolism</p>
<p>Diagnostic and other Para clinical services regarding:</p> <p>Laboratory services Imaging services X ray CT Scan Sonography ECG Endoscopy Pathology Blood bank and Blood storage Facilities Therapy and Appliances Dental Technology (Dental Hygiene) Drugs and Pharmacy</p>	<p>Diagnostic and other Para clinical services regarding:</p> <p>Other pathological services Electroencephalogram (EEG) Echocardiography Occupational therapy</p> <p>Ancillary and support services:</p>

<p>Ancillary and support services: Following ancillary services shall be ensured:</p> <p>Medico-legal/postmortem² Ambulance services Dietary services Laundry services Security services Waste management including Biomedical Waste Ware housing/central store Maintenance and repair Electric Supply (power generation and stabilization) Water supply (plumbing) Heating, ventilation and air-conditioning Transport Communication Nursing Services CSSD- Sterilization and Disinfection Refrigeration</p> <p>Administrative services</p> <p>(i) Finance³ (ii) Medical records (Provision should be made for computerized medical records with anti-virus facilities whereas alternate records should also be maintained) (iii) Procurement (iv) Personnel (v) Housekeeping and Sanitation (vi) Education and training (vii) Inventory Management</p> <p>Epidemic Control and Disaster Preparedness. Integrated Disease surveillance, epidemic investigation and emergency response</p>	<p>Counseling services for domestic violence, gender violence, adolescents, etc. Gender and socially sensitive service delivery be assured.</p> <p>24 x 7 ambulance with advance life support systems</p> <p>Horticulture (Landscaping)</p> <p>Lift and vertical transport</p> <p>Medical Social Work</p>
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¹As per guidelines notified by state Government

² Standard procedures for medico-legal cases, management of dead body and post mortem services (if needed) to be followed.

³ Financial accounting and auditing be carried out as per the rules along with timely submission of SOEs/UCs.

Note: Facilities for training of candidates who will be enrolled in the proposed Bachelor of Rural Health Care (BRHC of three and half year) shall be provided, as per the guidelines, once implemented. As per the proposal, the facilities with more than 300 beds

can enroll 50 candidates, and those with 150 to 300 can enroll 25 candidates for the proposed course (BRHC).

Financial powers of Head of the Institution: Medical Superintendent to be authorized to incur expenditure up to Rs.20.00 lakhs for repair/upgrading of impaired equipments/instruments with the approval of executive committee of Rogi Kalyan Samiti/Hospital Management Society.

No equipment/instruments should remain non-functional for more than 30 days. It will amount to suspension of status of IPHS of the concerned institutions for absence period. Outsourcing of services like laundry, ambulance, dietary, housekeeping and sanitation, waste disposal etc. should be preferably arranged by hospital itself. Manpower and outsourcing work could be done through local tender mechanism.

Self evaluation of hospital services at defined frequency should be done

6.2 Services under various National Health and Family Welfare Programmes.

6.3 Epidemic Control and Disaster Preparedness.

6.4. Patient Safety and infection control

Essential

1. Hand washing facilities in all OPD clinics, wards, emergency, ICU and OT areas
2. Safe clinical practices as per standard protocols to prevent health care associated infections and other harms to patients.
3. There shall be proper written handing over system between health care staff.
4. Formation of Infection control team and provision of trained Infection Control nurses. Hospital shall develop standard operating procedure for aseptic procedures, culture surveillance and determination of hospital acquired infections.
5. Safe Injection administration practices as per prescribed protocols
6. Safe Blood transfusion practices need to be implemented by the hospital administrators.
7. Ensuring Safe disposal of Bio-medical Waste as per rules (National Guidelines to be followed, may be seen at **Annexure II**)
8. For Disposal of Mercury, guidelines may be seen at **Annexure III**
9. Regular Training of Health care workers in Patient safety, infection control and Bio-medical waste management.

Desirable

1. Compliance to correct method of hand hygiene by health care workers should be ensured.
2. Provision of locally made Hand rub solution in critical care areas like ICU, Nursery, Burns ward etc. to ensure Hand Hygiene by Health care workers at the point of care.
3. Use of safe Surgery check lists in the ward and operation Theatre to minimize the errors during surgical procedures. (for the detailed checklist refer to **Annexure IV**)
4. A culture of encouraging reporting of Adverse Events happening in the hospital to a hospital committee should be developed to find out the cause of the adverse event and taking the corrective steps to prevent them in future. Committee should also have patient representative, NGO representative and a media person as members.
5. **Antibiotic Policy** – Hospital shall develop its own antibiotic policy to check indiscriminate use of antibiotics and reduce the emergence of resistant strains.

6.5 . Health Care workers Safety

1. Provision of Protective gears like gloves, masks, gowns, caps, personal protective equipments, lead aprons, dosimeters etc and their use by Health Care workers as per standard protocols.
2. Promotion of Hand Hygiene and practice of Universal precautions by Health care workers.
3. Display Standard operating procedures at strategic locations in the hospitals.
4. Implementation of Infection control practices and Safe BMW Management.
5. Regular Training of Health care workers in Universal precautions, Patient safety, infection control and Bio-medical waste management.

Desirable

1. Immunization of Health care workers against Tetanus and Hepatitis B
2. Provision of round the clock Post exposure prophylaxis against HIV in cases of needle sticks injuries.

6.6 SERVICE MIX OF PROCEDURES IN MEDICAL AND SURGICAL SPECIALITIES

Following services mix of procedures in medical and surgical specialties would be available. The list is only indicative and not exhaustive. The diseases prevalent in the district should be treated.

S. No	Name of the Procedure

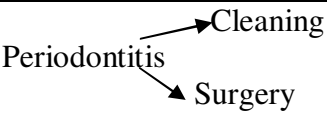
MEDICAL	
1	Pleural Aspiration
2	Pleural Biopsy
3	Bronchoscopy (Desirable)
4	Lumbar Puncture
5	Pericardial tapping
6	Skin scraping for fungus / AFB
7	Skin Biopsies
8	Abdominal tapping
9	Liver Biopsy
10	Liver Aspiration
11	Fibroptic Endoscopy (Desirable)
12	Peritoneal dialysis
13	Hemodialysis (Desirable)
14	Bone Marrow Biopsy
OPD Procedures (Including IPD)	
1	Dressing (Small, Medium and Large)
2	Injection (I/M & I/V)
3	Catheterisation
4	Nebulization
5	Cut down (Adult)
6	Enema
7	Stomach Wash
8	Douche
9	Sitz bath
10	CVP Line
11	Blood Transfusion
12	Hydrotherapy
13	Bowel Wash
Skin Procedures	
1	Chemical Cautery
2	Electro Cautery
3	Intra Lesional Injection
4	Biopsy (Desirable)
Paediatric Procedures	
1	Immunization (As per National Immunization Schedule)
2	Services related to new borne care
2.1	- only cradle
2.2	- Incubator
2.3	- Radiant Heat Warmer
2.4	- Phototherapy
2.5	- Gases (oxygen)

2.6	- Pulse Oxemeter
2.7	- Lumbar Puncture
2.8	- Bone Marrow Aspirations (Desirable)
2.9	- Exchange Transfusion (Desirable)
2.10	- Cut down
2.11	- Plural/Acite Tap
2.12	- Ventilator
2.13	- Live Biopsy u/s guided
Cardiology Procedures and Diagnostic Tests	
1	ECG
2	T M T
3	Holter
4	Thrombolytic Therapy
5	C V P Line
6	Defibrillator Shock
7	NTG/Xylocard Infusion
8	ECHO Cardiography (Desirable)
Endoscopic Specialised Procedures and Diagnostic	
1	Upper GI endoscopy (Esophagus, stomach, duodenum) (Diagnostic and Therapeutic)
2	Sigmoidoscopy and Colonoscopy (Desirable)
3	Bronchoscopy and Foreign Body Removal (Desirable)
4	Arthros copy (Diagnostic and Therapeutic)
5	Lapros copy (Diagnostic and Therapeutic)
6	Colposcopy
7	Hysteroscopy
Psychiatry Services	
1	Modified ECT (Desirable)
2	De-addiction (Desirable)
PMR Services	
1	With Electrical Equipments
1.1	- Computerized Traction (Lumbar & Cervical)
1.2	- Short wave diathermy
1.3	- Electrical Stimulator with TENS
1.4	- Electrical Stimulator
1.5	- Ultra Sonic Therapy
1.6	- Paraffin Wax Bath
1.7	- Infra Red Lamp (Therapy)
1.8	- U V (Therapeutic)
1.9	- Electric Vibrator
1.10	- Vibrator Belt Massage
2	With Mechanical Gadgets/Exercises
2.1	- Mechanical Traction (Lumbar & Cervical)
2.2	- Exercycle
2.3	- Shoulder Wheel

2.4	- Shoulder Pulley
2.5	- Supinator Pronator Bar
2.6	- Gripper
2.7	- Visco Weight Cuffs
2.8	- Walking Bars
2.9	- Post Polio Exercise
2.10	- Obesity Exercises
2.11	- Cerebral Palsy – Massage
2.12	- Breathing Exercises & Postural Drainage
3	Disability Certification Services
Eye Specialist Services (Ophthalmology)	
1	OPD Procedures
1.1	- Refraction (by using Snellen’s chart)
1.2	- Refraction (by auto refracto-meter)
1.3	- Syringing and Probing
1.4	- Foreign Body Removal (conjunctival)
1.5	- Foreign Body Removal (Corneal)
1.6	- Epilation
1.7	- Suture Removal
1.8	- Subconj Injection
1.9	- Retrobulbar Injection (Alcohol etc.)
1.10	- Tonometry
1.11	- Biometry / Keratometry
1.12	- Automated Perimetry
1.13	- Pterygium Excision
1.14	- Syringing & Probing
1.15	- I & C of chalazion
1.16	- Wart Excision
1.17	- Styte
1.18	- Cauterization (Thermal)
1.19	- Conjunctival Resuturing
1.20	- Corneal Scarping
1.21	- I & D Lid Abscess
1.22	- Uncomplicated Lid Tear
1.23	- Indirect Ophthalmoscopy
1.24	- Retinoscopy
2	IPD Procedures
2.1	- Examination under GA
2.2	- Canthotomy
2.3	- Paracentesis
2.4	- Air Injection & Resuturing
2.5	- Enucleation with Implant
2.6	- Enucleaion without Implant
2.7	- Perforating Corneo-Scleral Injury Repair
2.8	- Cataract Extraction with IOL

2.9	- Glaucoma (Trabeculectomy)
2.10	- Cutting of Iris Prolepses
2.11	- Small Lid Turnour Excision
2.12	- Conjunctival Cyst
2.13	- Capsulotomy
2.14	- Ant. Chamber Wash
2.15	- Evisceration
ENT Services	
1	OPD Procedures
1.1	- Foreign Body Removal (Ear and Nose)
1.2	- Syringing of Ear
1.3	- Ear Piercing
1.3	- Chemical Cauterization (Nose & Ear)
1.4	- Eustachian Tube Function Test
1.5	- Vestibular Function Test/Caloric Test
2	Minor Procedures
2.1	- Therapeutic Removal of Granulations (Nasal, Aural, Oropharynx)
2.2	- Punch Biopsy (Oral Cavity & Oropharynx)
2.3	- Cautrization (Oral, Oropharynx, Aural & nasal)
3	Nose Surgery
3.1	- Packing (Anterior & Posterior Nasal)
3.2	- Antral Puncture (Unilateral & Bilateral)
3.3	- Inter Nasal Antrostomy (unilateral & Bilateral)
3.4	- I & D Septal Abscess (Unilateral & Bilateral)
3.5	- S M R
3.6	- Septoplasty
3.7	- Fracture Reduction Nose
3.8	- Fracture Reduction Nose with Septal Correction
3.9	- Transantral Procedures (Biopsy, Excision of cyst and Angiofibroma Excision)
3.10	- Transantral Biopsy
3.11	- Rhinoplasty
3.12	- Septoplasty with reduction of terbinate (SMD)
4	Ear Surgery
4.1	- Mastoid Abscess I & D
4.2	- Mastoidectomy
4.3	- Stapedotomy
4.4	- Examination under Microscope
4.5	- Myringoplasty
4.6	- Tympanoplasty
4.7	- Myringotomy
4.8	- Ear Piercing
4.9	- Hearing Aid Analysis and Selection
5	Throat Surgery
5.1	- Adenoidectomy

5.2	- Tonsillectomy
5.3	- Adenoidectomy + Tonsillectomy
5.4	- Tongue Tie excision
6	Endoscopic ENT Procedures
6.1	- Direct Laryngoscopy
6.2	- Hypopharyngoscopy
6.3	- Direct Laryngoscopy & Biopsy
6.4	- Broncoscopic Diagnostic
6.5	- Broncoscopic & F B Removal
7	General ENT Surgery
7.1	- Sticking of LCW (Nose & Ear)
7.3	- Preauricular Sinus Excision
8	Audiometry
8.1	- Audiogram (Pure tone and Impedence)
Obstetric & Gynecology Specialist Services	
1	Episiotomy
2	Forceps delivery
3	Craniotomy-Dead Fetus/Hydrocephalus
4	Caesarean section
5	Female Sterilisation (Mini Laparotomy & Laparoscopic)
6	D&C
7	MTP (Medical Method & Surgical Methods)
8	IUCD services (Insertion & Removal)
9	Contraceptives including emergency contraceptives
10	Hysterectomy
11	Bartholin Cyst Excision
12	Suturing Perimeal Tears
12	Ovarian Cystectomy / Oophrectomy
13	Vaginal Hysterectomy
14	Haematocolpes Drainage Colpotomy
15	Casserian Hystrectomy
16	Assisted Breech Delivery
17	Cervical Biopsy
18	Cervical Cautery
19	Nomal Delivery
20	Casserian
21	E U A
22	Midtrimestor Abortion
23	Ectopic Pregnancy Ruptured
24	Retain Placenta
25	Suturing Cervical Tear
26	Assisted Twin Delivery
27	Colposcopy (desirable)

28	Hysteroscopy (desirable)
29	Laparoscopy Diagnostic/Operative)
30	Vaccum Delivery
31	Endometria Biospsy
32	ECC
33	Cervical Biopsy
34	Endometiral Aspiration
35	Hysterotomy
36	Emergency & Exploratory Laparotomy (Uterine perforation, septic abortion, Twisted Ovarian, Pelvic abscess, ectopic pregnancy)
37	FNAC
Dental Services	
1	Dental Caries/Dental Abcess/Gingivitis
2	 <pre> graph TD A[Periodontitis] --> B[Cleaning] A --> C[Surgery] </pre>
3	Minor Surgeries, Impaction, Flap
4	Malocclusion
5	Prosthodontia (Prosthetic Treatment)
6	Trauma including Vehicular Accidents
7	Maxillo Facial Surgeries
8	Neoplasms
9	Sub Mucus Fibrosis (SMF)
10	Scaling and Polishing
11	Root Canal Treatment
12	Extractions
13	Light Cure
14	Amalgum Filling (Silver)
15	Sub Luxation and Arthritis of Temporomandibular Joints
16	Pre Cancerous Lesions and Leukoplakias
17	Intra oral X-ray
18	Fracture wiring
19	Apiscectomy
20	Gingivectomy
21	Removal of Cyst
22	Complicated Extractions (including suturing of gums)
SURGICAL	
1	Abcess drainage including breast & perianal
2	Wound Debridement
3	Appendicectomy
4	Fissurotomy or fistulectomy
5	Hemorrohoidectomy

6	Circumcision
7	Hydrocele surgery
8	Herniorraphy
9	Suprapubic Cystostomy
10	Urethral Dilatation
11	Cystoscopy
12	Endoscopy
13	Esophagoscopy
14	Diagnostic Laparoscopy
15	Colonoscopy
16	Sigmoidoscopy
17	Colposcopy
18	Hysteroscopy
19	Arthroscopy
20	Tonsillectomy
21	Mastoidectomy
22	Stapedotomy
23	Craniotomy (Neurosurgical)
24	Episiotomy
25	Forceps delivery
26	Craniotomy-Dead Fetus/Hydrocephalus
27	Caeserean section
28	Female Sterilisation (Mini Laparotomy & Laparoscopic)
29	Vasectomy
30	D&C
31	MTP
32	Hysterectomy
33	FNAC
34	Total Parotidectomy
35	Intra-oral removal of submandibular duct Calculous
36	Excision Branchial Cyst or Fistula/sinus
37	Lingual Throid
38	Thyroid Adenoma Resection / Enucleation
39	Hemithyroidectomy (Sub total Thyroidectomy/Lobectomy)
40	Cysts and Benign Tumour of the Palate
41	Excision Submucous Cysts
Breast	
1	Excision fibroadenoma – Lump
2	Simple Mastectomy
3	Modified Radical, Mastectomy/Patey's Operation

4	Sectoral Mastectomy/Microdochectomy/Lumpectomy
5	Wedge Biopsy
6	Excision Mammary Fistula
Hernia	
1	Ingunial Hernia repair reinforcement
2	Ingunial Hernia repair with mesh
3	Femoral Hernia repair
4	Epigastric/Ventral Hernia repair
5	Recurrent Ingunial Hernia repair
6	Ventral Hernia repair with mesh
7	Strangulated Ventral or Incisional Hernia/Ingunial
8	Recurrent Incisional Hernia
9	Diaphargmatic Hernia
Abdomen	
1	Exploratory Laparotomy
2	Gastrostomy or Jejuncstomy
3	Simple Closure of Perforated Ulcer
4	Reamstedt's Operation
5	Gastro-Jejunostomy
6	Vagotomy & Drainage Procedure
7	Adhesonolysis or division of bands
8	Mesenteric Cyst
9	Retroperitoneal Tumour Excision
10	Intussuception (Simple Reduction)
11	Burst Abdomen Repair
Spleen and Portal Hypertension	
1	Spleenectomy
Pancreas	
1	Drainage of Pseudopancreatic Cyst (Cystogastroctomy)
2	Retroperitoneal Drainage of Abscess
Appendix	
1	Emergency Appendisectomy
2	Interval Appendisectomy
3	Appendicular Abscess Drainage
Small Intestine	
1	Resection and Anastomosis
2	Intussusceptions
3	Intestinal Fistula

4	Intestinal Perforation
Liver	
1	Open Drainage of liver abscess
2	Drainage of Subdia, Abscess/Perigastric Abscess
Biliary System	
1	Cholecystostomy
2	Cholecystectomy
3	Cholecystectomy and Choledocholithotomy
Colon, Rectum and Anus	
1	Fistula in ano low level
2	Fistula in ano high level
3	Catheters
4	IV Sets
5	Colostomy Bags
6	Peri-anal Abscess
7	Ischiorectal Abscess
8	Ileostomy or colostomy alone
9	Sigmoid Myotomy
10	Right Hemicolectomy
11	Sigmoid & Descending Colectomy
12	Haemorroidectomy
13	Sphincterotomy of Fissurectomy
14	Tube Caecostomy
15	Closure of loop colostomy
16	Rectal Prolapse Repair
17	Anal Sphincter Repair after injury
18	Thiersch's operation
19	Volvulus of colon
20	Resection anastomosis
21	Imperforate anus with low opening
22	Pilonidal Sinus
Penis, Testes, Scrotum	
1	Circumcision
2	Partial amputation of Penis
3	Total amputation of Penis
4	Orchidopexy (Unilateral & Bilateral)
5	Orchidectomy (Unilateral & Bilateral)
6	Hydrocele (Unilateral & Bilateral)

7	Excision of Multiple sebaceous cyst of scrotal skin
8	Reduction of Paraphimosis
Other Procedures	
1	Suture of large laceration
2	Suturing of small wounds
3	Excision of sebaceous cyst
4	Small superficial tumour
5	Large superficial tumour
6	Repair torn ear lobule each
7	Incision and drainage of abscess
8	Lymph node biopsy
9	Excision Biopsy of superficial lumps
10	Excision Bipsy of large lumps
11	Injection Haemorrhoids/Ganglion/Keloids
12	Removal of foreign body (superficial)
13	Removal of foreign body (deep)
14	Excision Bipsy of Ulcer
15	Excision Multiple Cysts
16	Muscle Biopsy
17	Tongue Tie
18	Debridment of wounds
19	Excision carbuncle
20	Ingrowing Toe Nail
21	Excision Soft Tissue Tumour Muscle Group
22	Diabetic Foot Asnd carbuncle
Urology	
1	Pyelolithotomy
2	Nephrolithotomy
3	Simple Nephrostomy
4	Implantation of ureters Bilateral (Desirable)
5	Vesico-vaginal fistula
6	Nephrectomy (Desirable)
7	Uretrolithotomy
8	Open Prostectomy
9	Closure of Urethral Fistula
10	Cystolithotomy Superopubic
11	Dialatation of stricture urethra under GA
12	Dialation of stricture urethra without anaesthesia

13	Meatotomy
14	Testicular Biopsy
15	Trocar Cystostomy
Plastic Surgery	
1	Burn Dressing Small, medium (10% to 30%), large 30% to 60%, extensive > 60%
2	Ear lobules repair one side (bilateral) (Desirable)
3	Simple wound
4	Complicated wound
5	Face Scar – Simple
6	Cleft Lip – One side
7	Small wound skin graft
8	Simple injury fingers
9	Finger injury with skin graft (Desirable)
10	Multiple finger injury (Desirable)
11	Crush injury hand (Desirable)
12	Full thickness graft (Desirable)
13	Congenital Deformity (Extra digit, Syndactly, Constriction rings)
14	Reconstruction of Hand (Tendon)
15	Polio Surgery (Desirable)
16	Surgery concerning disability with Leprosy
17	Surgery concerning with TB
Paediatric Surgery	
1	Minor Surgery, I & D, Prepuceal Dilatation, Meatotomy
2	Gland Bipsy, Reduction Paraphimosis, small soft Tissue tumour (Benign)
3	Rectal Polyp removal, deep abscess
4	Big soft tissue tumour (Desirable)
5	Branchial cyst/fistula/sinus/ Thyroglosal cyst
6	Ingunial Herniotomy (Unilateral & Bilateral)
7	Orchidopexy (Unilateral & Bilateral)
8	Pyoric Stenosis Ramsteadt operation
9	Exploratory Laprotomy
10	Neonatal Intestinal Obstruction / Resection / Atresia
11	Gastrostomy, colostomy
12	Umbilical Hernia / Epigastric Hernia
13	Sacroccygeal Teratoma (Desirable)
14	Torsion of Testis

15	Hypospadias single stage (first stage)
Orthopaedic Surgery	
Hip Surgery	
1	Femoral Neck nailing with or without plating replacement prosthesis / Upper Femoral Osteotomy; Innominate Osteotomy/Open Reduction of Hip dislocation; DHS/Richard Screw Plate
2	Synovial or bone biopsy from HIP
3	Girdle stone Arthroplasty
4	Arthroscopy
5	Total Hip Replacement (Desirable)
6	Total Knee Replacement (Desirable)
Fractures	
1	Open reductuin int. fixation or femur, tibia, B. Bone, Forarm Humerus inter-condylar fracture of humerus and femur and open reduction and int. Fixation bimaleolar fracture and fracture dialocation of ankle montaggia fracture dialocation
2	Medical concyle of humerus fracture lateral condyle of humerus Olecranen fracture, head of radius lower end of radius, medial malleolus patella fracture and fracture of calcaneum talus single forearm, bone fracture
3	External Fixation Appleication Pelvis femur, tibia humerus forearm
4	Ext. fixation of hand & foot bones
5	Tarsals, Metatarsals, Phalanges carpals, Metacarples, excision head fibula, lower and of Inia
6	Drainage of fracture
7	Interlocking nailing of long bones
8	Debridement & Secondary closure
9	Percutaneous Fixation (small and long bones)
Closed Reduction	
1	Hand, Foot bone and cervicle
2	Forearm or Arm, Leg, Thigh, Wrist, Aknle
3	Dislocation elbow, shoulder, Hip, Knee
4	Closed Fixation of hand / foot bone
Open Reduction and Others	
1	Shoulder dislocation, knee dislocation
2	Acromiocalvicular or stemoclavicular Jt. Clavicle
3	Ankle Bimalleolar Open reduction, Ankle Trimalleolar open reduction
4	Wrist dislocation on intercarpal joints
5	MP & IP Joints

6	Knee Synovectomy / Meniscectomy
7	Fasciotomy leg/forearm
8	High Tibial Osteotomy
9	Arthodesis (Shoulder/Knee Ankle, Triple/elbow, Wrist/Hip)
10	Arthodesis – MP & IP Joints
11	Excision Exostosis long bones, single / two
12	Currentage Bone Grafting of Bone Tumour of femur/tibia Humerus & forearm
13	Surgery tumours of small bone hand and foot
14	Debridement primary closure of compounds fracture of tibia, femur forearm without fixation
15	Debridement of hand/foot
16	Debridement primary closure of compound fractures of tibia, femur forearm with fixation
17	Tendon surgery soft tissue release in club foot
18	Internal fixation of small bone (Single, Two , More than two)
19	Tendon Surgery (Repair and Lengthening)
20	Surgery of chronic Osteomyelitis (Saucerization,Sequestrectomy of femur, Humerus, Tibia)
21	Fibula Radius Ulna (Clavicle) and Wrist, Ankle, Hand foot
22	Amputation (Thigh or arm, leg or forearm, feet or hand, digits)
23	Disarticulation of hip or shoulder (Disarticulation of knee elbow/wrist/ankle; Fore-quarter or hind-quarter)
24	POP Application (Hip Spica, Shoulder spica POP Jacket; A-K/A-E POP; B-K/B-E POP)
25	Corrective Osteotomy of long bones
26	Excision Arthroplasty of elbow & other major joints; Excision Arthroplasty of small joints
27	Operation of hallus valgus
28	Bone Surgery (Needle biopsy, Axial Skeleton, Non-Axial)
29	Removal K Nail AO Plates
30	Removal Forearm Nail, Screw, Wires
31	Skeletal Traction Femur, Tibia, Calcaneum, Elbow
32	Bone Grafting (small grafting and long bone)
33	Ingrowing toe-nail
34	Soft tissue Biopsy
35	Skin Graft (small, medium and large)
36	Patellectomy
37	Olecranon fixation
38	Open Ligament repair of elbow, Ankle & Wrist

39	Arthrotomy of hip/shoulder/elbow
40	Carpal Tunnel Release
41	Dupuytren's contracture
42	Synovectomy of major joint shoulder/hip/ Elbow
43	Repair of ligaments of knee
44	Closed Nailing of long bones
45	External fixator readjustment dynamisation removal of external fixation/removal of implant
46	Excision of soft tissue tumour muscle group

RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS) FOR DIFFERENT ILLNESSES CONCERNING DIFFERENT SPECIALITIES:

(The following list is only suggestive and not exhaustive; all the prevalent diseases in the district should be treated.)

OBSTETRIC & GYNEACOLOGY

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	Bleeding during first trimester & Hyperemesis	Treat
2	Bleeding during second trimester	Treat
3	Bleeding during third trimester (APH/Placenta Previa)	Treat & refer if Necessary
(3 a)	Placenta Accreta/ increta/percreta	Investigate, and refer if necessary
4	Normal Delivery (Induction of labor)	Yes
5	Abnormal labour (Mal presentation ,prolonged labour, Pre-Term Labour , PPRM, IUGR, Mal Position, Cord Prolapse PROM,Obstructed labour)	Treat
6	PPH	Treat
7	Puerperal Sepsis	Treat
8	Ectopic Pregnancy	Treat
9	Hypertensive disorders (Severe preeclampsia & Eclampsia)	Investigate, treat and refer if necessary

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
10	Septic abortion & Incomplete Abortion	Treat
11	Medical disorders complicating pregnancy (heart disease ,diabetes ,hepatitis Renal disorders, Respiratory Disorders, Tuberculosis, Anemia, RH negative Pregnancy)	Investigate, treat and refer if necessary
12	Bronchial asthma	Treat
13	Gestational Trophoblastic diseases	Investigate, treat and refer if necessary
14	Intra-Uterine Death	Investigate, treat and refer if necessary
15	Surgical Disorders with pregnancy (Prev. LSCS/ Fibroid uterurs/Ovarian mass	Investigate, treat and refer if necessary
16	Bleeding Disorders in Pregnancy	Refer at the earliest
Gynaecology		
1	RTI / STI	Treat
2	DUB	Treat
3	Benign disorders (fibroid, prolapse, ovarian masses & Torsion, endometriosis) Initial investigation at PHC / Gr III level	Treat
4	Breast Tumors	Investigate, treat and refer if necessary
5	Cancer Cervix Endometrial, ovarian, Vulval, Vaginal screening Initial investigation at PHC / Grade III level	Collection of PAP SMEAR and biopsy, Endometrial Aspiration, ECC, D&C, Colposcopy, hysteroscopy Repairing Cytology & Hispothalogy
6	Cancer cervix /ovarian Initial investigation at PHC / Gr III level	Treat
7	Infertility	Treat
8	Prevention of MTCT	Pretest and post test and counselling and treatment
9	MTP / MVA services	Treat

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
10	Tubectomy (Mini-lap, Laparoscopic)	Yes
11.	Medico-Legal Cases (Rape ,Sexual Assault)	Registration, Examination , Sample collection ,Treat ,Provision of emergency contraception (as per Supreme Court order)

GENERAL MEDICINE

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	Fever -a) Short duration (<1 week)	Basic investigation and Treatment
	Fever -b) Long duration (>1 week)	Investigation and treatment
	c) Typhoid	Treat
	d) Malaria / Filaria	Treat
	e) Pulmonary Tuberculosis.	Treat
	f) Viral Hepatitis	Treat If HBs, Ag +ve refer to tertiary care

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
	g) Leptospirosis / Meningitis and Haemorrhagic fever	Confirm by MAT / CSF Analysis and treat
	f) Malignancy	Confirm diagnosis refer to tertiary care
2	COMMON RESPIRATORY ILLNESSES	

	Bronchial Asthma / Pleuraleffusion / Pneumonia / Allergic Bronchitis/COPD	Diagnose and Treat
3	COMMON CARDIAC PROBLEMS	
	a) Chest pain (IHD)	Treat and decide further management
	b) Giddiness (HT)	Diagnose and treat

S. No	Name of the Illness	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
4	GASTRO INTESTINAL TRACT	
a)	G I Bleed / Portal hypertension / Gallbladder disorder	Investigate and treat
b)	Acute Gastro Enteritis / Dysentery / Diarrhoeas	Treat
5	NEUROLOGY	
a)	Chronic Headache	Investigate, treat & decide further
b)	Chronic Vertigo/ CVA/TIA/Hemiplegia/ Paraplegia	Treat

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
6	HAEMATOLOGY	
a)	Anemia	Basic investigation and Treatment
b)	Bleeding disorder	Stabilize Ref. To tertiary
c)	Malignancy	Treat & decide further
7	Communicable Diseases	
	Cholera Measles Mumps Chickenpox Malaria Tuberculosis	Treat

8	Psychological Disorders	
	Acute psychosis / Obsession / Anxiety neurosis	Treat

PAEDIATRICS

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	ARI/ Bronchitis Asthmatic	Investigate Diagnose Nebuliser Oxygen
2	Diarrheal Diseases	Diagnose Treat ORT corner
3	Protein Energy Malnutrition and Vitamin Deficiencies	Investigate Diagnose Treat with help of Dietician
4	Pyrexia of Unknown Origin	Diagnose Treat
5	Bleeding Disorders	Investigate Treat
6	Diseases of Bones and Joints	Investigate Treat
7	Childhood Malignancies	Investigate for initial diagnose & treatment then refer, support long term treatment in liaison with tertiary care hospital.
8	Liver Disorders	Investigate Manage
9	Paediatric Surgical Emergencies	Investigate Manage
10	Poisoning, Sting, Bites	Treat

Step down care and follow up care for patients being managed from tertiary level hospital in liaison / tandem with them for close to home care in follow up or after stabilization.

NEONATOLOGY

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	Attention at birth (to prevent illness)	5 cleans warm chain
2	Hypothermia	Warm chain
3	Birth asphyxia	Resuscitation And Treatment
4	Hypoglycemia	Treat
5	Meconium aspiration syndrome	Treat
6	Convulsions (seizures)	Investigate & Treat
7	Neonatal Sepsis	Investigate & Treat
8	LBW	Treat
9	Neonatal Jaundice	Treat
10	Preterm	Warm chain, feeding, kangaroo care, Treat
11	Congenital malformations	Manage
12	R.D.S,ARI	Manage CPAP
13	Seriously ill baby	Identify and manage Refer appropriately
14	Feeding Problems	Identify and manage
15	Neonatal diarrhoea	Diagnosis and manage
16	Birth injury	Manage

17	Neonatal Meningitis	Manage
18	Renal problems/Congenital heart disease/Surgical emergencies	Refer
19	HIV/AIDS	Exclusive breast feeding & manage minor ailments, refer for ART to higher centre
20	Hypocalcemia	Manage
21	Metabolic Disorders	Diagnose & manage & if no improvement, refer.
22	Hyaline Membrane diseases	Diagnose & refer
23	Neonatal Malaria	Manage
24	Blood disorders	Manage
25	Developmental Delays	CBR
26	UTIs	Manage & refer
27	Failure to Thrive	Manage & Refer

DERMATOLOGY

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	Infections a) Viral - HIV - Verruca Molluscum Contagiosa	Treat
	Pityriasis Rosea LGV HIV	Treat
	b) Bacteria Pyoderma Chancroid	Treat
	Gonorrhoea, Leprosy Tuberculosis	Treat
	c) Fungal Sup.Mycosis Subcut - Mycetoma	Treat
	d) Parasitic Infestation Scabies / Pediculosis/Larva Migrans	Treat

	e) Spirochaetes Syphilis	Diagnosis and Treat
2	Papulosquamous Psoriasis (classical)-uncomplicated/Lichen Planus	Treat
3	Pigmentary Disorder Vitiligo	Treat
4	Keratinisation Disorder Ichthyosis/Traumatic Fissures	Treat
5	Autoimmune Collagen Vascular DLE, Morphea	Treat / Refer
6	Skin Tumors , Seb. Keratosis, Soft Fibroma, Benign Surface, Tumors / Cysts, Appendageal Tumors	Treat
7	Miscellaneous a) Acne Vulgaris, Malaria, Alopecia, Nail disorder, Toxin induced	Treat
	b) Leprosy - Resistant/ Complications / reaction Allergy - EMF / SJS / TENP soriasis/Collagen Vascular/Auto immune Disorders	Treat
	c) Deep Mycosis, STD Complications	Treat
	d) Genetically Determined Disorders	Treat

CHEST DISEASES

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	Fever	Investigation and Treatment
2	Cough with Expectoration / Blood Stained	Treatment CT Scan if necessary
3	Hemoptysis	CT scan Bronchoscopy Treatment
4	Chest Pain	Investigation and Treatment
5	Wheezing	Treatment, PFT
6	Breathlessness	Investigation and Treatment Chest Physiotherapy

PSYCHIATRY

S. No.	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	Schizophrenia	Treatment and Follow up IP Management
2	Affective/Bipolar disorders	Treatment and Follow up IP Management
3	Obsessive compulsive disorders	Treatment and Follow up IP Management
4	Anxiety Disorders	Treatment and Follow up IP Management
5	Childhood Disorders including Mental Retardation	Treatment and Follow up IP Management
6	Somatoform and conversion disorders	Treatment and Follow up IP Management
7	Alcohol and Drug Abuse	Treatment and Follow up IP Management
8	Dementia	Treatment and Follow up IP Management

DIABETOLOGY

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	Screening for Diabetes	Diagnose and Treat
2	Gestational Diabetes/DM with Pregnancy	Diagnose and Treat
3	DM with HT	Diagnose and Treat
4	Nephropathy/Retinopathy	Diagnose and Treat
5	Neuropathy with Foot Care	Diagnose and Treat
6	Emergency :- i) Hypoglycemia ii) Ketosis iii) Coma	Diagnose and Treat

NEPHROLOGY

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
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1	Uncomplicated UTI	Treat
2	Nephrotic Syndrome - Children/ Acute Nephritis	Treat
3	Nephrotic Syndrome - Adults	Refer to Tertiary follow up care
4	HT, DM	Treat
5	Asymptomatic Urinary Abnormalities	Treat
6	Nephrolithiasis	Treat
7	Acute renal Failure/ Chronic Renal Failure	Treat and Dialysis Services
8	Tumors	Refer to Tertiary

NEURO MEDICINE AND NEURO SURGERY

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	Epilepsy	Investigate and Treat
2	C.V.A.	Investigate and Treat
3	Infections	Investigate and Treat
4	Trauma	Investigate and Treat
5	Chronic headache	Investigate and Treat
6	Chronic Progressive Neurological disorder	Investigate and Treat

GENERAL SURGERY

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
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1	Basic Techniques	a. Minor Cases under LA Abscess I&D/Suturing, Biopsy / Excision of Lipoma / Ganglion / Lymph Node, Seb-Cyst / Dermoid / Ear Lobe Repair / Circumcision	Treat
		b. FNAC Thyroid, Breast Lumps, Lymphnodes, Swelling	Investigate / Diagnosis /Treatment
2	Elective Surgeries	a. Genitourinary tract Hydrocele, Hernia, Circumcision, Supra pubic cystostomy,	Treat
		b. Gastrointestinal disorder Appendicitis/Anorectal abscesses/Rectal prolapse/Liver abscess/Haemorrhoids/Fistula	Treat
3	Emergency surgeries	Assault injuries/Bowel injuries/Head injuries/Stab injuries/Multiple injuries/Perforation/Intestinal obstruction	Treat
4	Benign/ Malignant Diseases	Breast/Oral/GI tract/Genitourinary (Penis, Prostate, Testis)	Treat
5	Others	Thyroid, Varicose veins	Treat
6	Burns	Burns < 15% >15%	Treat Treat
7	Medico legal	a) Assault / RTA	AR Entry / Treat
		b) Poisonings	AR Entry / Treat
		c) Rape	AR Entry / Treat
		d) Postmortem	Done

OPHTHALMOLOGY

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	Superficial Infection	Treatment with drugs
2	Deep Infections	Treat
3	Refractive Error	Treat
4	Glaucoma	Treat

5	Eye problems following systemic disorders	Treat
6	Cataract	Treat
7	Foreign Body and Injuries	Treat
8	Squint and Amblyopia/Corneal Blindness(INF,INJ,Leucoma)/ Oculoplasty	Treat
9	Malignancy/Retina Disease	Treat
10	Paediatric Ophthalmology	Treat

EAR, NOSE, THROAT

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
EAR		
1	ASOM/SOM/CSOM	Treat/Surgical if needed
2	Otitis External / Wax Ears	Treat
3	Polyps	Surgical Treatment
4	Mastoiditis	Treatment Surgery if needed
5	Unsafe Ear	Surgery
6	Deafness	Treat the cause and Hearing Aid
7	Foreign Body	Removal
THROAT		
1	Tonsillitis/Pharyngitis/Laryngitis	Treat
2	Quinsy	Surgery
3	Malignancy Larynx	Treat
4	Foreign Body Esophagus	Treat (removal)

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
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NOSE		
1	Epistaxis	Treat
2	Foreign Body	Treat
3	Polyps	Treat (Removal)
4	Sinusitis	Treat (surgery if needed)
5	Septal Deviation	Treat (surgery if needed)

ORTHOPADICS

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	Osteomyelitis	Surgery
2	Rickets /Nutritional Defeciencies	Manage with Physiotherapy
3	Poliomyelitis with residual Deformities/JRA/RA	Joint Replacement / Rehab for Polio
4	RTA/Polytrauma	Manage

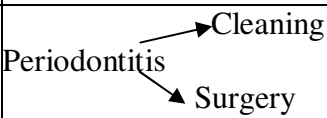
UROLOGY

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
CHILDREN		
1	Hydronephrosis	Diagnose and refer
2	Urinary Tract Injuries	Diagnose and refer
3	PUV/ Posterior Urethral Valve	Diagnose and refer
4	Cystic Kidney	Diagnose and refer
5	Urinary Obstruction	Urethrral Catheter Insertion SPC and Referral
6	Undesended Testis	Diagnose and refer
7	Hypospadias and Epispadias	Diagnose and refer

8	Mega Ureter	Diagnose and refer
9	Extrophy	Diagnose and refer
10	Tumours - Urinary Tact	Diagnose and refer

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
ADULT		
	All above and	
1	Stricture Urethra	Treatment
2	Stone Diseases	Treatment/ Referral
3	Cancer - Urinary and Genital Tract	Treatment/ Referral
4	Trauma Urinary Tact	Treatment/ Referral
5	GUTB	Treatment/Referral/ Follow up
OLD AGE		
1	Prostate Enlargement and Urinary Retention	Treatment / Referral
2	Stricture Urethra	Treatment
3	Stone	Treatment/Referral
4	Cancer (Kidney, Bladder, Prostate, Testis, Penis and Urethra)	Treatment/Referral
5	Trauma Urinary Tract	Treatment/Referral

DENTAL SURGERY

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	Dental Caries/Dental Abcess/Gingivitis	Treat
2	Periodontitis 	Treat
3	Minor Surgeries, Impaction, Flap	Treat

4	Malocclusion	Treat with appliances
5	Prosthodontia (Prosthetic Treatment)	Treat with appliances
6	Trauma	Treat (wiring and plating)
7	Maxillo Facial Surgeries	Treat and refer
8	Neoplasms	Treat and Refer if necessary

HEALTH PROMOTION & COUNSELLING

S. No.	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	CHD / M.I.	Counseling / Diet advice Safe Life Style changes
2	Diabetes	Life Style Modifications / Physiotherapy
3	Substance Abuse	Vocational Rehabilitation Safe Style
4	HIV / AIDS	HIV Counseling
5	Tobaccoism	Tobacco cessation

COMMUNITY HEALTH SERVICES:

S. No.	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	Communicable & Vaccine Preventable Diseases	Health Promotional Activities like ORT Corner, Immunization Camps
2	Non-communicable Diseases	Epidemic Health Investigation, Promotion & Counseling Activities
3	Adolescent & School Health	Adolescent & school health promotional activities including services
4	Family Planning	Counseling services, camps, follow up of contraceptive users
5	HIV / AIDS	HIV Counseling and Testing; STI testing; Blood safety; STI syndromic treatment

6. Physical infrastructure

7.1. **Size of the hospital:** the size of a district hospital is a function of the hospital bed requirement which in turn is a function of the size of the population served. In India the population size of a district varies from 50,000 to 15,00,000. For the purpose of convenience the average size of the district is taken in this document as one million populations. Based on the assumptions of the annual rate of admission as 1 per 50 populations. And average length of stay in a hospital as 5 days. The number of beds required for a district having a population of 10 lakhs will be as follows:

$$\text{The total number of admissions per year} = 10,00,000 \times 1/50 = 20,000$$

Bed days per year = 20,000 x 5 = 100,000

Total number of beds required when occupancy is 100% = 100000/365 = 275 beds

Total number of beds required when occupancy is 80% = 100000/365 x 80/100
= 220 beds

Requirement of beds in a District Hospital would also be determined by following factors:

- a) Urban and Rural Population, Profile and likely burden of diseases
- b) Geographic terrain
- c) Communication network
- d) Location of FRUs and Sub-district Hospitals in the area
- e) Nearest Tertiary care hospital and its distance & Travel time
- f) Facilities in Private Sector and Not-for profit sectors
- g) Healthcare facilities for specialised population – Defence, Railways, etc.
- h) Any tourist facility

7.2. Area of the hospital: An area of 65-85 m² per bed has been considered to be reasonable. The area will include the service areas such as waiting space, entrance hall, registration counter, etc. In addition, Hospital Service buildings like Generators, HVAC plant, Manifold Rooms, Boilers, Laundry, Kitchen and essential staff residences are required in the Hospital premises. In case of specific requirement of a hospital, flexibility in altering the area be kept.

7.3. Site selection criteria: In the case of either site selection or evaluation of adaptability, the following items must be, considered: Physical description of the area which should include bearings, boundaries, topography, surface area, land used in adjoining areas, drainage, soil conditions, limitation of the site that would affect planning, maps of vicinity and landmarks or centers, existing utilities, nearest city, port, airport, railway station, major bus stand, rain fall and data on weather and climate.

7.4. Factors to be considered in locating a district hospital

- ◆ The location may be near the residential area.
- ◆ Too old building may be demolished and new construction done in its place.
- ◆ It should be free from dangers of flooding; it must not, therefore, be sited at the lowest point of the district.
- ◆ It should be in an area free of pollution of any kind, including air, noise, water and land pollution.
- ◆ It must be serviced by public utilities: water, sewage and storm-water disposal, electricity, gas and telephone. In areas where such utilities are not available, substitutes must be found, such as a deep well for water, generators for electricity and radio communication for telephone.
- ◆ Necessary environmental clearance will be taken.
- ◆ Disability Act will be followed.

7.5. Site selection Process

A rational, step-by-step process of site selection occurs only in ideal circumstances. In some cases, the availability of a site outweighs other rational reasons for its selection, and planners and architects are confronted with the job of assessing whether a piece of land is suitable for building a hospital.

7.6 In the already existing structures of a district hospital

- ◆ It should be examined whether they fit into the design of the recommended structure and if the existing parts can be converted into functional spaces to fit in to the recommended standards.
- ◆ If the existing structures are too old to become part of the new hospital, could they be converted to a motor pool, laundry, store or workshop or for any other use of the district hospital.
- ◆ If they are too old and dilapidated then they must be demolished. And new construction should be put in place.

7.7 Hospital Building - Planning and Lay out-

Hospital Management Policy should emphasize on hospital buildings with quake proof, flood proof and fire protection features. Infrastructure should be eco-friendly and disabled (physically and visually handicapped) friendly. Local agency Guidelines and By-laws should strictly be followed.

i) Appearance and upkeep -

- a) The hospital should have a high boundary wall with at least two exit gates.
- b) Building shall be plastered and painted with uniform colour scheme.
- c) There shall be no unwanted/ outdated posters pasted on the walls of building and boundary of the hospital.
- d) There shall be no outdated/unwanted hoardings in hospital premises.
- e) There shall be provision of adequate light in the night so hospital is visible from approach road.
- f) There shall be no encroachment in and around the hospital.

ii) Signage:

- a) The building should have a prominent board displaying the name of the Centre in the local language at the gate and on the building. Signage indicating access to various facilities at strategic points in the Hospital for guidance of the public should be provided. For showing the directions, colour coding may be used.
- b) Citizen charter shall be displayed at OPD and Entrance in local language including patient rights and responsibilities.
- c) Hospital lay out with location and name of the facility shall be displayed at the entrance.

- d) Directional signages for Emergency, all the Departments and utilities shall be displayed appropriately, so that they can be accessed easily.
- e) Florescent Fire Exit plan shall be displayed at each floor.
- f) Safety, Hazard and caution signs displayed prominently at relevant places.
- g) Display of important contacts like higher medical centres, blood banks, fire department, police, and ambulance services available in nearby area.
- h) Display of mandatory information (under RTI act, PNDT act, MTP act etc.)

iii) Condition of roads, pathways and drains

- a) Approach road to hospital emergency shall be all weather motorable road.
- b) Roads shall be illuminated in the nights.
- c) There shall be dedicated parking space separately for ambulances, Hospital staff and visitors.
- d) There shall be no stagnation /over flow of drains.
- e) There shall be no water logging/ marsh in or around the hospital premises.
- f) There shall be no open sewage/ ditches in the hospital.

iv) Disaster Prevention Measures: (For all new upcoming facilities in seismic zone 5 or other disaster prone areas)

Desirable

For prevention of

Earthquake,
Flood
and Fire

Building structure and the internal structure of Hospital should be made disaster proof especially earthquake proof, flood proof and equipped with fire protection measures.

Quake proof measures – structural and non-structural should be built in to withstand quake as per geographical/ state govt. guidelines. Non-structural features like fastening the shelves, almirahs, equipments etc are even more essential than structural changes in the buildings. Since it is likely to increase the cost substantially, these measures may especially be taken on priority in known earthquake prone areas. (For more details refer to **Annexure IX.**)

Hospital should not be located in low lying area to prevent flooding.

Fire fighting equipments – fire extinguishers, sand buckets, etc. should be available and maintained to be readily available when there is a problem.

All health staff should be trained and well conversant with disaster prevention and management aspects

v) Environmental friendly features

The Hospital should be, as far as possible, environment friendly and energy efficient. Rain-Water harvesting, solar energy use and use of energy-efficient bulbs/equipments should be encouraged. Provision should be made horticulture services including herbal garden. A room for horticulture to store garden implements, seeds etc will be made available.

vi) Barrier free access: for easy access to non-ambulant(wheel- chair, stretcher), semi-ambulant, visually disabled and elderly persons as per “Guidelines and Space Standards for barrier-free built environment for Disabled and Elderly Persons” of CPWD/ Min of Social Welfare, GOI. This will ensure safety and utilization of space by disabled and elderly people fully and full integration into the society

vii) Administrative Block:

Administrative block attached to main hospital along with provision of MS Office and other staff will be provided.

viii) Circulation Areas

Circulation areas like corridors, toilets, lifts, ramps, staircase and other common spaces etc. in the hospital should not be more than 55% of the total floor area of the building.

ix) Floor Height

The room height should not be less than approximately 3.6 m measured at any point from floor to floor height.

x) Entrance Area

Barrier free access environment for easy access to non-ambulant(wheel- chair, stretcher), semi-ambulant, visually disabled and elderly persons as per “Guidelines and Space Standards for barrier-free built environment for Disabled and Elderly Persons” of CPWD/ Min of Social Welfare, GOI.

Ramp as per specification, Hand- railing, proper lightning etc must be provided in all health facilities and retrofitted in older one which lack the same.

xi) **Residential Quarters**

All the essential medical and para-medical staff will be provided with residential accommodation. If the accommodation can not be provided due to any reason, then the staff may be paid house rent allowance, but in that case they should be staying in near vicinity, so that essential staff is available 24x7.

xii) **Hospital communication-**

1. 24x7 working telephone shall be available for hospital.
2. Competent person shall be available for answering the enquiries

7.8 Departmental Lay Out

7.8.1 Clinical Services

I) Outdoor Patient Department (OPD)

The facility shall be planned keeping in mind the maximum peak hour patient load and shall have the scope for future expansion. OPD shall have approach from main road with signage visible from a distance.

a. Reception and Enquiry-

- Enquiry/ May I Help desk shall be available with competent staff fluent in local language.
- Services available at the hospital displayed at the enquiry.
- Name and contacts of responsible persons like Medical superintendent, Hospital Manger, Causality Medical officer, Public Information Officer etc shall be displayed .

b. Waiting Spaces

Waiting area with adequate seating arrangement shall be provided. Main entrance, general waiting and subsidiary waiting spaces are required adjacent to each consultation and treatment room in all the clinics.

c. Layout of OPD shall follow functional flow of the patients. E.g.-

Enquiry→Registration→Waiting→SubWating→Clinic→Dressing room/Injection Room→Billing→Dignostics(lab/X-ray)→pharmacy→Exit

d. Patient amenities-

- Potable drinking water
- Functional and clean toilets with running water and flush

- Fans/Coolers.
- Seating arrangement as per load of patient.

e. Clinics

The clinics should include general, medical, surgical, ophthalmic, ENT, dental, obstetric and gynaecology, paediatrics, dermatology and venereology, psychiatry, neonatology, orthopaedic and social service department. The clinics for infectious and communicable diseases should be located in isolation, preferably, in remote corner, provided with independent access. For National Health Programme, adequate space be made available. Immunization Clinic with waiting Room having an Area of 3m x 4m in PP centre/Maternity centre/Pediatric Clinic should be provided. 1 Room for HIV/STI counseling is to be provided. Pharmacy shall be in close proximity of OPD. All clinics shall be provided with examination table, X-ray- View box, Screens and hand washing facility.

f. Nursing Services

Various clinics under Ambulatory Care Area require nursing facilities in common which include dressing room, side laboratory, injection room, social service and treatment rooms, etc.

Nursing Station: Need based space required for Nursing Station in OPD for dispensing nursing services. (Based on OPD load of patient)

Diagnostic Services

Provision for following Space be made

- Separate room for doctors/consultants
- rooms for reporting
- space for technicians
- storage /records areas
- sufficient waiting areas

g. Quality Assurances in Clinics -

- Work load at OPD shall be studied and measures shall be taken to reduce the Waiting Time for registration, consultation, Diagnostics and pharmacy.
- Punctuality of staff shall be ensured.
- Cleanliness of OPD area shall be monitored on regular basis.
- There shall be provision of complaints/suggestion box. There shall be a mechanism to redress the complaints.

- Hospital shall develop standard operating procedures for OPD management, train the staff, and implement it accordingly.

h. Desirable Services –

1. Air-cooling
2. Patient calling system with electronic display.
3. Specimen collection centre
4. Television in waiting area
5. Computerized Registration
6. Public Telephone booth
7. Provision of OPD manager

II) Imaging

Role of imaging department should be radio-diagnosis and ultrasound along with hire facilities depending on the bed strength. The department should be located at a place which is accessible to both OPD and wards and also to operation theatre department. The size of the room should depend on the type of instrument installed. The room should have a sub-waiting area with toilet facility and a change room facility, if required. Film developing and processing (dark room) shall be provided in the department for loading, unloading, developing and processing of X-ray films. Separate Reporting Room for doctors should be there. **Lead Aprons and Thermo Luminescent Dosimeters (TLD) badges shall be available with all the staff working in x-ray room which will be sent to Atomic energy regulation Board on regular basis..**

III) Clinical Laboratory

For quick diagnosis of blood, urine, etc., a small sample collection room facility shall be provided. Separate Reporting Room for doctors should be there.

Quality Assurance in Lab. Services

External validation of lab reports shall be done on regular basis. Facility of emergency laboratory services shall be available. Service provided by the department with schedule of charges shall be displayed at the entrance of department. Timely reporting should be ensured.

IV) Blood Bank

Blood bank shall be in close proximity to pathology department and at an accessible distance to operation theatre department, intensive care units and emergency and accident department. Blood Bank should follow all existing guidelines and fulfill all requirements as per the various Acts pertaining to setting up of the Blood Bank. Separate Reporting Room for doctors should be there.

Quality Assurance in blood bank-

1. Hospital shall develop standard operating procedure for management of blood bank services including policy on rational use of blood and blood product, selection of donors, counselling and examination of donors, consent for donation, issue and transport of blood, storage of blood, cross matching, blood transfusion, safety precaution.
2. Blood bank shall validate the test results from external labs on regular basis.
3. Service provided by the department with schedule of charges shall be displayed at the entrance of department
4. Availability of blood group shall be displayed prominently in the blood bank.
5. Blood bank shall adhere to NACO guidelines and drug and cosmetic act strictly.
6. Blood bank shall practice first in first out policy for reduction of waste. Adequate measures shall be taken to prevent expiry of blood or blood components.
9. Use of blood component shall be encouraged.

V) Intermediate Care Area (Inpatient Nursing Units)

General IPD beds shall be categorized as following-

1. Male Medical ward
2. Male surgical ward
3. Female Medical ward
4. Female surgical ward
5. Maternity ward
6. Paediatric ward
7. Nursery
8. Isolation ward

As per need and infrastructure hospital have following wards –

1. Emergency ward/trauma ward
2. Burn Ward
3. Orthopaedic ward

4. Post operative ward

5. Ophthalmology Ward

6. Malaria Ward

7. Infectious Disease Ward

8. Private ward: Depending upon the requirement of the hospital and catchment area, appropriate beds may be allowed for private facility. 10% of the total bed strength is recommended as private wards beds.

Location

Location of the ward should be such to ensure quietness and to control number of visitors.

Ward Unit

The basic aim in planning a ward unit should be to minimize the work of the nursing staff and provide basic amenities to the patients within the unit. The distances to be traveled by a nurse from bed areas to treatment room, pantry etc. should be kept to the minimum. Ward unit will include nursing station, doctors' duty room, pantry, isolation room, treatment room, nursing store along with wards and toilets as per the norms. On an average one nursing station per ward will be provided. It should be ensure that nursing station caters to around 40-45 beds, out of which half will be for acute patients and chronic patients. The following quality parameters should be ensured.

- There shall be at least 3.5 feet distance between two beds to prevent cross infection and allow bedside nursing care.
- The Nurse:Bed shall be 1:3 (as per Nursing Council of India regulations)
- Every bed shall be provided with IV stand, bed side locker and stool for attendant. Screen shall be available for privacy.
- Dedicated toilets with running water facility and flush shall be provide for each ward.
- Dirty utility room with sluicing facility and janitors rooms shall be provided with in ward.
- All wards shall be provided with positive ventilation (except isolation ward) and fans.

VI) Pharmacy (Dispensary)

The pharmacy should be located in an area conveniently accessible from all clinics. The size should be adequate to contain 5 percent of the total clinical visits to the OPD in one session.

Pharmacy should have component of medical store facility for indoor patients and separate pharmacy with accessibility for OPD patients.

Hospital shall have standard operating procedure for stocking, preventing stock out of essential drugs, receiving, inspecting, handing over , storage and retrieval of drugs, checking quality of drugs, inventory management (ABC & VED), storage of narcotic drugs, checking pilferage, date of expiry, pest and rodent control etc.

VII) Patient Conveniences: It is to be as per local byelaws.

VIII) Intensive Care Unit and High Dependency Wards

General

In this unit, critically ill patients requiring highly skilled life saving medical aid and nursing care are concentrated. These should include major surgical and medical cases, head injuries, severe haemorrhage, acute coronary occlusion, kidney and respiratory catastrophe, poisoning etc. It should be the ultimate medicare the hospital can provide with highly specialized staff and equipment. The number of patients requiring intensive care may be about 2 to 5 percent total medical and surgical patients in a hospital. The unit shall not have less than 4 beds nor more than 12 beds. Number of beds may be restricted to 5% of the total bed strength initially but should be expanded to 10% gradually. Out of these, they can be equally divided among ICU and High Dependency Wards. For example, in a 500-bedded hospital, total of 25 beds will be for Critical Care. Out of these, 13 may be ICU beds and 12 will be allocated for High Dependency Wards. Changing room should be provided for.

Location

This unit should be located close to operation theatre department and other essential departments, such as, X-ray and pathology so that the staff and ancillaries could be shared. Easy and convenient access from emergency and accident department is also essential. This unit will also need all the specialized services, such as, piped suction and medical gases, uninterrupted electric supply, heating, ventilation, central air conditioning and efficient life services. A good natural light and pleasant environment would also be of great help to the patients and staff as well.

Number of beds for both the units will be restricted to 5% of the total bed strength. Out of these, they can be equally divided among ICU and High Dependency Wards. For example, in a 500 bedded hospital, total of 25 beds will

be for critical care. Out of these 13 may be ICU beds and 12 will be allocated for high dependency wards.

Facilities

Nurses Station
Clean Utility Area
Equipment Room

IX) Accident and Emergency Services

1. 24x 7 operational emergency with dedicated emergency room shall be available with adequate man power.
2. It should preferably have a distinct entry independent of OPD main entry so that a very minimum time is lost in giving immediate treatment to casualties arriving in the hospital. There should be an easy ambulance approach with adequate space for free passage of vehicles and covered area for alighting patients.
3. Lay out shall follow the functional flow.
4. Signage of emergency shall be displayed at the entry of the hospital with directional signage at key points.
5. Emergency shall have dedicated triage, resuscitation and observation area. Screens shall be available for privacy.
6. Separate provision for examination of rape / sexual assault victim should be made available in the emergency as per guidelines of the Supreme Court
7. Emergency should have mobile X-ray/ laboratory, side labs/plaster room/and minor OT facilities. Separate emergency beds may be provided. Duty rooms for Doctors/ nurses/paramedical staff and medico legal cases. Sufficient separate waiting areas and public amenities for patients and relatives and located in such a way which does not disturb functioning of emergency services.
8. Emergency block to have ECG<Pulse Oxymeter, Cardiac Monitor with Defibrillator, Multiparameter Monitor, Ventilator also.
9. Stretcher, wheelchair and trolley shall be available at the entrance of the emergency at designated area.

X) Operation Theatre

Operation theatre usually has a team of surgeons anesthetists, nurses and sometime pathologist and radiologist operate upon or care for the patients. The location of Operation theatre should be in a quite environment, free from noise and other disturbances, free from contamination and possible cross infection, maximum protection from solar radiation and convenient relationship with surgical ward, intensive care unit, radiology, pathology, blood bank and CSSD. This unit also need constant specialized services, such as, piped suction and medical gases, electric supply, heating, air-conditioning, ventilation and efficient life service, if the theatres are located on upper floors. Zoning should be done to keep the theatres free from micro organisms. There may be four well defined zones of varying degree of cleanliness namely, Protective Zone, Clean Zone, Aseptic or Sterile Zone and Disposal or Dirty Zone. Normally there are three types of traffic flow, namely, patients, staff and supplies. All these should be properly channelized. An Operation Theatre should also have Preparation Room, Pre-operative Room and Post Operative Resting Room. Operating room should be made dust-proof and moisture proof. There should also be a Scrub-up room where operating team washes and scrub-up their hands and arms, put on their sterile gown, gloves and other covers before entering the operation theatre. The theatre should have sink / photo sensors for water facility. Laminar flow of air be maintained in operation theatre. It should have a central air conditioning facility. It should have a single leaf door with self closing device and viewing window to communicate with the operation theatre. A pair of surgeon's sinks and elbow or knee operated taps are essential. Operation Theatre should also have a Sub-Sterilizing unit attached to the operation theatre limiting its role to operating instruments on an emergency basis only.

Theatre refuse, such as, dirty linen, used instruments and other disposable / non disposable items should be removed to a room after each operation. Non-disposable instruments after initial wash are given back to instrument sterilization and rest of the disposable items are disposed off and destroyed. Dirty linen is sent to laundry through a separate exit. The room should be provided with sink, slop sink, work bench and draining boards.

XI) Delivery Suite Unit

The delivery suit unit be located near to operation theatre, & located preferably on the ground floor

The delivery Suit Unit should include the facilities of accommodation for various facilities as given below:

- Reception and admission
- Examination and Preparation Room
- Labour Room (clean and a septic room)
- Delivery Room
- Neo-natal Room

Sterilizing Rooms
Sterile Store Room
Scrubbing Room
Dirty Utility

Doctors Duty Room
Nursing Station
Nurses changing Room
Group C & D Room
Eclampsia Room

XII) Physical Medicine and Rehabilitation (PMR)

The PMR department provides treatment facilities to patients suffering from crippling diseases and disabilities. The department is more frequently visited by out-patients but should be located at a place which may be at convenient access to both outdoor and indoor patients with privacy. It should also have a physical and electro-therapy rooms, gymnasium, office, store and toilets separate for male and female. Normative standards will be followed.

7.8.2 Hospital Services

I) Management Information System (MIS)

Computer with Internet connection is to be provided for MIS purpose. Provision of flow of Information from PHC/CHC to district hospital and from there to district and state health organization should be established. Relevant information with regards to emergency, outdoor and indoor patients be recorded and maintained for a sufficient duration of time as per state health policy.

II) Hospital Kitchen (Dietary Service)

The dietary service of a hospital is an important therapeutic tool. It should easily be accessible from outside along with vehicular accessibility and separate room for dietician and special diet. It should be located such that the noise and cooking odours emanating from the department do not cause any inconvenience to the other departments. At the same time location should involve the shortest possible time in delivering food to the wards. Apart from normal diet diabetic, semi solid diets and liquid diet shall be available

III) Central Sterile and Supply Department (CSSD)

As the operation theatre department is the major consumer of this service, it is recommended to locate the department at a position of easy access to operation theatre department. It should have a provision of hot water supply. Department shall develop and implement the for transfer of unsterile and sterile items between CSSD and departments, sterilization of different items, complete process cycle,

validation of sterilization process, recall , labelling, first in first out, calibration and maintenance of instruments.

IV) Hospital Laundry

It should be provided with necessary facilities for drying, pressing and storage of soiled and cleaned linens. It may be outsourced.

V) Medical and General Stores

There are of medical and general store should have vehicular accessibility and ventilation, security and fire fighting arrangements. Hospital shall have standard operating procedure for local purchase, indent management, storage and preparation of monthly requirement plan, Inventory analysis

For Storage of Vaccines and other logistics

Cold Chain Room: 3.5m x 3m in size

Vaccine & Logistics Room: 3.5m x 3m in size

Minimum and maximum Stock (0.5 and 1.25 month respectively). Indent order and receipt of vaccines and logistics should be monthly. CC & VL Assistant will be responsible for timely receipt of required vaccines and Logistics from the District Stores

VI) Mortuary

It provides facilities for keeping of dead bodies and conducting autopsy. It should be so located that the dead bodies can be transported unnoticed by the general public and patients.

VII) Engineering Services

Electric Engineering

Sub Station and Generation

Electric sub station and standby generator room should be provided.

Illumination

The illumination and lightning in the hospital should be done as per the prescribed standards.

Emergency Lighting

Shadow less light in operation theatre and delivery rooms should be provided. Emergency portable light units should be provided in the wards and departments.

Call Bells

Call bells with switches for all beds should be provided in all types of wards with indicator lights and location indicator situated in the nurses duty room of the wards.

Ventilation

The ventilation in the hospital may be achieved by either natural supply or by mechanical exhaust of air.

Mechanical Engineering

Air-conditioning and Room Heating in operation theatre and neo-natal units should be provided. Air coolers or hot air convectors may be provided for the comfort of patients and staff depending on the local needs.

Hospital should be provided with water coolers and refrigerator in wards and departments depending upon the local needs.

Public Health Engineering

Water Supply

Arrangement should be made for round the clock piped water supply along with an overhead water storage tank with pumping and boosting arrangements. Approximately 10000 litres of potable water per day is required for a 100 bedded hospital. Separate provision for fire fighting and water softening plants be made available.

Drainage and Sanitation

The construction and maintenance of drainage and sanitation system for waste water, surface water, sub-soil water and sewerage shall be in accordance with the prescribed standards. Prescribed standards and local guidelines shall be followed.

Other Amenities

Disabled friendly, WC with basins wash basins as specified by Guidelines for disabled friendly environment should be provided.

IX) Waste Disposal System

National Guidelines on Bio-Medical Waste Management are at **Annexure II**
Mercury waste management guidelines are placed at **Annexure III**

- X) **Housekeeping services –**
Hospital shall develop and implement standard operating procedure for cleaning techniques, pest control, frequency and supervision of housekeeping activities.
- XI) **Medical Gas:** All gases may preferably be supplied through manifold system
- XII) **Cooking Gas:** Liquefied petroleum gas (LPG)
- XIII) **Building Maintenance:** Provision for building maintenance staff and an office-cum store will be provided to handle day to day maintenance work
- XIV) **Annual Maintenance Contract(AMC)**
AMC should be taken for all equipments which need special care and preventive maintenance done to avoid break down and reduce down time of all essential and other equipments.
- XV) **Record Maintenance (medical record department)**
Hospital shall have dedicated medical record department to store patient's record and other data pertaining to hospital.
- XVI) **Committee Room:** A meeting or a committee room for conferences, trainings with associated furniture.

8. MANPOWER REQUIREMENTS

8.1. MAN POWER – DOCTORS

Sl. No	Staff	Essential	Desirable
1	Hospital Superintendent	1	
2	Medical Specialist	4	
3	Surgery Specialists	4	
4	O&G specialist	6	+2
5	Psychiatrist	1	+1
6	Dermatologist / Venereologist	1	
7	Paediatrician	4	
8	Anesthetist (Regular / trained)	4	+2
9	ENT Surgeon	1	+1
10	Ophthalmologist	2	
11	Orthopedician	2	
12	Orthodontist		1
13	Radiologist	2	+1
14	Radiotherapist*		1
15	Medical Physicist*		1
16	Microbiologist	1	+1
17	Pathologist cum Blood Bank In-charge	1	
18	PMR specialist		1
19	Casualty Doctors / General Duty Doctors	20	+4
20	Dental Surgeon	2	
21	Forensic Expert	1	
22	Public Health Manager ¹	1	
23	AYUSH Physician ²	2 (GDMO)	+2 (Specialist)
24	Pathologists	1	+1
25	Clinical psychologist		1
	Total	61	81

Note :

¹ May be a Public Health Specialist or management specialist trained in public health

² Provided there is no AYUSH hospital / dispensary in the district headquarter

* Where-ever Radiotherapy Unit is available

\$ Cardiologist/Neurologist/ Nephrologist or MD with experience in super specialty

2. MAN POWER – PARA MEDICAL

Sl. No	Staff	Essential	Desirable
1	Staff Nurse*	100+10 (One Psychiatric Nurse and 3 for immunization)	
2	LHV	1	
3	HWM	1	
4	Hospital worker (OPD+ward +OT+ blood bank)	30	
5	Sanitary Worker	20	
6	Ophthalmic Assistant / Refractionist	2	
7	Social Worker / Counsellor	2	
8	Cytotechnician	1	+1
9	ECG Technician	1	
10	ECHO Technician		1
11	Audiometrician	1	
12	Radiotherapy technicians#		2
13	Laboratory Technician (Lab + Blood Bank)	12	
14	Laboratory Attendant (Hospital Worker)	4	
15	Dietician	1	
16	PFT Technician		1
17	Dental Technician	1	
18	Dental Assistant	1	
19	Dental Hygienist	1	
20	Maternity assistant (ANM)	4	
21	Radiographer	3	
22	Dark Room Assistant	2	
23	Pharmacist ¹	8	
24	Matron / ANS	7	
25	Physiotherapist	1	+1
26	Occupational Therapist		1
27	Rehabilitation Therapist		2
28	Prosthetist		1
29	Orthotist		1
30	Multi Rehabilitation worker	1	
31	Rehabilitation Worker	1	
32	Statistical Assistant	1	+1
33	Medical Records Officer / Technician	2	
34	Electrician	1	
35	Plumber	1	

Sl. No	Staff	Essential	Desirable
36	Cold Chain & Vaccine Logistics Assistant	1	
37	Cold Chain Handler	1	
38	Instructor for Young Hearing Impaired		1
	Total	218	231

* 1 Staff Nurse for every eight beds with 25% reserve.

¹ One may from AYUSH

[#] Where-ever Radiotherapy Unit is available

Note General HR and Bed norms for Obstetric Cases

No of Deliveries in a month	Requirement of Bed	Requirement of Labour table	HR requirement Staff Nurses
100 deliveries	10 beds	2 Labour tables	4 for Labour Rooms 5 for ANC/PNC Wards

8.3. MANPOWER- ADMINISTRATIVE STAFF

Sl. No	Item	District Headquarters Hospital plus JD-HS office
		300 Bedded
1	Manager (Administration)	1
2	Junior Administrative Officer	1
3	Office Superintendent	2
4	Account Officer	1
6	Accountant	2
7	Record Clerk	3
8	Office Assistant	4
9	Computer Operator	2
10	Driver	3
11	Peon	2
12	Security Staff*	2
	Total	23

Note : Drivers post will be in the ratio of 1 Driver per 1 vehicle. Driver will not be required if outsourced

* The number would vary as per requirement and to be outsourced.

8.4. MAN POWER – OPERATION THEATRE

Sl. No	Item	District Headquarters Hospital			
		300 Bedded			
		Emergency / FW OT	OPHTH / ENT	A&E	Elective
1	Staff Nurse	5	2	1	6
2	OT Assistant	4	2	2	4
3	Sweeper	2	1	1	2
	Total	11	5	4	12

8.5. MAN POWER – BLOOD BANK / STORAGE

S. No	Item	Blood Bank	Blood Storage
1	Staff Nurse	3	1
2	MNA / FNA	1	1
3	Lab Technician	1	-
4	Sweeper	1	1

9. EQUIPMENT NORMS

Equipment norms are worked out keeping in mind the assured service recommended for various grades of the district hospitals. The equipments required are worked out under the following headings

1. Imaging equipments
2. X Ray Room Accessories
3. Cardiac Equipments
4. Labour ward, Neo Natal and Special Newborn Care Unit (SNCU)
Equipments

5. Immunization Equipments
6. Ear Nose Throat Equipments
7. Eye Equipments
8. Dental Equipments
9. Operation Theatre Equipment
10. Laboratory Equipments
11. Surgical Equipment Sets
12. PMR Equipments
13. Endoscopy Equipments
14. Anaesthesia Equipments
15. Furniture & Hospital Accessories
16. PM equipments
17. Linen
18. Teaching Equipments
19. Administration
20. Refrigeration & AC
21. Hospital Plants
22. Hospital Fittings & Necessities
23. Transport

The detailed information on service norms for equipments is given in the Table I to XXIII.

I. IMAGING EQUIPMENT

S. No.	Name of the Equipment	District Headquarters Hospital 301-500 Bedded
1	500 M.A. X-ray machine*	1
2	300 M.A. X-ray machine	1
3	100 M.A. X-ray machine	1
4	60 M.A. X-ray machine (Mobile)	1
5	C arm with accessories *	1 (Desirable)
6	Dental X ray machine	1
7	Ultra Sonogram (Obs & Gyne. department should be having a separate ultra-sound machine of its own)	2+1
8	Doppler ultrasound	1 (Desirable)
9	Portable ultrasound	1 (Desirable)
10	C.T. Scan Multi slice	1 (Desirable)
11	Mammography Unit *	1
12	Echocardiogram*	1 (Desirable)

* To be provided as per need.

II X-RAY ROOM ACCESSORIES

Sl. No.	Name of the Equipment	District Headquarters Hospital (201-300 bedded)
1	X.ray developing tank	2
2	Safe light X.ray dark room	3
3	Cassettes X.ray	15
4	X.ray lobby single	8
5	X.ray lobby Multiple	1
6	Lead Apron	3
7	Intensifying screen X-ray	3

III CARDIAC EQUIPMENTS

S. No.	Name of the Equipment	District Headquarters Hospital 301-500 Bedded
1	ECG machine computerized	1
2	ECG machine ordinary	2
3	12 Channel stress ECG test equipments Tread Mill *	1
4	Echocardiography Machine	1 (Desirable)
5	Cardiac Monitor	6+2
6	Cardiac Monitor with defibrillator	2
7	Ventilators (Adult)	2+2
8	Ventilators (Paediatrics)	1
9	Pulse Oximeter	6+2
10	Pulse Oximeter with NIB.P*	1
11	Infusion pump	2
12	B.P.apparatus table model	20 +5
13	B.P.apparatus stand model	20+5
14	Stethoscope	30+10

* To be provided as per need.

IV LABOUR WARD, NEO NATAL AND SPECIAL NEWBORN CARE UNIT (SNCU) EQUIPMENTS

S. No.	Name of the Equipment	District Headquarters Hospital (201-300 bedded)
1	Baby Incubators	3 (1 for labour room & 2 for neonatal room)
2	Phototherapy Unit	3
3	Emergency Resuscitation Kit-Baby	4
4	Standard weighing scale	1 each for the labor room & OT
5	Newborn Care Equipments	1 set each for labor room & OT
6	Double-outlet Oxygen Concentrator	1 each for the labor room & OT
7	Radiant Warmer	3 (1 for labour room & 2 for neonatal room)
8	Room Warmer	2
9	Foetal Doppler	2
10	CTG Monitor	3
11	Delivery Kit	15
12	Episiotomy kit	10
13	Forceps Delivery Kit	2

14	Crainotomy	2
15	Vacuum extractor metal	2
16	Silastic vacuum extractor	2
17	Pulse Oximeter baby & adult	2 each
18	Cardiac monitor baby	2
19	Nebulizer baby	4 (for ICU & wards)
20	Weighing machine adult	6
21	Weighing machine infant	4
22	Head Box	6

Equipments List for Special Newborn Care Unit (SNCU)

A General Equipments for SNCU

1	Electronic weighing scale	5(essential)
2	Infantometer	5(essential)
3	Emergency drugs trolley	5(essential)
45	Procedure trolley	5(essential)
5	Wall clock with seconds hand	1 for each room
6	Refrigerator	1 for the unit
7	Spot lamp	5(essential)
8	Portable x-ray machine	1 for the unit (essential)
9	Basic surgical instruments e.g. fine scissors, scalpel with blades, fine artery forceps, suture material & needles, towel, clips etc	1 set per bed (essential)
10	Nebulizer	1 for the unit
11	Multi-channel monitor with non-invasive BP monitor(3 size:0,1,2-disposable in plenty-reusable neonatal probe, at least 4)	4 (desirable)
12	Room Thermometer	4 (essential)

B. Equipments for disinfection of Special Newborn Care Unit

Item	Requirement for the unit
1. Electric heater / boiler	2 (essential)
2. Washing machine with dryer (separate)	1 (essential)
3. Electronic fumigator	2 (essential)
4. Vacuum Cleaner	1 (essential)
5. Gowns for doctors, nurses, neonatal aides, Group D staff & mothers	Adequate number of each size (essential)
6. Washable slippers	Adequate number of each size (essential)
7. Vertical Autoclave	1 (essential)
8. Autoclave drums (large & medium & small sizes)	At least 6 of each size (essential)
9. Disinfectant Sprayer	1 (essential)
10. Container for liquid disinfectant	2 (essential)
11. Formalin Vaporizer	1 (essential)
12. Hot Air Oven	1 (desirable)
13. Ethylene oxide (ETO) Sterilizer	1 (desirable)

C. Equipments for individual patient care in the Special Newborn Care Unit

Item	Requirement for the unit
1. Servo-controlled Radiant Warmer	1 for each bed (essential) + 2
2. Low-Reading Digital Thermometer (centigrade scale)	1 for each bed (essential)
3. Neonatal Stethoscope	1 for each bed (essential) + 2

4. Neonatal Resuscitation Kit (Laerdal type, Silicone, Autoclavable 240 ml, 450ml resuscitation bag with valves- including pressure release valve), oxygen reservoir & silicone round cushion masks – sizes 0 & 00), Neonatal laryngoscope with straight blade and spare bulbs)	1 set for each bed (essential)+ 2
5. Suction Machine	1 for each beds (essential) (80% should be electrically operated & 20% foot operated)
6. Oxygen Hood (unbreakable-neonatal/infant size)	1 for each bed (essential) 20% extra (in case of repair/ disinfection)
7. Non stretchable measuring tape (mm scale)	1 for each bed (essential)
8. Infusion pump or syringe pump	1 for every 2 beds (essential)
9. Pulse Oxymeter	1 for every 2 beds (essential)
10. Double Outlet Oxygen Concentrator	1 for every 3 beds (essential)
11. Double Sided Blue Light Phototherapy	1 for every 3 beds
12. CENTRAL AC (8 AIR EXCHANGE PER HOUR)	For the SNCU, Step-down Unit & SCBU
13. Generator (15 KVA)	1

14. Flux meter	1 (Desirable)
15. CFL Phototherapy	1 for every 3beds (essential)
16. Horizontal Laminar Flow	1 (essential)
17. Window AC(1.5)/ Split AC	Laboratory & Teaching & Training room (essential) Doctor's room (desirable)

D . Disposables:

These items should be regularly supplied to the SNCU, if necessary by changing policy

1. Cord clamp
2. Dee Lee's Mucus Trap
3. Neoflon (intravenous catheter) 24G
4. Micro drip set with & without burette
5. Blood Transfusion Set
6. 3 way stop cock
7. Suction Catheter size # 10, 12 Fr
8. Endotracheal Tube size # 2.5, 3, 3.5mm
9. Feeding Tube size # 5, 6,7 Fr
10. Syringes: Tuberculin- 1,2,5,10,50cc with needle nos. 22, 24, 26
11. Sterile gloves & drapes
12. Chemical disinfectants: Cidex, Bacilloid, Liquid soap & detergent, Sterilium, Savlon, Phenol, Lysol, Betadine and Rectified Spirit
13. Glucostix and multistix strips (in container)
14. Capillary Tubes for microhaematocrit(in containers)
15. Cotton ,surgical gauze
16. Normal saline, 10% Dextrose infusion bottl

V IMMUNIZATION EQUIPMENTS

ILR & DF with Stabilizer	ILR(L)-1, & DF(L)-1 for immunization at hospital purpose
Spare ice pack box	one from each equipment
Room Heater/Cooler for immunization clinic with electrical fittings	As per need
Waste disposal twin bucket, hypochlorite solution/bleach	2 per ILR bimonthly
Freeze Tag	Need Based
Thermometers Alcohol (stem)	2
Almirah for Vaccine logistics	2
Almirah for vaccine logistics	1
Immunization table	5
Chair for new staff proposed	3
Stools for immunization room	2
Bench for waiting area	1
Dustbin with lid	one from each equipment
Water container	1
Hub cutters	2
5 KVA Generator with POL for immunization purpose	1 (If hospital has other Generator for general purpose this is not needed.)

For Monitoring and Effective programme management for immunization following are to be used

Registers	Immunization register
	Vaccine stock & issue register
	AD syringes, Reconstitution syringes, other logistic stock & issue register
	Equipment, furniture & other accessories register
	Geneset Logbook
Monitoring Tools	Tracking Bag and Tickler Box
	Tally sheets
	Immunization cards
	Temperature Logbook
	Microplans
Reports	Monthly UIP reports
	Weekly surveillance reports (AFP, Measles)
	Serious AEFI reports
	Outbreak reports

VI. EAR NOSE THROAT EQUIPMENT

S. No.	Name of the Equipment	District Headquarters Hospital (201-300 bedded)
1	Indigenous Digital Audiometer	1
2	Impedance Audiometer	1
2	Operating Microscope (ENT)	1
3	Head light (ordinary) (Boyle Davis)	2
4	ENT Operation set including headlight, Tonsils	1
5	Ear Surgery Instruments	2 sets
6	Mastoid Set	1
7	Micro Ear Set myringoplasty	1
8	Micro drill System	2 sets
9	Stapedotomy Set	1
10	Stapedoplasty	1
11	ENT Nasal Set (SMR, Septoplasty, Polypetcomy, DNS, Rhinoplasty)	1
12	Laryngoscope fibreoptic ENT	
13	Laryngoscope indirect	2
14	Otoscope	2
15	Oesophagoscope Adult	1
16	Oesophagoscope Child	1
17	Head Light (cold light)	1
18	Tracheostomy Set	2
19	Tuning fork	1
20	OAE Analyzer	1(Desirable)
21	Sound Proof room	1(Desirable)

VII. EYE EQUIPMENTS

S. No.	Name of the Equipment	District Headquarters Hospital (201-300 bedded)
1	Cryo Surgery Unit	1
2	Ophthalmoscope - Direct	2
3	Slit Lamp	1
4	Retino scope	1
5	Perimeter	1
6	Binomags	
7	Distant Vision Charts	
8	Foreign Body spud and needle	
9	Lacrimal cannula and probes	
10	Lid retractors (Desmarres)	
11	Near Vision charts	

12	Punctum Dilator	
13	Rotating Visual acuity drum	
14	Torch	
15	Trial Frame Adult/Children	
16	Trial Lens Set	
17	IOL Operation set	2
18	Laser Photocoagulometer*	1
19	Operating Microscope	1
20	A-Scan Biometer	1
21	Keratometer	1
22	Auto Refractometer	1
23	Flash Autoclave	1
24	Applanation Tonometer	1(Desirable)

* - to be supplied by Blindness Control Society

1. Flash Autoclave

VIII. DENTAL EQUIPMENTS

1. Dental Unit complete with following facilities:

- Dental Chair motorized with panel and foot controlled with up and down movement.
- Air Rotor
- Compressor oil free medical grade (noise-free)
- Ultrasonic Scalar with four tips.
- Suction fitted in the dental chair medium and high vacuum.
- Air rotor hand piece contra angle two and one straight hand piece (4 lakhs RPM).
- LED light cure unit.
- Latest foot operated light of 20,000 and 25,000/- Lux.
- Air motor terminal with hand piece.
- Dental X-ray IOP/OPG X-ray viewer with LED light.
- Doctors' Stool.
- Medical Emergency tray.

2. DENTAL INSTRUMENTS

- All types of dental extraction forceps (each set 3 sets- minimum required which includes upper and lower molars and anterior forceps).
- Elevators (Dental) all types (3 sets each).
- Apexo.
- Bonefile.
- Bone cutter forceps one.
- Chisel and hammer-one each.
- Periosteal elevator-3 Nos.
- Artery forceps-three each.
- Needle holder- three.
- 20 PMT sets (mouth mirror, probe dental and tweezers)
- Excavators.
- Filling instruments.
- Micromotor with straight and contra angle hand piece

3. MINOR SURGICAL INSTRUMENTS.

4. Perio surgical instrument- ONE COMPLETE SET.

5. ENDODONTIC INSTRUMENTS.

6. HANDS SCALER SET BLOPSY.

7. PULP TESTER.

8. TRAYS FOR COMPLETE/ PARTIAL EDENTULOUS PATIENTS FOR MAKING OF COMPLETE/PARTIAL DENTURES OF DIFFERENT SIZES.

9. STERILIZER

- Autoclave small front loading-one
- Boiler (sterilizer)-One
- Dressing drum

10. Executive Chair Revolving

11. Chair metal for office use

12. Office table

13. Recovery room with one bed and oxygen cylinder with trolley and gas.

14. Trolley and wheel chair for patients

15. Wall clock

16. Dental I.O.P.X-ray machine with X-ray developing facilities.

17. Chairs for waiting patients-20.

IX. OPERATION THEATRE EQUIPMENT

S. No.	Name of the Equipment	District Headquarters Hospital (201-300 bedded)
1	Auto Clave HP Horizontal	1
2	Auto Clave HP Vertical (2 bin)	4
3	Operation Table Ordinary Paediatric*	
4	Operation Table Hydraulic Major	4
5	Operation table Hydraulic Minor	4
6	Operating table non-hydraulic field type	2
7	Operating table Orthopedic *	1
8	Autoclave with Burners 2 bin*	
9	Autoclave vertical single bin	2
10	Shadowless lamp ceiling type major*	2
11	Shadowless lamp ceiling type minor*	1
12	Shadowless Lamp stand model	3
13	Focus lamp Ordinary	4
14	Sterilizer big (Instrument)	3
15	Sterilizer Medium (Instrument)	5
16	Steriliser Small (Instruments)	5
17	Bowl Steriliser - big*	3
18	Bowl steriliser - Medium*	1
19	Diathermy Machine (Electric Cautery)	1
20	Suction Apparatus - Electrical	5
21	Suction Apparatus - Foot operated	4
22	Dehumidifier*	1
23	Ultra violet lamp philips model 4 feet	8
24	Ethylene Oxide sterilizer*	1 (Desirable)
25	Microwave sterilizer*	1

* To be provided as per need.

X. LABORATORY EQUIPMENTS

S. No.	Name of the Equipment	District Headquarters Hospital (201-300 bedded)
1	Binocular Microscope	6
2	Chemical Balances	2
3	Simple balances	2
4	Electric Calorimeter	2
5	Auto analyser *	1
6	Semi auto analyser	1

7	Micro pipettes of different volumes	10
8	Water bath	2
9	Hot Air oven*	3
10	Lab Incubator*	3
11	Distilled water Plant	2
12	Electric centrifuge, table top	3
13	Cell Counter Electronic*	1
14	Hot plates	3
15	Rotor / Shaker	3
16	Counting chamber	3
17	PH meter	2
18	Paediatric Glucometer / Bilirubinometer*	
19	Glucometer	1
20	Haemoglobinometer	2
21	TCDC count apparatus	1
22	ESR stand with tubes	4
23	Test tube stands *	6
24	Test tube rack *	6
25	Test tube holders*	6
26	Spirit lamp*	8
27	Rotary Microtome*	1
28	Wax Embed Bath*	
29	Auto Embedic Station *	1
30	Timer stop watch	2
31	Alarm clock	1
32	Elisa Reader cum washer	1
33	Blood gas analyser*	1
34	Electrolyte Analyser	1
35	Glycosylated Haemoglobinometer	1
36	Blood Bank Refrigerator	3
37	Haematology Analyser with 22 parameters	1
38	Blood Collection Monitor	1
39	Laboratory Autoclaves	3
40	Blood Bank Refrigerator	4
41	Ordinary Refrigerator	3
42	Flootation Bath	1
43	Emergency Drug Trolley with auto cylinder	1
44	Dialacted Tube Scaler	
45	Class – I Bio Safety Cabinet	1
46	Knife Sharpner	1
47	Air Conditioner with Stabilizer	1
48	Cyto Spin	1

49	RO Plant	1
50	Computer with UPS and Printer	1
51	Automatic Blood Gas Analyzer	1
52	Fine Needle Aspiration Cytology	1
53	Histopathology Equipments	1
54**	Pipette – 1 ml & 5 ml Burette 10 ml, Conical Flask Biker/Glass bottles Glass or plastic funnel Glass stirring rod Small stainless steel bowl Electronic weighing scale Measuring cylinder Gas Burner Laboratory balance Stop watch, Cyclomixer Micro pipette 10-100 ml :10-200ml Micro Tips Centrifuge, Oven Bath Serological Digital calorie meter Stirrer with stainless steel stirring rod Digital electronic temperature controller	
55***	i.Ion – meter Table Top (specific for fluoride estimation in biological fluid) ii.Table Top Centrifuge without refrigeration iii.Digital PH Meter iv.Metaler Balance v.Mixer vi.Incubator Pipettes / Micropipettes	
56	CO Analyser	
57	Dry Biochemistry	1 (desirable)
58	Whole Blood Finger Prick HIV Rapid Test and STI Screening Test each	4000

* To be provided as per need.** To be provided for salt and Urine analysis for Iodine
*** For analysis of Fluoride wherever applicable

XI. SURGICAL EQUIPMENT SETS

S. No.	Name of the Equipment	District Headquarters Hospital (201-300 bedded)
1	P.S.set	2
2	MTP Set	2
3	Biopsy Cervical Set*	2
4	EB Set	3
5	Microscope (Gynae for wet smear and PCT)	1
6	D & C Set	2
7	I.U.C.D. Kit	2
8	LSCS set	2
9	MVA Kit	2
10	Vaginal Hysterectomy	2
11	Proctoscopy Set*	2
12	P.V. Tray*	3
13	Abdominal Hysterectomy set	2
14	Laparotomy Set	3
15	Formaline dispenser	4
16	Kick Bucket	10
17	General Surgical Instrument Set Piles, Fistula, Fissure*	2
18	Knee hammer	5
19	Hernia, Hydrocele*	2
20	Varicosevein etc*	1
21	Gynaec Electric Cautery	1
22	Vaginal Examination set*	22
23	Suturing Set*	7
24	MTP suction apparatus	2
25	Thoracotomy set	1
26	Neuro Surgery Craniotomy Set	1
27	I M Nailing Kit	2
28	SP Nailing	2
29	Compression Plating Kit*	2
30	AM Prosthesis*	1
31	Dislocation Hip Screw Fixation*	1
32	Fixation Fracture Hip	1
33	Spinal Column Back Operation Set	1
34	Thomas Splint	9
35	Paediatric Surgery Set	2
36	Mini Surgery Set*	2
37	Urology Kit	1
38	Surgical Package for Cholecystectomy*	1
39	Surgical package for Thyroid	1

S. No.	Name of the Equipment	District Headquarters Hospital (201-300 bedded)
40	GI Operation Set*	2
41	Appendicectomy set *	2
42	L.P.Tray*	7
43	Urethral Dilator Set	4
44	TURP resectoscope *	1
45	Haemodialysis Machine *	2
46	Amputation set	2
47	Universal Bone Drill	1
48	Crammer wire splints	10
49	Heamo dialysis machine	2
50	IUCD -5 Nos	5
51	Minilap sets-3	3
52	NSV sets- 3	3
53	Colposcope	1
54	Cryoprobe	1

* To be provided as per need.

XII. PMR* EQUIPMENTS

S. No.	Name of the Equipment	District Headquarters Hospital 301-500 Bedded
1	Skeleton traction set	2
2	Interferential therapy unit	2
3	Short Wave Diathermy	1
4	Hot packs & Hydro collator	As per need
5	Exercise Table	As per need
6	Static Cycle	As per need
7	Medicine ball	As per need
8	Quadriiceps Exerciser	As per need
9	Coordination Board	As per need
10	Hand grip strength measurement Board	As per need
11	Kit for Neuro-development assessment.	As per need
12	CBR Manual	As per need
13	ADL Kit & hand exerciser	As per need
14	Multi Gym Exerciser	As per need
15	Self Help devices	As per need
16	Wheel chair	As per need
17	Crutches / Mobility device sets	As per need
18	Hot air oven	2

19	Hot air gun	2
20	Grinder	2
21	Sander	2
22	Router	As per need
23	Power Drill	As per need
24	Band saw	As per need
25	Vacuum forming apparatus	As per need
26	Lathe	As per need
27	Welding machine	As per need
28	Buffing & polishing machine	As per need
29	Work table – 2 nos	2
30	Tools and raw material	As per need

*As PMR services would be provided with the posting of qualified paramedical these are all required equipment including items for use in the orthotic & Prosthetic workshop

XIII. ENDOSCOPY EQUIPMENTS

S. No.	Name of the Equipment	District Headquarters Hospital (201-300 bedded)
1	Endoscope fibre Optic (OGD) *	1
2	Arthroscope	1
3	Laparoscope operating major with accessories *	1
4	Laparoscope diagnostic and for sterilisation *	2
5	Colonoscope and sigmoidoscope*	1
6	Hysteroscope *	1
7	Colposcope *	1

* - to be provided as per need

XIV ANAESTHESIA EQUIPMENTS

S. No.	Name of the Equipment	District Headquarters Hospital (201-300 bedded)
1	Anaesthetic - laryngoscope magills with four blades	5
2	Endo tracheal tubes sets	3
3	Magills forceps (two sizes)	8
4	Connector set of six for E.T.T	8
5	Tubes connecting for ETT	10
6	Air way female*	10
7	Air way male*	20
8	Mouth prop*	10
9	Tongue depressors*	12
10	O2 cylinder for Boyles	12
11	N2O Cylinder for Boyles	12
12	CO2 cylinder for laparoscope*	5
13	PFT machine	1
14	Boyles Apparatus with Fluotec and circle absorber	2
15	Exchange Transfusion Sets*	

* - to be provided as per need

XV FURNITURE & HOSPITAL ACCESSORIES

S. No.	Name of the Equipment	District Headquarters Hospital (201-300 bedded)
1	Doctor's chair for OP Ward, Blood Bank, Lab etc.	50
2	Doctor's Table	25
3	Duty Table for Nurses	15
4	Table for Sterilisation use (medium)	12
5	Long Benches(6 1/2' x 1 1/2')	40
6	Stool Wooden	40
7	Stools Revolving	15
8	Steel Cup-board	25
9	Wooden Cup Board	15
10	Racks -Steel – Wooden	12
11	Patients Waiting Chairs (Moulded) *	30
12	Attendants Cots *	15
13	Office Chairs	8
14	Office Table	10
15	Foot Stools *	30

16	Filing Cabinets (for records) *	10
17	M.R.D.Requirements (record room use) *	1
18	Paediatric cots with railings	5
19	Cradle*	5
20	Fowler's cot	2
21	Ortho Fracture Table*	1
22	Hospital Cots (ISI Model)	300
23	Hospital Cots Paediatric (ISI Model)	15
24	Wooden Blocks (Set)*	5
25	Back rest*	8
26	Dressing Trolley (SS)	8
27	Medicine Almairah	5
28	Bin racks (wooden or steel)*	10
29	ICCU Cots	6
30	Bed Side Screen (SS-Godrej Model)^	As per requirement
31	Medicine Trolley(SS)	8
32	Case Sheet Holders with clip(S.S.)*	120
33	Bed Side Lockers (SS)*	0
34	Examination Couch (SS)	5
35	Instrument Trolley (SS)	10
36	Instrument Trolley Mayos (SS)	6
37	Surgical Bin Assorted	40
38	Wheel Chair (SS)	10
39	Stretcher / Patience Trolley (SS)	10
40	Instrument Tray (SS) Assorted	60
41	Kidney Tray (SS) - Assorted	60
42	Basin Assorted (SS)	60
43	Basin Stand Assorted (SS)	
	(2 basin type)	10
	(1 basin type)	15
44	Delivery Table (SS Full)	10
45	Blood Donar Table*	2
46	O2 Cylinder Trolley(SS)	12
47	Saline Stand (SS)	50
48	Waste Bucket (SS)*	75
49	Dispensing Table Wooden	2
50	Bed Pan (SS)*	40
51	Urinal Male and Female	40
52	Name Board for cubicals*	1
53	Kitchen Utensils*	
54	Containers for kitchen*	
55	Plate, Tumblers*	
56	Waste Disposal - Bin / drums	15
57	Waste Disposal - Trolley (SS)	3
58	Linen Almairah	5

59	Stores Almirah	5
60	Arm Board Adult*	15
61	Arm Board Child*	15
62	SS Bucket with Lid	10
63	Bucket Plastic*	10
64	Ambu bags	10
65	O2 Cylinder with spanner ward type	40
66	Diet trolley - stainless steel	2
67	Needle cutter and melter	25
68	Thermometer clinical *	30
69	Thermometer Rectal*	5
70	Torch light*	12
71	Cheatles forceps assorted*	12
72	Stomach wash equipment*	5
73	Infra Red lamp*	5
74	Wax bath*	2
75	Emergency Resuscitation Kit-Adult*	2
76	Enema Set*	8
77	Ceiling Fan\$	As per requirement

XVI POST MORTEM EQUIPMENTS

S. No.	Name of the Equipment	District Headquarters Hospital (201-300 bedded)
1	Mortuary table (Stainless steel) *	2
2	P.M.equipments (list)	6
3	Weighing machines (Organs)	2
4	Measuring glasses(liquids)	4
5	Aprons*	10
6	PM gloves (Pairs)*	20
7	Rubber sheets*	
8	Lens	2
9	Spot lights	4

* - to be provided as per need

XVII LINEN

S. No.	Name of the Equipment	District Headquarters Hospital (201-300 bedded)
1	Bedsheets	1200
2	Bedspreads	1800
3	Blankets Red and blue	100
4	Patna towels	1000

5	Table cloth	75
6	Draw sheet	150
7	Doctor's overcoat	90
8	Hospital worker OT coat	400
9	Patients house coat (for female)	900
10	Patients Pyjama (for male) Shirt	400
11	Over shoes pairs	100
12	Pillows	450
13	Pillows covers	900
14	Mattress (foam) Adult	300
15	Paediatric Mattress	40
16	Abdominal sheets for OT	200
17	Pereneal sheets for OT	200
18	Leggings	150
19	Curtain cloth windows and doors	
20	Uniform / Apron	
21	Mortuary sheet	70
22	Mats (Nylon)	200
23	Mackin tosh sheet (in meters)	300
24	Apron for cook	

XVIII TEACHING EQUIPMENT

S. No.	Name of the Equipment	District Headquarters Hospital (201-300 bedded)
1	Slide Projector	
2	O.H.P with OHP sheets	1
3	Screen	1
4	White / colour boards	1
5	Television colour	2
6	Tape Recorder* (2 in 1)	1
7	VCD Player	1
8	Radio	1
9	LCD Projectors	1
10	1.Desk top computer(with color monitor, CPU, UPS, laser printer & computer table)	1
11	Resuscitation Training Mannequins	1
12	Library with Books, internet facility, Training CD and Potocols	

XIX ADMINISTRATION

S. No.	Name of the Equipment	District Headquarters Hospital (201-300 bedded)
1	Computer with Modem with UPS, Printer with Internet Connection**	5
2	Xerox Machine	1
3	Typewriter (Electronic)*	1
4	Intercom (15 lines)*	
5	Intercom (40 lines)*	1
6	Fax Machine	1
7	Telephone	2
8	Paging System*	
9	Public Address System*	1
10	Library facility*	

* - to be provided as per need

** At least one for Medical Records and one for IDSP

XX. REFRIGERATION & AC

S. No.	Name of the Equipment	District Headquarters Hospital (201-300 bedded)
1	Refrigerator 165 litres	5
2	Blood Bank Refrigerator*	1
3	ILR & DF with Stabilizer	ILR(L)-1, & DF(L)-1 for immunization at hospital purpose
	Spare ice pack box	one from each equipment
	Room Heater/Cooler for immunization clinic with electrical fittings	As per need
	Waste disposal twin bucket, hypochlorite solution/bleach	2 per ILR bimonthly
	Freeze Tag	Need Based
	Thermometers Alcohol (stem)	2
	Almirah for Vaccine logistics	2
	Almirah for vaccine logistics	1
	Immunization table	5
	Chair for new staff proposed	3
	Stools for immunization room	2
	Bench for waiting area	1
	Dustbin with lid	one from each equipment
	Water container	1
	Hub cutters	2

	5 KVA Generator with POL for immunization purpose	
4	Coolers*	As per requirement
5	Air conditioners	10
6	Central A/C for OT	1

* One cooler per 8 beds in the wards.

XXI HOSPITAL PLANTS

S. No.	Name of the Equipment	District Headquarters Hospital (201-300 bedded)
1	Generator 40 / 50 KV	
2	Generator 75 KV	
3	Generator 125 KV	1
4	Portable 2.5 KV	2
5	Solar Water heater *	
6	Incinerator*	
7	Central supply of O ₂ , N ₂ O, Vacuum *	
8	Cold storage for mortuary *	

* - to be provided as per need

XXII HOSPITAL FITTINGS & NECESSITIES

S. No.	Name of the Equipment	District Headquarters Hospital (201-300 bedded)
1	Ceiling Fans*	70
2	Exhaust Fan*	12
3	Pedestal Fan*	3
4	Wall Fan*	4
5	Hotwater geiser*	2
6	Fire extinguishers*	
7	Sewing Machine*	2
8	Lawn Mover*	2
9	Vaccum cleaner*	3
10	Aqua guard*	
11	Solar water heater *	
12	Neon sign for hospital*	
13	Garden equipment*	
14	Borewell motor OHT *	
15	Water dispenser / Water cooler*	
16	Laundry (steam) *	

17	Emergency lamp	
18	Emergency trauma set*	2
19	Tube lights*	120
20	Drinking Water Fountain*	4

* - to be provided as per need

XXIII TRANSPORT

S. No.	Name of the Equipment	District Headquarters Hospital (201-300 bedded)
1	Ambulance	3
2	Van (Family Welfare)*	
3	Pickup vehicles Maruti (Omni)*	
4	Mortuary Van	1
5	Administrative vehicle (Car)*	
6	Minidor 3 wheeler*	
7	Bicycle*	
8	Camp Bus*	
9	Progamme vehicle*	
10	Motorcycle*	

* To be provided as per need.

10. LABORATORY SERVICES AT DISTRICT HOSPITAL: Following services will be ensured, for advanced diagnostic tests, a list of National Reference Laboratories has been provided as annexure **V**.

S. No.	Speciality	Diagnostic Services / Tests	District Headquarters Hospital (201-300 bedded)
I.	CLINICAL PATHOLOGY		
	a. Haematology	Haemoglobin estimation	Yes
		Total Leucocyte count	Yes
		Differential Leucocyte count	Yes
		Absolute Eosinophil count	Yes
		Reticulocyte count	Yes
		Total RBC count	Yes
		E.S.R.	Yes
		Bleeding time	Yes
		Clotting time	Yes
		Prothrombin time	Yes
		Peripheral Blood Smear	Yes
		Malaria/Filaria Parasite	Yes
		Platelet count	Yes
		Packed Cell volume	Yes
		Blood grouping	Yes
		Rh typing	Yes
		Blood Cross matching	Yes
		ELISA for HIV, HBS AG, and HCV	Yes

S. No.	Speciality	Diagnostic Services / Tests	District Headquarters Hospital (201-300 bedded)
	b. Urine Analysis	Urine for Albumin, Sugar, Deposits, bile salts, bile pigments, acetone, specific gravity, Reaction (pH)	Yes
	c. Stool Analysis	Stool for Ovacyst (Eh)	Yes
		Culture and Sensitivity	

		Hanging drop for V.Cholera	Yes
		Occultblood	Yes
	d. Semen Analysis	Morphology, count	Yes
	e. CSF Analysis	Cell count, culture sensitivity etc, Gram Staining	Yes
	f. Aspirated fluids	Cell count cytology	Yes
	II. PATHOLOGY		
	a. PAP smear	Cytology	Yes
	b. Sputum	Sputum cytology	Yes
	d. Haematology	Bone Marrow Aspiration	Yes
		Coagulation disorders	Desirable
		Sickle cell anaemia	Desirable
		Thalassemia	Desirable
	e. Histopathology	All types of specimens, Biopsies	Desirable

Sl. No.	Speciality	Diagnostic Services / Tests	District Headquarters Hospital (201-300 bedded)
	III. MICROBIOLOGY		
		Smear for AFB (Acid Fast Bacilli), KLB (Diphtheria Bacilli)	Yes
		Culture and sensitivity for blood, sputum, pus, urine etc.	Desirable
		Stool culture for enteco pathogene	Desirable
		Supply of different Specimen collection and transportation media for peripheral Laboratories	Desirable
		KOH Study for Fungus	Yes
		Grams Stain for Throat swab, sputum etc.	Yes
		Bacteriological analysis of water by Rapid H ₂ S test to be done in districts where there is no separate public health laboratory	Desirable
	IV. SEROLOGY		

		Pregnancy test (Urine gravindex)	Yes
		Coomb's tests,	Yes
		Lepto spirois (Rapid test / ELISA)	Desirable
		WIDAL test	Yes
		RPR test	Yes
		Elisa test for HIV, HBs Ag, HCV	Yes
		RA factor test	Yes

V.	BIOCHEMISTRY	Blood Sugar	Yes
		Glucose Tolerance Test	Yes
		Glycosylated Hemoglobin	Yes
		Blood urea, blood cholesterol	Yes
		Serum bilirubin	Yes
		Liver function tests	Yes
		Kidney function tests	Yes
		Lipid Profile	Yes
		Blood uric acid	Yes
		Serum calcium, sodium, potassium	Yes
		Serum Phosphorous	Yes
		Serum Magnesium	Yes
		CSF for protein, sugar	Yes
		Blood gas analysis	Yes
		Estimation of residual chlorine in water by OT test	Yes
		Thyroid T3 T4 TSH	Yes
		CPK	Yes
		Chloride	Desirable
		Salt and Urine for Iodine	Desirable

S. No.	Speciality	Diagnostic Services / Tests	District Headquarters Hospital (201-300 bedded)
VI.	CARDIAC INVESTIGATIONS	a) ECG	Yes
		b) Stress tests	Yes
		c) ECHO	(Desirable)
VII.	OPHTHALMOLOGY	a) Refraction by using Snellen's chart	Yes
		Retinoscopy	Yes
		Ophthalmoscopy	Yes
VIII.	ENT	Audiometry	Yes
		Endoscopy for ENT	(Desirable)
IX.	RADIOLOGY	a) Xray for Chest, Skull, Spine, Abdomen, bones	Yes
		IITB X-Ray – CR Digital	Yes
		OPG	(Desirable)
		d) HSG	Yes
		f) Ultrasonography Colour Doppler	Yes
		g) Spiral CT scan	(Desirable)
		MRI 0.5 TESSLA	(Desirable)

Sl. No.	Speciality	Diagnostic Services / Tests	District Headquarters Hospital (201-300 bedded)
X	ENDOSCOPY	Esophagus	Yes
		Stomach	Yes
		Colonoscopy	Desirable

		Bronchoscopy	Desirable
		Arthroscopy	Desirable
		Laparoscopy (Diagnostic)	Yes
		Colposcopy	Desirable
		Hysteroscopy	Desirable
XI.	RESPIRATORY	Pulmonary function tests	Desirable

11. RECOMMENDED ALLOCATION OF BED STRENGTH AT VARIOUS LEVELS

RECOMMENDED ALLOCATION OF BED STRENGTH

Sl. No	Item	Type	District Headquarters Hospital (201-300 bedded)
1	General Medicine	Beds (M+F)	25+25
2	New born ward	Beds	5
3	Mothers room with dining and toilets	Beds	5
4	Paediatrics ward	Beds	20
5	Critical care ward – IMCU	Beds	10
6	Isolation Ward	Beds	5
7	Dialysis unit (as per specifications)	Beds	3
8	Thoracic medicine ward with room for pulmonary function test	Beds (M+F)	5+5
9	Blood bank		Yes
10	General surgery ward (incl. Urology, ENT)	Beds (M+F)	25+20
11	Post – Operative Ward	Beds (M+F)	10+10
12	Accident and Trauma ward	Beds	10
13	Labour room	Boards	8
14	Labour room (Eclampsia)	Beds	3
15	Septic Labour room	Boards	2
16	Ante-natal ward	Beds	15
17	Post-natal ward	Beds	15
18	Postpartum ward	Beds	30
19	Post operative ward	Beds	20
20	Ophthalmology ward	Beds	10
21	Burns Ward	Beds	5

* including ophthalmic ward. \$ including post – caesarean patients # including paediatric beds @ 10% Paying Wards

REQUIREMENTS OF OPERATION THEATRE:

S. No	Item	District Headquarters Hospital (300 bedded)
1	Elective OT-Major	2
2	Emergency OT/FW OT	1
3	Ophthalmology /ENT OT	1

12. LIST OF MEDICINES / INSTRUMENTS / EQUIPMENTS /LAB REAGENTS / OTHER CONSUMABLES AND DISPOSABLES FOR DISTRICT HOSPITALS

Sr. No	NAME OF THE ITEM
A)	Analgesics/Antipyretics/Anti Inflammatory
1	Tab.Aspirin 300mg
2	Tab.Paracetamol 500mg
3	Inj.Diclofenac sodium
4	Tab.Diclofenac sod
5	Tab.Dolonex DT 20mg
6	Tab.Ibuprofen
B)	Chemotherapeutics
7	Inj.Crystalline penicillin 5 lac unit
8	Inj.Fortified procaine pen 4 lac
9	Inj.Ampicillin 500mg
10	Inj. Cloxacillin
11	Inj.Gentamycin 40mg/2ml vial
12	Inj.crystalline penicillin 10 lac unit
13	Cap.Ampicillin 250mg
14	Cap.Tetracycline 250mg
15	Tab.Trimethoprim+Sulphamethazol ss
16	Tab.Ciprofloxacin 250mg
17	Tab.Ciprofloxacin 500mg
18	Inj.Ciprofloxacin 100ml
19	Tab.Erythromycin 250mg
20	Tab.Erythromycin 500mg
21	Syrup Cotrimoxazole 50ml
22	Syrup Ampicillin 125mg/5ml 60ml
23	Inj.Cefoperazone 1Gm (Desirable)
24	Inj.cefotaxime 500mg
25	Tab.Norfloxacin 200mg

26	Inj Ceftriaxone
27	Diazepam Inj. IP
28	Inj. Cefotaxime
29	Inj. Cloxacillin
30	Dexamethasone Sodium Phosphate inj. IP
31	Aminophylline Inj. BP
32	Adrenaline Bitartrate Inj. IP
33	Ringer Lactate
34	Doxycycline Hydrochloride
35	Vit. K3 (Menadione Inj.) IP
36	Phenytoin
37	Inj. Gentamycin
38	Water for injection
39	Inj. Lasix
40	Inj. Phenobarbitone
41	Inj. Quinine
42	Inj. Ampicillin
43	Inj. Chloramphenicol
44	Inj. Calcium Gluconate
45	Ciprofloxacin
46	Nebulisable Salbutamol nebulol solution (to be used with nebuliser)
47	Inj. Dopamine
48	Tab.Norfloxacin 400mg
49	Tab.Ofloxacin 200mg
50	Inj.Vionocef(Ceffixime)250mg
51	Inj.Amikacin sulphate 500mg
52	Inj.Amikacin sulphate 100mg
53	Cap.Cefodroxyl 250mg
54	Inj.Amoxyicillin 500mg
C)	Anti Diarrhoeal
55	Tab.Metronidazole 200mg
56	Tab.Metronidazole 400mg
57	Syrup.Metronidazole
58	Tab.Furazolidone 100mg
59	Tab.Diolaxanide Fuzate
60	Tab.Tinidazole 300mg
D)	Dressing Material/Antiseptic lotion
61	Povidone Iodine solution 500ml
62	Phenyl 5litr jar(Black Phenyl)
63	Benzalkonium chloride 500ml bottle
64	Rolled Bandage a)6cm

	b)10cm
	c)15cm
65	Bandage cloth(100cmx20mm) in Than
66	Surgical Guaze(50cmx18m) in Than
67	Adhesive plaster 7.5cm x 5mtr
68	Absorbent cotton I.P 500gm Net
69	P.O.P Bandage a) 10cm
70	b)15cm
71	Framycetin skin oint 100 G tube
72	Silver Sulphadiazene Oint 500gm jar
73	Antiseptic lotion containing :
74	a)Dichlorometxylenol 100ml bot
75	b)Haffkinol 5litre jar
76	Sterilium lotion
77	Bacillocid lotion
78	Infusion fluids
79	Inj.dextrose 5% 500ml
80	Inj.Dextrose 10% 500ml bottle
81	Inj.Dextrose in Normal saline 500ml bt
82	Inj.Normal saline (Sod chloride) 500ml
83	Inj.Ringer lactate 500ml
84	Inj.Mannitol 20% 300ml
85	Inj. Water for 5ml amp
86	Inj. Water for 10ml amp
87	Inj.Dextrose 25%100ml bot
88	I.V.Metronidazole 100ml
89	Inj.Plasma Substitute 500ml bot
90	Inj.Lomodex
F)	Other Drugs & Material
91	All Glass Syringes 2ml
	5ml
	10ml
	20ml
92	Hypodermic Needle (Pkt of 10 needle)
	a)No.19
	b)No.20
	c)No.21
	d)No.22
	e)No.23
	f)No.24
	g)No.25

	h)No.26
93	Scalp vein sets no a)19
	b)20
	c)21
	d)22
	e)23
	f)24
	g)25
	h)26
94	Gelco all numbers
95	Tab.B.Complex NFI Therapeutic
96	Tab.Polyvitamin NFI Therapeutic
97	Inj.Dexamethasone 2mg/ml vial
98	Inj.Vitamin B Complex 10ml
99	Inj.B12 Folic acid
100	Surgical Gloves a)6 "
	b)6.1/2"
	c)7"
	d)7.5"
101	Catgut Chromic a)1 No.
	b)2 No.
	c)1-0 No
	d)2-0 N0
	e)8-0
102	Vicryl No.1
103	Sutupak 1,1/0,2,2/0
104	Prolene
105	X Ray film 50 film packet(in Pkt) size
	a)6.1/2x8.1/2"
	b)8"x10"
	c)10"x12'
	d)12"x15"
106	Fixer
107	Developer
108	CT Scan film
109	Ultrasound scan film
110	Dental film
111	Oral Rehydration powder 27.5g
112	Ether Anaesthetic 500ml
113	Halothane
G)	Eye and ENT Drops

114	Sulphacetamide eye drops 10% 5ml
115	Framycetin with steroid eye drops 5ml
116	Framycetin eye drops 5ml
117	Ciprofloxacin eye/ear drops
118	Gentamycin eye drops
119	Local antibiotic steroid drops
120	Pilocarpine Nitrate 2%
121	Timolol 0.5%
122	Homatropine 2%
123	Tropicamide 1%
124	Cyclomide 1%
125	Wax dissolving ear drops
126	Antifungal (Clotrimazole) ear drops
127	Antiallergic+ Decongestant combination eg. Chlorphenarmine +Pseudoephedrine /Phenylephrine
128	Oxmetazoline/Xylometazoline nasal drops
H)	Other Material
129	Rubber Mackintosh Sheet in mtr
130	Sterile Infusion sets(Plastic)
131	Antisera I) A 5ml
	II)B 5ml
	III)D 5ml
	IV)AB 5ml
132	Inj.MethylErgometrine 0.2mg/amp
133	Inj.Streptokinase 7.5lac vial
134	Inj.Streptokinase 15lac vial
135	Inj.PAM
136	Tab.Antacid
137	ARS
138	Syp.Antacid
139	Inj.Rabipur
140	Inj.Ranitidine 2ML
141	Tab.Ranitidine
142	Tab.Omeprazole
143	Cough syrup 5litre Jar
144	Cough syrup with Noscapine 100ml
145	Coir Mattress
146	Inj.Lignocaine 1%
147	Inj.lignocaine 2%
148	Inj.Lignocaine 5%
149	Injections: Inj. Hylase (Hyaluronidase) (Desirable)

150	Inj.Marcaine
151	Inj.Diazepam
152	Inj.Salbactum+Cefoperazone2Gm
153	Inj.Amoxycillin with clavutanite acid 600mg
154	Cap.Amoxycillin250+cloxacillin 250
155	Inj.Cefuroxime 250/750 (Desirable)
156	Tab.Pefloxacin 400mg
157	Tab.Gattifloxacin 400mg
158	Tab.Valdecoxib 20mg(Desirable)
159	Tab.Atrovastatin 10mg
160	Sy.Himalt-X (Desirable)
161	Sy.Protein(Provita) (Desirable)

I)	Antibiotics and Chemotherapeutics
1	Tab.Chloroquine phosphate 250mg
2	Inj.Chloroquine phosphate
3	Inj.Quinine
4	Tab.Erythromycine Esteararte 250mg
5	Syp.Erythromycine
6	Tab.Phenoxymethyl Penicillin125mg
7	Cap.Rifampicin
8	Tab.Isoniazid 100mg
9	Tab.Ethambutol 400mg
10	Tab.Isoniazid+Thiacetazone
11	Cap.Neomycin
12	Inj.Benzathine penicillin 12lac
13	Cap. Amoxycilline 500 mg
14	Cap. Amoxycilline 250 mg
J)	Antihistaminics/anti-allergic
15	Inj.Pheniramine maleate
16	Tab.Diphenhydramine (eqv.Benadryl)
17	Tab.Cetirizine
18	Tab.Chlorpheniramine maleate 4mg
19	Tab.Diethylcarbamazin
20	Tab. Beta-histidine 8 mg (Desirable)
21	Tab. Cinnarazine 25 mg
K)	Drugs acting on Digestive system
22	Tab.Cyclopam
23	Inj.Cyclopam
24	Tab.Bisacodyl
25	Tab.Perinorm

26	Inj.Perinorm
27	syrup.Furazolidone
28	Inj.Prochlorperazine(Stemetil)
29	Tab.Piperazine citrate
30	Tab.Mebendazole 100mg
31	Syp.Mebendazole
32	Sy.Piperazine Citrate
33	Sy.Pyrantel Pamoate
34	Tab.Belladona
L)	Drugs related to Hoemopoetic system
35	Tab.Ferrous sulphate200mg
36	Inj.Iron Dextran/Iron sorbitol
M)	Eye oint
37	Chloramphenicol eye oint & applicaps
38	Chloramphenicol + Dexamethsone oint
39	Gentamycin eye/ear drops
40	Dexamethasone eye drops
41	Drosyn eye drops
42	Atropine eye oint
N)	Drugs acting on Cardiac vascular system
43	Inj.adrenaline
44	Inj.atropine sulphate
45	Inj.Digoxine
46	Tab.Digoxine
47	Inj.Mephentine
48	Tab.Atenolol
49	Tab.Isoxuprine
50	Inj.Duvadilan
51	Tab.Methyldopa
52	Tab.Isosorbide Dinitrate(Sorbitrate)
53	Tab.Propranolol
54	Tab.Verapamil(Isoptin)
55	tab.Enalapril2.5/5mg
56	Tab.Metoprolol
57	Hydrochlorthiazide 12.5, 25 mg
58	Tab Captopril
59	Tab Clopidogrel
60	Glyceryl Trinitrate Inj
61	Carbamazepine tabs, syrup
O)	Drugs acting on Central/peripheral Nervous system

62	Inj.Pentazocine (Fortwin)
63	Inj.Pavlon 2ml amp
64	Inj.Chlorpromazine 25mg(like Largactil)
65	Inj.Promethazine Hcl Phenergan
66	inj.Pethidine
67	Inj.Diazepam 5mg
68	Tab.Haloperidol
69	Inj.Haloperidol
70	Tab.Diazepam 5mg
71	Tab.Phenobarbitone 30mg
72	Tab.Phenobarbitone 60mg
73	Tab.Largactil 25mg
74	Tab.Pacitane
75	Tab.Surmontil
76	Tab. Chlorpromazine 100 mg
77	Tab. Risperidone 2 mg
78	Inj. Promethazine 50 mg
79	Tab. Imipramine 75 mg
80	Inj. Fluphenazine 25 mg
81	Tab. Lorazepam 2 mg
82	Tab. Diphenylhydantoin 100 mg
83	Tab. Lithium Carbonate 300 mg
84	Tab. Carbamazepine 200 mg
85	Cap. Fluoxetine 20 mg
86	Tab. Olanzapine 5 mg
87	Syrup.Phenergan
88	Syrup Paracetamol
89	Ethyl chloride spray
90	Lignocaine oint
91	Gentamycin eye/ear drops
92	Betnesol-N/Efcorlin Nasal drops
P)	Drugs acting on Respiratory system
93	Inj.Aminophylline
94	Tab.Aminophylline
95	Inj.Deriphylline
96	Tab.Deriphylline
97	Tab.Salbutamol 2mg
98	Syrup Tedral
99	Syrup.Salbutamol
Q)	Antiseptic Ointment
100	Furacin skin oint

101	Framycetin skin oint
R)	Drugs acting on UroGenital system
102	Tab.Frusemide 40mg
103	Inj.KCL
104	Liquid KCL
105	Tab.Pyridicil
106	Inj.Frusemide
	Drugs acting on Uterus and Female Genital Tracts
107	Inj.Pitocin
108	Inj.Prostodin
109	Tab. Mesoprost
110	Tab.Duvadilan
111	Inj. Devadilan
112	Tab.Methyl Ergometrine
113	Tab.Primolut-N
114	Haymycin vaginal tab
115	10 g. Magnesium Sulphate
116	Inj.Ethacredin lact(Emcredyl)
T)	Hormonal Preparation
117	Inj.Insulin Rapid
118	Insulin lente Besal
119	Inj.Cry Insulin
120	Inj.Mixtard
121	Inj.Testosterone plain 25mg
122	Testosterone Depot 50mg
123	Tab.Biguanide
124	Tab.Chlorpropamide 100mg
125	Tab.Prednisolone 5mg
126	Tab.Tolbutamide 500mg
127	Tab.Glibenclamide
128	Tab.Betamethasone
U)	Vitamins
129	Inj.Vit "A"
130	Inj.Cholcalciferol16lac
131	Inj.Ascorbic acid
132	Inj.Pyridoxin 50mg
133	Inj.Vit K
134	Tab.Vit "A" & "D"
135	Tab.Ascorbic acid 100mg
V)	Other drugs

136	Inj.Antirabies vaccine
137	Inj.Antisnake venom
138	Inj.AntiDiphtheria Serum
139	Inj.Cyclophosphamide
140	Inj.Sodabicarb
141	Inj.Calcium Gluconate
142	Tab.Calcium lactate
143	Tr.Iodine
144	Tr.Benzoin
145	Glcial acetic caid
146	Benedict solution
147	Caster oil
148	Liquid paraffin
149	Glycerine
150	Glycerine Suppositories
151	Turpentine oil
152	Potassium Permanganate
153	Formaldehyde
154	Dextrose Powder
155	Methylated spirit
156	Cotrimazole lotion
157	Cotrimazole cream
158	Tab.Theophylline
159	ECG Roll
160	Burnion Oint
161	Flemigel APC Ointment
162	Syp.Himobin
163	APDYL Cough &Noscopin
164	Tab. Septilin
165	Tab. Cystone
166	Tab. Gasex
167	Syp. Mentat
168	Oint. Pilex
169	Rumalaya Gel
170	Pinku Pedratic Cough Syp.
171	
	Vaccines Drugs and Logistics
	Vaccines BCG, DPT, OPV, Measles, TT, Hepatitis B*, JE* and other vaccines if any as per GOI guidelines
	AD syringes AD syringes (0.5 ml & 0.1 ml) - need based
	Reconstitution syringes Reconstitution syringes(5ml) - need based
	Red Bags Red Bags for waste management

	Black bags	
	Vial Oppener	Need Based
	Vitamin A	Vitamin A Syrup
	Paracetamol	Paracetamol Syrup
	Emergency Drug Kit	Inj. Adrenaline, Inj. Hydrocortisone, Inj. Dexamethasone, Ambu bag (Paediatric), Disposable 2ml and 5ml syringes, Needles(Size 24, 22, 20)
	* Hepatitis B wherever implemented under UIP and JE in select districts	
(W)	Others	
1	Tab.Liv52	
2	Syrup Liv52	
3	Cap.Doxycycline 100mg	
4	Inj.Heparin sod.1000IU	
5	Tab.Dipyridamol(Like Persentine)	
6	Inj.Dopamine	
7	Tab.Glyceryl Trinitrate	
8	Tab.Amitryptilline	
9	Tab.trifluoperazine(1mg)	
10	Tab.Nitrofurantine	
11	Inj.Valethemide Bromide(Epidosyn)	
12	Inj.Isolyte-M	
13	Inj.Isolyte-P	
14	Inj.Isolyte-G	
15	Cap.Cephalexin 250mg	
16	Tab.Taxim	
17	Inj.Metaclopramide	
18	Tab.Folic acid	
19	Inj.Lignocaine Hcl 2%	
20	Inj.Nor adrenaline	
21	Betadine lotion	
22	Tab.stilboesteral	
23	Inj.Pyridoxine	
24	Hydrogen peroxide	
25	Inj.magnesium sulphate	
26	Benzyl Benzoate	
27	GammaBenzene Hexachloride	
28	Inj.Tetglobe	
29	Inj.Paracetamol	
30	Pilocarpine eye drops 1%	
31	Sy.Orciprenaline (Desirable)	
32	Suturing needles (RB,Cutting)	
33	Inj.Calcium pantothenate	

34	Inj.Xylocaine 4% 30 ml
35	Halothane
36	Mixture Alkaline
37	Inj. Phenobarbitone 200mg
38	Inj. B12 (Cynacobalamine)
39	Neosporin, Nebasuef , Soframycin Pow
40	Magnasium Sulphate Powder
41	Furacin Cream
42	Xylocaine jelly
43	Formaldehyde Lotion
44	Cetrimide 100ml bott 3.5%, 1.5% 1
45	Bacitrium powder 10mg botts
46	Bleaching Powder 5 Kg Pkts(ISI Mark)
47	Ether Solvent
48	Sodium Hypochloride Sod. 5 ltrs/1 ltrs
49	Inj. Diphthoria Antitoxin (ADS)10000I.U
50	Inj. Gas gangrene Antitoxin(AGGS)10000
51	Inj. Hydroxy Progesterone500mg/2ml
52	Inj. Methyl Prednisolon 500mg vial
53	Inj.Multivitamin I.V
54	Inj.Potassium chloride
55	Inj.Quinine Dihydrochloride
56	Tetanus Antitoxin 10000 I.U
57	Inj.Tetanus Toxoid 5ml vial
58	Inj.Theophylline Etophylline
59	Inj.Vitamin A
60	Tab.Ferrous sulphate200mg+Folic acid
61	Tab.Ferrous sulphate 300mg
62	Tab.Griseofulvin125mg
63	Tab.Phenobarbitone 30mg
64	Tab.Phenobarbitone 60mg
65	Tab.Pyridoxin 10mg
66	Tab.Thyroxine sod 0.1mg
67	Warfarin sod 5mg
68	Tab.Alprazolam 0.25mg
69	Tab.Amlodipine 5mg
70	Tab.Amlodipine 10mg
71	Tab.Nefidipine 20mg
72	Tab.Nefidipine 30mg
73	Tab.Riboflavin 10mg
74	Syp.Ferrous Gluconate 100ml bottle

75	Cream Fluconazole 15gm tube
76	Sus.Furazolidone
77	Oint.Hydrocortisone acetate
78	Syp.isoniazid 100mg/5ml 100ml bot
79	Liquid paraffin
79A	Linctus codein 500ml bot
80	Cream Miconazole 2% 15gm tube
81	Syp.Nalidixic acid
82	syp.Norfloxacin
83	Phenylepinephrine eye drops
84	Pilocarpine eye drops 2%
85	Syp.Pottassium chloride 400ml bot
86	Syp.Primaquine
87	Suspension Pyrantel pamoate
88	Sus Rifampicin
89	Syp.Salbutamol 100ml bot
90	Syp.Theophylline 100ml
91	Syp.Vitamin B.Complex
92	Vit D-3 Granules
93	Ophthalmic & ear drops
94	Glycerine Mag sulphate ear drops
95	Pilocarpine eye drops 4%
96	Oint Acyclovir 3% 5gm tube
97	Benzyl Benzoate emulsion 50ml bot
98	Oint.Betamethasone
99	Cream Clotrimazole skin 1% 15gm
100	Oint Dexamethasone 1%+ Framycetin
101	oint contain clotrimazole+Genta+Flucon
102	Oint Flucanazole 10 mg
103	Cream Framyctin 1% 20gm tube/100gm
104	Lot.Gamabenzene hexachloride1% bt
105	Glycerine Suppository USP 3gm bott/10
106	Cream Nitrofurazone 0.2% jar of 500g
107	Oint Silversulpadiazene 1% 25g
108	Gum Paint
109	AIDS Protective kit
110	Chemotherapy Drugs
111	Hearing Aids (Behind the Ear Type) 200 per district per year
112	Surgical Accessories for Eye Green Shades Blades (Carbon Steel)

	Opsite surgical gauze (10x14 cm.) 8-0 & 10-0 double needle suture Visco elastics from reputed firms Spectacles For operated Cataract Cases (after refraction) For Poor school age children with refractive errors
--	---

Emergency Life Saving Drugs for Special Newborn Care Unit:

Item	Requirement for the unit
1. Injection Adrenaline (1:10000)	A stock of 1 set per bed per month should always be maintained in the unit
2. Injection Naloxone	
3. Sodium Bicarbonate	
4. Injection Aminophylline	
5. Injection Phenobarbitone	
6. Injection Hydrocortisone	
7. 5%, 10%, 25% Dextrose	
8. Normal saline	
9. Injection Ampicillin with Cloxacillin	
10. Injection Ampicillin	
11. Injection Cefotaxime	
12. Injection Gentamycin	

** This is not an exhaustive list for an emergency situation in any Sick Newborn Care Units*

VIII. Essential Medicines and Supplies for Special Newborn Care Unit:

1. 4.5% Dextrose Normal Saline
2. Injection Potassium Chloride 15%
3. Injection Calcium Gluconate 10%
4. Injection Magnesium Sulphate 50%
5. Injection Vitamin K
6. Injection Phenobarbitone
7. Injection Phenytoin
8. Phenobarbitone Syrup
9. Amoxicillin-Clavulanic Suspension
10. Injection Dexamethasone
11. Antifungal Skin Cream
12. Antibiotic Skin Cream
13. 2% Glutaraldehyde
14. Rectified Spirit
15. Povidone Iodine Solution
16. Lysol
17. Savlon
18. Liquid hand washing soap
19. Detergent for Washing Machine
20. Hand washing soap
21. Triple dye
22. Gentian violet 1%
23. Antibiotic Eye Drop

13. Capacity Building

Training of all cadres of workers at periodic intervals is an essential component of the IPHS for district hospitals. Both medical and paramedical staff should undergo continuing medical education (CME) at intervals.

District hospitals also should provide the opportunity for the training of medical and paramedical staff working in the institutions below district level such as skill birth attendant training and other skill development / management training.

14. Quality Assurance in Service Delivery

Quality of service should be maintained at all levels. Standard treatment protocols for locally common diseases and diseases covered under all national programmes should be made available at all district hospitals. All the efforts that are being made to improve hardware i.e. infrastructure and software i.e. human resources are necessary but not sufficient. These need to be guided by standard treatment protocols and Quality Assurance in Service Delivery. Department wise quality assurance has been discussed earlier.

Quality Control

Internal Monitoring

a) **Management Information System-**

Hospital shall collect data pertaining to performance of different department and hospital overall. A standard format for capturing key performance indicators given in **annexure VII. This is only a suggestive format and States may modify it as per their requirement.** These performance indicators shall regularly be monitored and analyzed. The findings of MIS shall be discussed in meetings of Rogikalyan samiti and management review meetings. Corrective and preventive actions shall be taken to improve the performance.

b) **Internal Audit** – Internal audit of the services available in the hospital shall be done on regular basis (preferably quarterly) . Findings of audit shall be discussed in meetings of hospital monitoring committee and corrective and preventive action shall be taken. Internal audit shall be done through hospital monitoring committee. This shall comprise of Civil surgeon/ CMO, medical superintendent, deputy medical superintendent, departmental incharge , matron and hospital manager.

c) **Social audit** through Rogi Kalyan Samities / Panchayati Raj Institutions

d) **Medical audit** – A medical audit committee shall be constituted in the hospital. Audit shall be done on regular basis (preferably monthly). Sample size for audit shall be decided and records of patients shall be selected randomly. Records shall be evaluated for completeness against standard content format, clinical management of a particular.

e) **Death review-** Review of the all mortality occur in the hospital shall be done. It shall be of fortnightly basis.

f) **Other audits:** Disaster Preparedness Audit, Monitoring of Accessibility and equity issues, information exchange. These audits shall be carried out by Rogi Kalyan Samiti of the hospital.

External Monitoring

Monitoring by PRI / Rogi Kalyan Samities

Service / performance evaluation by independent agencies

District Monitoring Committees formed under NRHM shall monitor the upgradation of Hospitals to IPHS. Annual Jansamvad may also be held as a mechanism of monitoring.

Monitoring of laboratory

Internal Quality Assessment Scheme

External Quality Assessment Scheme

Record Maintenance

Computers have to be used for accurate record maintenance and with connectivity to the District Health Systems, State and National Level.

15. **Statuary Compliance-** Hospital shall fulfil all the statuary requirements and comply to all the regulations issued by state and union of India. Hospital shall have copy of these regulations / acts .List of statuary and regulatory compliances is given in the **annexure VIII**

16. **Rogi Kalyan Samities (RKS) / Hospital Management Committee (HMC)**

Each district hospital should have a Rogi Kalyan Samiti / Hospital Management Committee with involvement of PRIs and other stakeholders as per the guidelines issued by the Government of India. These RKS should be registered bodies with an account for itself in the local bank. The RKS / HMC will have authority to raise their own resources by charging user fees and by any other means and utilized the same for the improvement of service rendered by the District Hospital.

17. **Citizen's Charter**

Each District hospital should display a citizen's charter for the district hospital indicating the services available, user fees charged, if any, and a grievance redressal system. A modal citizen's charter is given as in **Annexure I**

OUR MOTTO - SERVICE WITH SMILE

CITIZENS CHARTER

This charter seeks to provide a framework which enables our users to know:

- What services are available in this hospital;
- The quality of services they are entitled to;
- The means through which complaints regarding denial or poor quality of services will be redressed.

Standards of Service:

- This is a District, Sub-district/divisional hospital;
- It provides medical care to all patients who come to the hospital;
- Standards are influenced by patients load and availability of resources;
- Yet we insist that all our users receive courteous and prompt attention.

Locations:

It is located on road in front of

This hospital has-

Doctors: (including residents).

Nurses: (including supervisory staff).

Beds:

Doctors wear white aprons and nurses are in uniform.

All Staff member wear identity cards.

General Information

Enquiry, Reception and Registration Services:

This counter is functioning round the clock.

Location guide maps have been put up at various places in this hospital.

Colour coded guidelines and directional signboards are fixed at strategic points for guidance.

Telephone enquiries can be made over telephone numbers:

....., &, Fax:

Casualty & Emergency Services:

All Casualty Services are available round the clock.

- Duty Doctor is available round the clock.
- Specialist doctors are available on call from resident doctors.
- Emergency services are available for all specialities as listed in the OPD Services.
- Emergency Operations are done in-

OT located on floor of building.

Maternity OT
Orthopaedic Emergency OT
Burns and plastic OT
Main OT for Neurosurgery cases

Emergency Operation Theatre is functioned round the clock.

In serious cases, treatment/management gets priority over paper work like registration and medico-legal requirements. The decision rests with the treating doctor.

OPD Services:

Various outpatient services available in the hospital are detailed below (as available):

OPD	Place	Time of Registration	Time of OPD
General Medicine			
Paediatrics			
General Surgery			
Paediatric Surgery			
Neuro Surgery			
Cardiac Surgery			
Obstetric & Gynec.:			

Special Clinics in the afternoon

- Antenatal & Postnatal clinic
- Geriatric clinic
- Adolescent Clinic
- Onco-Clinic
- Uro-Gynae Clinic
- Infertility Clinic

Eye

ENT

Skin

Urology

Cardiology

Psychiatry

Radiotherapy

Neurology

Orthopaedics

Burns & plastics

Dental OPD

ISM Services:

Homeopathic

Ayurvedic

Any other

In OPDs specialists are available for consultation.

OPD services are available on all working days excluding Sundays and Gazetted Holidays.

On Saturdays, the hospital functions from AM to PM.

Medical Facilities Not Available:

Organ Transplantation

.....

.....

.....

Some specialities do not have indoor patients services:

Psychiatry

D-addiction

Dental

Nuclear Medicine

Genetic Counselling

Endochronology

Geriatrics

Laboratory Services:

Routine: Laboratory Services are provided in the field of (as available):

- Bio-chemistry
- Microbiology
- Haematology
- Cytology
- Histopathology including FNAC
- Clinical Pathology

There is a Central Collection Centre for receiving and collecting various specimens for testing. The timings for receiving specimens are 9:00 AM to 11:30 AM.

Emergency: Emergency Laboratory Services are available 24 hours for limited tests relating to clinical pathology and bio-chemistry.

Radio Diagnostic Services:

Routine: These services include:

X-Rays

Ultrasound and

CAT Scan

Routine X-Rays are done from 9:00 AM to 1:00 PM. Registration is done from 9:00 AM to 11:30 AM.

Ultrasound examination is done from 9:00 AM to 4:00 PM.

Emergency: Emergency X-Ray services are also available round the clock. CAT Scan services are also available round the clock.

Indoor Patient Services:

There are total of Wards providing free indoor patient care.

Emergency ward A admits emergency cases for medical problems.

Emergency ward B admits emergency cases for surgical problems.

There is a ----- bedded Intensive Care Unit for care of seriously ill patients.

A ----- bedded Intensive Coronary Care Unit takes care of heart patients requiring intensive treatment.

In the Burns Department, there are ----- bedded Intensive Care Unit to treat seriously injured burns patients.

There are ----- labour rooms for conducting deliveries round the clock.

----- nurseries provide necessary care to the newborns – normal as well those born with disease.

All indoor patients receive treatment under the guidance and supervision during office hours i.e. 9:00 AM to 4:00 PM.

Outside office hours, treatment is given by doctor on duty and specialists are available on call.

Free diet is provided to all patients in the General Wards.

Every patient is given one attendant pass.

Visitors are allowed only between 5:00 PM to 7:00 PM.

Investigations like CAT Scan, Ultra Sound, Barium-meal, ECHO, TMT etc. are charged for as per Government approved rates.

For poor patients, these charges can be waived partially or fully on the recommendation of the H.O.D. by the Additional Medical Superintendent. In case of emergency CMO (on duty) may waive off these charges.

A Staff Nurse is on duty round the clock in the ward.

Admitted patients should contact the Staff Nurse for any medical assistance they need.

Other Facilities:

Other facilities available include:

Cold Drinking Water

Wheel chairs and trolleys are available in the OPD and casualty.

----- Ambulances are available to pick up patients from their places (on payment of nominal charges) and also for discharged patients.

Mortuary Van is available on payment between 9:00 AM to 4:00 PM.

Public Telephone Booths are provided at various locations.

Stand-by Electricity Generators have been provided. Chemist Shops are available outside the hospital. Canteen for patients and their attendants is available.

Lifts are available for access to higher floors.

Adequate toilet Facilities for use of patients and their attendants are available.

The cleaning staff, in-house or on contract done through local tender mechanism.

Cleaning supplies such as brooms, phynile, harpic, disinfectants, formalin, soaps etc. shall be there is sufficient quantity.

Doctor's Canteen/ Mess

Staff Canteen

24hrs Canteen for patients Attendants

Complaints & Grievances:

There will be occasions when our services will not be upto your expectations.

Please do not hesitate to register your complaints. It will only help us serve you better.

Every grievance will be duly acknowledged.

We aim to settle your genuine complaints within 10 working days of its receipt.

Suggestions/Complaint boxes are also provided at various locations in the hospital.

If we cannot, we will explain the reasons and the time we will take to resolve.

Name, designation and telephone number of the nodal officer concerned is duly displayed at the Reception.

Dr.
Designation.....
Tele (O)..... (R)..... (M).....
Meeting Hours..... to

Responsibilities of the Users:

The success of this charter depends on the support we receive from our uses.

Please try to appreciate the various constraints under which the hospital is functioning.

On an average more than ----- lacs patients attend the OPD annually and more than ---
----- lacs patients are attended annually in the casualty and emergency wards.

Please do not inconvenience other patients.

Please help us in keeping the hospital and its surroundings neat and clean.

Please use the facilities of this hospital with care. Beware of Touts.

The Hospital is a “No Smoking Zone” and smoking is a Punishable Offence.

Please refrain from demanding undue favours from the staff and officials as it encourages corruption.

Please provide useful feedback & constructed suggestions. These may be addressed to the Medical Superintendent of the Hospital.

- ◆ “No Smoking Please”
- ◆ Don’t split here & there
- ◆ Use Dustbin
- ◆ Keep Hospital Clean
- ◆ Give regards to Ladies and Senior Citizens

**NATIONAL GUIDELINES ON HOSPITAL WASTE MANAGEMENT BASED
UPON THE BIO-MEDICAL WASTE (MANAGEMENT & HANDLING) RULES,
1998**

The Bio-Medical Waste (Management & Handling) Rules, 1998 were notified under the Environment Protection Act, 1986 (29 of 1986) by the Ministry of Environment and Forest, Govt. Of India on 20th July, 1998. The guidelines have been prepared to enable each hospital to implement the said Rules, by developing comprehensive plan for hospital waste management, in term of segregation, collection, treatment, transportation and disposal of the hospital waste.

1. POLICY ON HOSPITAL WASTE MANAGEMENT

The policy statement aims “to provide for a system for management of all potentially infectious and hazardous waste in accordance with the Bio-Medical Waste (Management & Handling) Rules, 1998 (BMW, 1998).

2. DEFINITION OF BIO-MEDICAL WASTE

Bio-Medical waste means any waste, which is generated during the diagnosis, treatment or immunisation of human beings or animal or in research activities pertaining thereto or in the production or testing of biological, including categories mentioned in the Schedule of the Bio-Medical Waste (Management & Handling) Rules, 1998.

3. CATEGORIES OF BIO-MEDICAL WASTE

Hazardous, toxic and Bio-Medical waste has been separated into following categories for the purpose of its safe transportation to a specific site for specific treatment. Certain categories of infectious waste require specific treatment (disinfection/decontamination) before transportation for disposal. These categories of bio-medical waste are mentioned as below:-

Category No.1- Human Anatomical Waste

This includes human tissues, organs, and body parts.

Category No.2- Animal Waste

This includes animal tissues, organs, body parts, carcasses, bleeding parts, fluid, blood and experimental animal used in research; waste generated by veterinary hospitals and colleges: discharge from hospital and animal houses.

Category No.3- Microbiology & Biotechnology Waste

This includes waste from laboratory cultures, stocks or specimens of microorganism live or attenuated vaccines, human and animal cell culture used in research and infectious agents from research and industrial laboratories, wastes from production of biological, toxins, dishes and devices used for transfer of cultures.

Category No.4- Waste sharps

This comprises of needles, syringes, scalpels, blades, glass, etc, that may cause puncture and cuts. This includes both used and unusable sharps.

Category No.5- Discarded Medicines and Cytotoxic drugs

This includes wastes comprising of outdated, contaminated and discarded medicines.

Category No.6- Soiled Waste

It comprises of item contaminated with blood, and body fluids including cotton, dressings, soiled plaster casts, linens, beddings, other material contaminated with blood.

Category No.7- Solid Waste

This includes wastes generated from disposable items, other than the waste sharps, such as tunings, catheters, intravenous sets, etc.

Category No.8- Liquid Waste

This includes waste generated from laboratory and washing, cleaning, housekeeping and disinfecting activities.

Category No.9- Incineration Ash

This consists of ash from incineration of any bio-medical waste.

Category No.10- Chemical Waste

This contains chemical used in production of biological and chemical used in disinfection, insecticides, etc.

4.1 SEGREGATION OF WASTE

4.1 It should be done at the site of generation of bio-medical waste, e.g. all patient care activity areas, diagnostic services areas, operation theatre labour rooms, treatment rooms etc.

4.2 The responsibility of segregation should be with the generator of bio-medical waste i.e. Doctors, Nurses, Technicians, etc.

4.3 The Bio-medical waste should be segregated as per categories applicable.

5. COLLECTION OF BIO-MEDICAL WASTE:

Collection of Bio-Medical Waste should be done as per Bio-Medical Waste (Management & Handling) Rules, 1999 (Rule 6-Schedule II). The collection bags and the containers should be labelled as per guidelines of Schedule III, i.e., symbols for bio-hazard and cytotoxic. A separate container shall be placed at every point of generation for general waste to be disposed of through Municipal Authority.

The trolleys which are used to collect hospital waste should be designed in such a way that there should be no leakage or spillage of bio-medical waste while transporting to designated site.

5.1 Type of container and colour for collection of Bio-medical waste:

<u>Category</u>	<u>Type of container</u>	<u>Colour Coding</u>
1. Human Anatomical Waste	Plastic Bag	Yellow
2. Animal Waste	Plastic Bag	Yellow
3. Microbiology & Bio-Technology Waste	Plastic Bag	Yellow/Red
4. Waste sharp	plastic bag, Puncture Proof Container	Blue/White/Translucent
5. Discarded Medicines & Cytotoxic Waste	Plastic Bag	Black
6. Solid waste (plastic)	Plastic Bag	Yellow/Red
7. Solid Waste(Plastic)	plastic Bag	Blue/White
8. Liquid waste	-----	-----
9. Incineration ash	Plastic Bag	Black
10. Chemical waste(solid)	Plastic Bag	Black

- Those plastics bags which contain liquid like blood, urine, pus, etc., should be put into red colour bag for microwaving and autoclaving and other items should be put into blue or white bag after chemical treatment and mutilation/shredding.

5.2 All the items sent to incinerator/deep burial (Cat. 1, 2, 3, 6) should be placed in Yellow coloured bags.

5.3 All the Bio-medical waste to be sent for Microwave/Autoclave treatment should be placed in Red coloured bags. (Cat. 3, 6 & &)

5.4 Any waste which is sent to shredder after Autoclaving/Microwaving/Chemical treatment is to be packed in Blue/White translucent bag.

5.5 Location of Containers:

All containers having different coloured plastic bags should be located at the point of generation waste, i.e., near OT tables, injection rooms, diagnostic service areas, dressing trolleys, injection trolleys, etc.

5.6 Labelling: All the bags/containers must be labelled bio-hazard or cytotoxic with symbols according to the rules (Schedule III of Bio-Medical Waste Rules, 1998)

5.7 Bags: It should be ensured that waste bags are filled up to three-fourth capacity, tied securely and removed from the site of the generation to the storage area regularly and timely.

5.8 The categories of waste (Cat. 4, 7, 8, & 10) which require pre-treatment (decontamination/disinfection) at the site of generation such as plastic and sharp materials, etc.. should be removed from the site of generation only after pre-treatment.

5.9 The quantity of collection should be documented in a register. The colour plastic bags should be replaced and the garbage bin should be cleaned with disinfectant regularly.

6. STORAGE OF WASTE

Storage refers to the holding of Bio-medical waste for a certain period of time at the site of generation till its transit for treatment and final disposal.

6.1 No untreated bio-medical waste shall be kept stored beyond a period of 48 hours.

6.2 The authorised person must take the permission of the prescribed authority, if for any reason it becomes necessary to store the waste beyond 48 hours.

- 6.3 The authorised person should take measures to ensure that the waste does not adversely affect human health and the environment in case it is kept beyond the prescribed limit.

7. TRANSPORTATION

7.1 TRANSPORTATION OF WASTE WITHIN THE HOSPITALS:

- 7.1.1 Within the hospital, waste routed must be designated to avoid the passage of waste through patient care areas as far as possible.
- 7.1.2 Separate time schedules are prepared for transportation of Bio-medical waste and general waste. It will reduce chances of their mix up.
- 7.1.3 Dedicated wheeled containers, trolleys or carts with proper label (as per Schedule IV of Rule 6) should be used to transport the waste from the site of storage to the site of treatment.
- 7.1.4 Trolleys or carts should be thoroughly cleansed and disinfected in the event of any spillage.
- 7.1.5 The wheeled containers should be designed in such a manner that the waste can be easily loaded, remains secured during transportation, does not have any sharp edges and easy to cleanse and disinfect.

7.2 TRANSPORTATION OF WASTE FOR DISPOSAL OUTSIDE THE HOSPITAL.

- 7.2.1 Notwithstanding anything contained in the Motor Vehicles Act, 1988 or rules there under. Bio-medical waste shall be transported only in such vehicles as may be authorised for the purpose by the Competent Authority.
- 7.2.2 The containers for transportation must be labelled as given in Schedule III and IV of BMW, 1998.

8. TREATMENT OF HOSPITAL WASTE (Please see Rule 5. Schedule V & VI)

8.1 **General waste** (Non-hazardous, non-toxic, non-infectious). The safe disposal of this waste should be ensured by the occupier through Local Municipal Authority.

8.2 Bio-Medical Waste

Monitoring of incinerator/autoclave/microwave shall be carried out once in a month to check the performance of the equipment. One should ensure:

- i) The proper operation & Maintenance of the incinerators/autoclave/microwave.
- ii) Attainment of prescribed temperatures in both the chambers of incineration while incinerating the waste.
- iii) Not to incinerate PVC plastic materials.
- iv) Only skilled persons operate the equipment.
- v) Proper record book shall be maintained for the incinerator/autoclave/microwave/shredder. Such record book shall have the entries of period of operation, temperature/pressure attained while treating the waste quantity for waste treated etc.
- vi) The scavengers shall not be allowed to sort out the waste.
- vii) Proper hygiene shall be maintained at, both, the waste treatment plant site as well as the waste storage area.
- viii) Categories 4,7,8 & 10 should be treated with chemical disinfectant like 1% hypochlorite solution or any other equivalent chemical reagent to ensure disinfection.

8.2.1 **Incineration:** The incinerator should be installed and made operational as per specifications under the BMW Rules, 1998 (schedule V) and an authorization shall be taken from the prescribed authority for the management and handling of bio-medical waste including installation and operation of treatment facility as per Rule 8 of Bio-Medical Waste (Management & Handling) Rules 1998. Specific requirement regarding the incinerator and norms of combustion efficiency and emission levels etc. have been defined in the Bio-Medical Waste (Management & Handling) Rules 1998. In case of small hospitals, Joint facilities for incineration can be developed depending upon the local policies of the Hospital and feasibility. The plastic Bags made of Chlorinated plastics should not be incinerated.

8.2.2 Deep burial: Standard for deep burial are also mentioned in the Bio-medical waste (Management & handling) Rules 1998 (Schedule V). The cities having less than 5 lakhs population can opt for deep burial for wastes under categories 1 &2.

8.2.3 Autoclave and Microwave Treatment: Standards for the autoclaving and Microwaving are also mentioned in the Bio-medical Waste (Management & Handling) Rules 1998 (Schedule-V). All equipments installed/ shared should meet these specifications. The waste under category 3,4,6 & 7 can be treated by these techniques.

8.2.4 Shredding: The plastics (IV bottle IV sets syringes, catheters, etc.) sharps (needles, blades, glass, etc.) should be shredded but only after chemical treatment/Microwaving/Autoclaving, ensuring disinfection.

8.2.5 Needles destroyers can be used for disposal of needles directly without chemical treatment.

8.2.6 Secured landfill: The incinerator ash, discarded medicines, cytotoxic substances and solid chemical waste should be treated by this option (cat. 5,9 & 10).

8.2.7 It may be noted there are multiple options available for disposal of certain category of waste. The individual hospital can choose the best option depending upon treatment facilities available.

8.2.8 Radioactive Waste: The management of the radioactive waste should be undertaken as per the guidelines of BARC.

8.2.9 Liquid (Cat.8)& Chemical Waste (Cat.10):

- i) Chemical waste & liquid waste from Laboratory: Suitable treatment, dilution or 1% hypochlorite solution as required shall be given before disposal.
- ii) The affluent generated from the hospital should conform to limits as laid down in the Bio-medical Waste (Management & Handling) Rules, 1998 (Schedule V).
- iii) The liquid and chemical waste should not be used for any other purpose.

- iv) For discharge into public sewers with terminal facilities the prescribed standard limits should be ensured.

9. SAFETY MEASURES

9.1 Personal Protection:

Hospital and health care authorities have to ensure that the following personal protective equipment are provided.

- i) Gloves
 - a) Disposable gloves
 - b) Latex surgical gloves
 - c) Heavy duty rubber gloves (uptil elbows) for cleaners.
- ii) Masks: Simple and cheap mask to prevent health care workers against: aerosols splashes and dust.
- iii) Protective glasses.
- iv) Plastic Aprons.
- v) Special Foot wear, e.g., gum boots for Hospital waste Handler.

9.2 Immunization against Hepatitis B and Tetanus shall be given to all hospital staff.

9.3 All the generators of bio-medical waste should adopt universal precautions and appropriate safety measures while doing therapeutic and diagnostic activities and also while handling the Bio-Medical waste.

9.4 All the sanitation workers engaged in the handling and transporting should be made aware of the risks involved in handling the bio-medical waste.

9.5 Any worker reporting with an accident/injury due to handling of biomedical waste should be given prompt first aid. Necessary investigations and follow up action as per requirement may be carried out.

9.2 Reporting Accident & Spillages

The procedure for reporting accidents (as per Form III of BMW Rules. 1998) should be followed and the records should be kept. The report should include the nature of accidents, when and where it occurred and which staffs were directly involved. It should also show type of waste involved and emergency measures taken.

10 TRAINING

- 10.1** All the medical professional must be made aware of Bio-medical waste (Management & Handling) Rules, 1998.
- 10.2** Each and every hospital must have well planned awareness and training programme for all categories of personnel including administrators to make them aware about safe hospital waste management practices.
- 10.3** Training should be conducted category wise and more emphasis should be given in training modules as per category of personnel.
- 10.4** Training should be conducted in appropriate language/medium and in an acceptable manner.
- 10.5** Wherever possible audio-visual material and experienced trainers should be used. Hand on training about colour coded bags, categorization and chemical disinfections can be given to concerned employees.
- 10.6** Training should be interactive and should include, demonstration sessions, Behavioural science approach should be adopted with emphasis on establishing proper practices. Training is a continuous process and will need constant reinforcement.

11. MANAGEMENT & ADMINISTRATION

- 11.1** The Head of the Hospital shall form a waste Management Committee under his Chairmanship. The Waste Management Committee shall meet regularly to review the performance of the waste disposal. This Committee should be responsible for making hospital specific action plan for hospital waste management and for its supervision, monitoring implementation and looking after the safety of the bio-medical waste handlers.
- 11.2** The Heads of each hospital will have to take authorization for generation of waste from appropriate authorities well in time as notified by the concerned State/U.T. Government and get it renewed as per time schedule laid in the rules. The application is to be made as per format given in form I for grant of authorization. (Please See page 18 of notifies BMW Rules)
- 11.3** The annual reports accident reporting, as required under BMW rules should be submitted to the concerned authorities as per BMW rules format (Form II and Form III respectively) (Please see pages 19 & 20 of BMW Rules).

Guidelines to Reduce Environmental Pollution due to Mercury waste

1. following guidelines will be used for management of Mercury waste
 - a. As mercury waste is a hazardous waste, the storage, handling, treatment and disposal practices should be in line with the requirements of Government of India's Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules 2008, which may be seen at website www.cpcb.nic.in.
 - b. Mercury-contaminated waste should not be mixed with other biomedical waste or with general waste. It should not be swept down the drain and wherever possible, it should be disposed off at a hazardous waste facility or given to a mercury-based equipment manufacturer.
 - c. Precaution should be taken not to handle mercury with bare hands and as far as possible; jewellery should be removed at the time of handling mercury. After handling mercury, hands must be carefully washed before eating or drinking. Appropriate personal protective equipment (rubber gloves, goggles / face shields and clothing) should be used while handling mercury.
 - d. Mercury-containing thermometers should be kept in a container that does not have a hard bottom. Prefer a plastic container to a glass container, as the possibility of breakage will be less.
 - e. In case of breakage, cardboard sheets should be used to push the spilled beads of mercury together. A syringe should be used to suck the beads of mercury. Mercury should be placed carefully in a container with some water. Any remaining beads of mercury will be picked up with a sticky tape and placed in a plastic bag, properly labeled.
2. Reporting formats must be used to report and register any mercury spills / leakages.
3. Hospitals and health centres should work to create awareness among health workers and other stakeholders regarding the health and safety hazards of mercury.

STEPS FOR SAFETY IN SURGICAL PATIENTS (IN THE PRE-OPERATIVE WARD)

To be done by Surgeon

- History, examination and investigations
- Pre-op orders
- Check and reconfirm PAC findings.
- Assess and mention any co-morbid condition.
- Record boldly on 1st page of case sheet --
--History of drug allergies.
- Blood transfusion
 - Sample for grouping and cross-matching to be sent.
 - Check availability & donation
 - Risk of transfusion to be explained to relatives
- Written well informed consent from patient (Counter sign by surgeon)
- Sister in charge of O.T. to be informed in advance regarding the need for special equipments.

Signature of Surgeon

To be done by Staff Nurse

- Patient's consent to be taken (Counter sign by surgeon)
- Part preparation as ordered
- Identification tag on patient wrist
Name / Age / Sex / C.R. No /
Surgical unit / Diagnosis
- Follow pre-op orders
- Antibiotic sensitivity test done

Signature of Staff Nurse

To be done by Anesthetist

- Check PAC findings
- Assess co morbid conditions
- H/O any drug allergy
- Check Consent

Signature of Anaesthetist

SURGICAL SAFETY CHECK LIST IN THE OPERATION THEATRE

SIGN IN (Period before induction of anesthesia)

- Patient has confirmed**
- Identity
 - Site
 - Procedure
 - Consent

-
- Site marked / Not Applicable**

-
- Anesthesia Safety Check Completed**
- Anesthesia Equipment
 - A B C D E

-
- Pulse Oxymeter on Patient and functioning**

DOES PATIENT HAVE A:

Known Allergy

- No
 Yes

Difficult Airway / Aspiration Risk?

- No
 Yes, and assistance available

Risk of >500 ml Blood loss (7 ml / kg in children)

- No
 Yes and adequate I.V. access
& Blood / Fluids Planned.

Signature of Nurse

TIME OUT (Period after induction & before surgical incision)

- Confirm all team members have introduced themselves by name & role**

-
- Surgeon ,Anesthetist & Nurse verbally Confirm**
- Patient
 - Site
 - Procedure

ANTICIPATED CRITICAL EVENTS

- Surgeons reviews:** What are the critical or unexpected steps, operative duration & anticipated blood loss

- Anesthetist reviews:** Are there any patient specific concerns

- Nursing Team reviews:** Has sterility been confirmed? Is there equipment issue or any concern?

Has Antibiotic prophylaxis been given with in the last 60 minutes?

- Yes
 Not Applicable

Is Essential Imaging Displayed?

- Yes
 Not Applicable

Signature of Surgeon

SIGN OUT (Period from wound closure till transfer of patient from OT room)

Nurse Verbally confirm with the team :

- The name of the procedure recorded**
- That instrument, sponge, needle counts are correct** (or not applicable)

- How the specimen is labeled** (including Patient name)
- Whether there are any equipment problems to be addressed?**

-
- Surgeon, Anesthetist & Nurse review the key concerns for recovery and management of patient & post-op orders to be given accordingly**

-
- Information to patients attendant** about procedure performed, condition of the patient & specimen to be shown

-
- Histopathology form** to be filled properly & **return all the records & investigation** to attendant / patient

Signature of Anaesthetist

REFERRAL LABORATORY NETWORKS

Referral Laboratory Network for Advanced diagnostic facilities

	IDSP Level - 4 Labs					IDSP Level - 5 Labs
	Central Zone	South Zone	North Zone	East Zone	South Zone	

Advance Diagnostic Facilities

Bacterial diagnosis						
Enteric bacteria: <i>Vibrio cholerae</i> , <i>Shigella</i> , <i>Salmonella</i>		CMC Vellore Trivandrum Medical College	PGIMER Chandigarh AIIMS Delhi CRI Kasauli	RMRC Dibrugarh, Cuttack Medical College	KEM Mumbai, AFMC Pune	NICED & NICD
<i>Streptococcus pyogenes</i> and <i>S pneumoniae</i>	Indore Medical College	St. John Medical College, Bangalore	VP. Chest University of Delhi	-	BJ MC	CMC Vellore
<i>C.diphtheriae</i>	BHU	CMC, Vellore	NICD, Delhi	STM, Kolkata	AFMC, Pune	VP Chest Institute, Delhi
<i>Neisseria meningitidis</i> and <i>N. gonorrhoeae</i>	SN Medical College, Agra	State PH Lab Trivandrum	PGIMER Chandigarh	-	Surat Medical College	CMC Vellore & PGIMER Chandigarh
<i>Staphylococcus</i>	BHU	MGR Medical University	Maulana Azad Medical College, Delhi	STM, Kolkata	AFMC, Pune	NICD, Delhi
Tuberculosis	State TB Demonstration & Training Centre (for all zones)					NTI, TRC

	ICGEB, Delhi					
Leptospirosis	DRDE	Virology Institute, Allepey Tamil Nadu University, Chennai VCRC, Pondicherry	AIIMS IVRI	RMRC, Bhubaneswar & Dibrugarh	BJMC	RMRC Port Blair

Viral Diagnosis

Enteric viruses	DRDE	CMC, Vellore	AIIMS & Villupuram Chest Institute	NICED Kolkata	-	EVRC, Mumbai, NIV & NICD
Arboviruses	DRDE	CMC, Vellore	AIIMS & NICD Delhi Chest Institute	NICED Kolkata	-	NIV
Myxoviruses	DRDE	CMC, Vellore	AIIMS & NICD Delhi Chest Institute	NICED Kolkata	-	NIV, HSADL Bhopal
Hepatitis viruses	DRDE	CMC, Vellore	AIIMS ICGEB, Delhi	NICED Kolkata	-	NIV
Neurotropic viruses	DRDE	CMC, Vellore	AIIMS & NICD Delhi	-	-	NIV NIMHANS
HIV	DRDE	CMC, Vellore	AIIMS	-	-	NARI, NICD & NACO ICGEB, Delhi

Parasitic Diagnosis

Malaria	All State Public Health Laboratories				MRC, Delhi ICGEB, Delhi
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Filaria	All State Public Health Laboratories	NVBDCP, Delhi VCRC Pondicherry
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Zoonoses

Dengue	DRDE	VCRC, Pondicherry Institute of Virology, Aleppey	AIIMS	NICED	NIV	NIV ICGEB, Delhi
JE	DRDE	CRME, Madurai & NIMHANS VCRC, Pondicherry	AIIMS	NICED	NIV	NIV /NICD
Plague	DRDE	NICD Bangalore	NICD, Delhi	-	Haffikins Institute	NICD, Delhi
Rickettsial diseases	DRDE	CMC, Vellore	-	-	AFMC	NICD IVRI

Others of Public Health Importance

Anthrax	DRDE	CMC, Vellore	IGIB	NICED, Calcutta	BJMC	NICD IVRI
Microbial water quality monitoring	NEERI, Nagpur	CMC Vellore, Trivandrum Medical College	PGIMER Chandigarh AIIMS Delhi CRI Kasauli	RMRC, Dibrugarh, Cuttack Medical College	KEM Mumbai, HAFFKIN's, Mumbai AFMC Pune	NICED & NICD

Unknown pathogens	Other laboratories to perform support functions	NIV, NICD, HSADL
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Outbreak investigation support	Medical Colleges and state public health laboratories as L3/ L4	NICD, NIV, NICED, VCRC
Laboratory data management	Medical Colleges, state public health laboratories and all the L4 & L5 laboratories (in their area of expertise)	NIV, NICD
Capacity building	All the L4 & L5 laboratories (in their area of expertise)	NIV, NICD
Quality assurance	All the L4 & L5 laboratories (in their area of expertise)	CMC, TRC, NTI, AFMC, NARI, RMRC, Port Blair NIV, NICD
Quality control of reagents & kits evaluation	All the L4 & L5 laboratories (in their area of expertise)	CMC, TRC, NARI, RMRC, Port Blair NIV, NICD, BJMC, NICODE
Production & supply of reagents/ kits/ biological/ standard reference materials	-	DRDE, NIV, IVRI, NICODE, NICD, MRC, Delhi AFMC, Pune NARI TRC, Chennai RMRC, Port Blair

Biosafety & bio-containment	Other laboratories to perform support function	HSADL, NIV/MCC, DRDE, NICD
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Special Newborn Care Unit (SNCU) at District Hospital

The SNCU at the district hospital is expected to provide the following services;

1. Care at birth
2. Resuscitation of asphyxiated newborns
3. Managing sick newborns (except those requiring mechanical ventilation and major surgical interventions)
4. Kangaroo mother care
5. Post natal care
6. Follow-up of high risk newborns
7. Referral services
8. Immunization services

GENERIC PLAN FOR DISTRICT LEVEL SPECIAL NEWBORN CARE UNITS (LEVEL

II)

Special Newborn Care Units (SNCU) are a special newborn unit meant primarily to reduce the case fatality among sick children born within the hospital or outside, including home deliveries within first 28 days of life.

These units will have:

- 1) **Main Special Newborn Care Unit:** This should have at least 12 beds, which would cater to the sickest child in the Hospital. It will have space for nursing work station, Hand Washing and Gowning at the point of entry.
- 2) **Step Down Unit For Children:** This is an additional 6 bed Step down Unit where recovering neonates can stay i.e. neonates who don't need intensive monitoring.
- 3) **Special Newborn Care Ward:** This is an additional 10 beds , where both the mother and the newborn can stay together for neonates who require minimal support such as for phototherapy , uncomplicated low birth weight for observation esp. weighing more than 1800gm and superficial infections etc.
- 4) **Follow up area:** This should be an additional area outside but not far away from the SNCU. This should be designated for follow up of the neonates discharged from the SNCU.

- 5) **Newborn corner with facilities for neonatal warmer and resuscitation at the labor room and Obstetrics Operation Theatre** *Ancillary area*
- 6) **Side Laboratory Room** with facilities for at least doing neonatal septic screen and measuring bilirubin level
- 7) **Teaching and Training Room.**
- 8) **Day and Night Shelter** for mothers of out born neonates with I.E.C. facilities e.g. T.V. with Audio- Video facilities
- 9) Place for In-house facility **for washing, drying and autoclaving**
- 10) **Duty Room** for doctors and Nurses
- 11) Place for **Promotion of Breast feeding and learning mother craft**
- 12) Place for **Soiled Utility/Holding Room and Clean Utility/Holding Area(s)**

Main Special Newborn Care Unit: Special Newborn Care Units (SNCU) should be ideally established in a facility in a resource poor area where not less than 1000 deliveries occur per year.

The SNCU should have at least 12 beds providing 24 hours service.

1. Location of the SNCU

- Should be located near the Labour Room, Labour Ward and Obstetrics Operation Theatre.
- Should not be located on the top floor.
- Should be accessible from the main entrance of the hospital.

2. Space requirement

Minimum space requirement for each bed area is 100 sq.ft. This would be divided as follows:

- 50sq.ft per bed would be for individual patient care area.
- 50 sq.ft per bed would be for ancillary area.

2.1 Patient Care Area:

SNCU Main Area: The main SNCU area should be divided into two interconnected rooms (600sq.ft for each) separated by transparent observation windows. The nursing station (200sq.ft.) should be in between the two rooms. This would facilitate temporary closure of one section for disinfection. A couple of beds can be separated for barrier nursing of infected neonates.

Apart from this there should be two rooms designated for a Step -Down Unit and a Special Care Baby Unit (SCBU) i.e. the Mother & Child Care Unit.

2.2 Step Down Unit:

This is an additional 6-10 bed Step Down Unit where recovering neonates can stay i.e. neonates who don't need intensive monitoring. This would be of added advantage to the SNCU as it would relieve the pressure to some extent. The space requirement would be 50sq.ft. per bed.

2.3 Special Newborn Care Ward: This is an additional 10 beds, where both the mother and the newborn can stay together for neonates who require minimal support such as for phototherapy, uncomplicated low birth weight for observation

2.4 Follow up area: This should be an additional area outside but not far away from the SNCU. This should be designated for follow up of the neonates discharged from the SNCU.

2.5 Teaching Room: The SNCU also serves as a teaching and hands-on-training centre for the entire district. Thus with every unit there should be a room allotted for teaching and training. This space can also be utilized for patient party meetings. The departmental library can be set up in this place.

2.6 Ancillary Area:

The ancillary area should include separate areas for

- Hand washing and gowning area within the Main SNCU
- Changing Room within the Main SNCU
- Nursing Work Station within the Main SNCU
- Fluid preparation area within the Main SNCU
- Space for X-ray within the main SNCU unit
- Store Room for the Unit
- Side Laboratory
- Breast feeding room/area cum learning mother craft
- Doctor's Room
- Nurses' Room
- Washing , Drying and Autoclave Rooms
- Teaching and training Room
- Out born mothers' Room
- Sister-in-charge's Room
- Sluice Room: Place for Soiled Utility/Holding Room. The ventilation system in the soiled utility/holding room shall be engineered to have negative air pressure with air 100% exhausted to the outside. The soiled utility/holding room shall be situated to allow removal of soiled materials without passing through the infant care area.
- Clean Utility/Holding Area(s): For storage of supplies frequently used in the care of newborns.

3. Minimum space requirement for each room:

- Main SNCU – 1200sq.ft (for 12 bed unit)
- Step Down Unit -300 sq.ft (for 6 bed unit)
- Special Care Baby Unit-500 sq.ft (for 6 bed unit)

- Side laboratory-100 sq.ft
- Store Room-100 sq.ft
- Washing, Drying and Autoclave room-150 sq.ft (there should be 3 divisions for the 3 functions)
- Nurses' work Station-100sq.ft
- Shelter for out born mothers-250 sq.ft
- Nurses' Room-100 sq.ft
- Doctor's Room -100sq.ft
- Teaching and Training Room-400sq.ft
- Sister-in-charge's Room-50 sq.ft.
- Room for breast feeding and learning mother craft-100sq.ft
- Soiled Utility/Holding Room -50 sq.ft
- Clean Utility/Holding Area – 50 sq.ft

Total space required = 3550 sq.ft

SPECIFICATIONS:

4.1 Windows

- Should be easily cleaned
- Should be there as a source of natural light
- Should be made of fixed glass with sliding opaque glass shades (to provide shades as an when required)
 - Should be at least 2 feet away from the cots 4.2

Walls

- Should be made of washable tiles
- The colour of the tiles should be white or off-white
- Yellow and blue tiles should not be used at all.
- Tiles should be given up to 7ft

4.3 Floor

Cleaning

Infection control is crucial in the SNCU, so a flooring material for patient care areas should be such that can be easily cleaned and is essential requirement. Stain resistance is an important aspect for flooring that will be used where spills of blood, iodine-containing compounds, or other such materials are common.

Rubber: Rubber flooring is the most rapidly growing choice in newly constructed SNCUs due to its ease of cleaning and highly durable nature. It should be latex-free.

- Other choice could be made of vitrified tiles, but should be of white/off-white color
- Others: These include epoxy, laminates, stone/granite/marble, concrete, porcelain and ceramic tile, and resilient urethane.

Table: Summary of Flooring considerations

Flooring type	Initial cost	Durability	Comfort/sound control	Environmental impact	Maintenance cost	Suggested use in
Linoleum	Low	Medium	Poor	Good	Medium	Supply areas
Vinyl	Low	Medium	Poor	Fair	Medium	Supply areas
Cushioned Vinyl	Low	Medium	fair	Fair	Medium	none
Carpet	Medium	Low	Good	Good	High	Public areas
Rubber	High	High	Good	Very good	Low	Patient care areas

4.4 Power supply

- 24 hour uninterrupted stabilized power supply with 3 phases, capacity of 25-50 KVA.
- Capable of taking up additional load.
 - Generator back-up essential with 25-50 KVA capacity

4.5 Water Supply

The ideal number of Hand washing facilities should be such that it should be within 20ft (6m) of any infant bed, apart from the entrance to SNCU.

- Should have 24 hrs uninterrupted running water supply
 - There should be wash basins with elbow/foot operated tap in the
 - washing and gowning area (at least 2)
 - main SNCU (4 in 4 corners of the room)
 - Step Down Unit (2 corners of the room)
 - There should be wash basins in the (Ordinary type)
 - Laboratory
 - Toilets

➤ Sluice Room

4.6 **Hand washing sink specification:** They shall be large enough to control splashing and designed to avoid standing or retained water. Minimum dimensions for a hand washing sink are 24 inches

wide 7 16 inches front to back 7 10 inches deep (617 417 25 cm3) from the bottom of the sink to the top of its rim. Space for pictorial hand washing instructions shall be provided above all sinks. Walls adjacent to hand washing sinks shall be constructed of nonporous material. Space shall also be provided for soap and towel dispensers and for appropriate trash receptacles. Nonabsorbent wall material should be used around sinks to prevent the growth of mold on cellulose material.

4.7 Electricity Outlet for individual beds: 6-8

central voltage stabilized outlets would have combined 5 and 15 amperes or at least 50% should be 5 and 50% should be 15 (to handle all equipments)

Additional point for portable X-Ray

4.8 Illumination inside SNCU

- Well Illuminated but adjustable day & night to suit the need of the baby
- Adequate day – light for natural illumination for examination of color
- Cool white fluorescent tubes or CFL unit with reflection grid providing 10-20 ft candle shadow free light

Illumination at the level of Neonates

Avoid exposure of the infant to direct ambient lighting. Direct ambient light has a negative effect on the development of the infant's visual neural architecture and early exposure to direct light may adversely affect the development of other neurosensory systems.

Goals were to avoid direct infant lighting exposure.

- Ambient lighting levels in infant spaces shall be adjustable through a range of at least 50 to no more than 600 lux (approximately 5 to 60foot candles), as measured at each bedside.
- Both natural and electric light sources shall have controls that allow immediate darkening of any bed position sufficient for transillumination when necessary.
- Night illumination 0.5 ft candle at Neonate's level
- Reinforced light 100-150 ft candle shadow free illumination for examination and

4.9 Ventilation:

- Well-ventilated with fresh air: Ideally by laminar air flow system or
- By central air-conditioning with Millipore filters and fresh air exchange of 12 /hour

4.10 Temperature inside SNCU:

- To be maintained at 28 C +/- 2 C round the clock preferably by thermostatic

Control

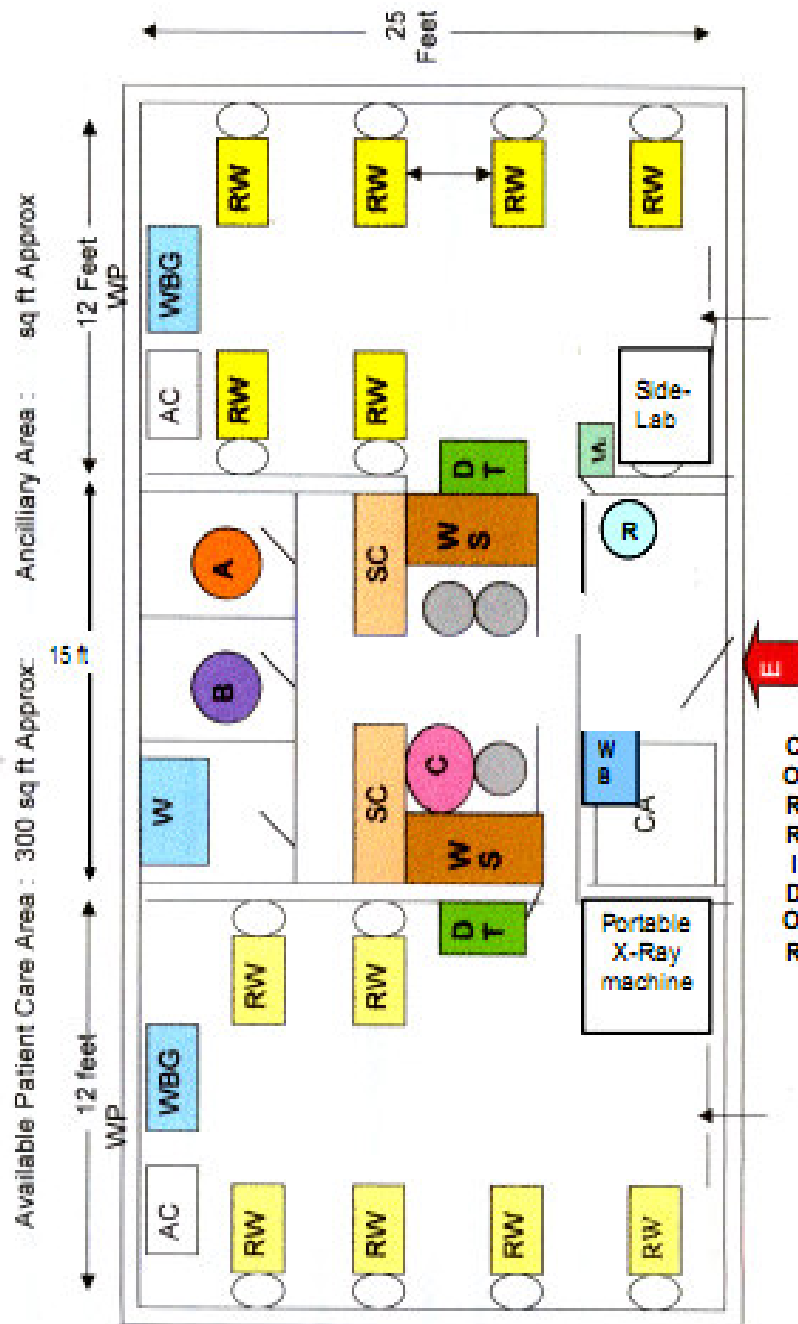
- The temperature inside SNCU should be set at the level of comfort (22°- 25°C) for the staff so that they can work for long hours, by air conditioning provided the neonates are kept warm by warming devices.

4.11 Acoustic Characteristics:

- Background sound should not be more than 45 db
- Peak intensity should not be more than 80 db

4. Plan for 12-bed Sick Newborn Care Unit at Purulia District Hospital

Plan for Outborn Sick Newborn Care Unit, District Hospital, Purulia
(Not to Scale)



Legends : A: Autodave, AC: Split Air conditioner, B: Washing Machine, C: Computer, CA: Changing area, DT: Drugs Trolley, E: Main Entrance, R: Refrigerator, RW: Radiant Warmer, SC: Storage cabinet, W: Weighing scale, WB: Wash Basin, WP: Window, WS: Work station, Viewing window: ←
Doctors' office cum Teaching Room and Step-Down units are located on opposite side of the corridor.

How to read a table

Item No	Item Description	Essential	Desirable	Quantity for 12 bed unit	Installatio	Training	Civil	Mechanica	Electrical
1	Open care system: radiant warmer, fixed height, with trolley, drawers, O2-bottles	E		2					X
2	Open care system: radiant warmer, fixed height, with trolley	E		6					X
35	Infant meter, plexi, 3½ft/105cm			1					X

MANPOWER REQUIREMENT FOR A 12 BED SPECIAL NEWBORN

CARE UNIT:

1. Doctors

- The medical officers must have a special qualifications & / or training & / or experience in sick newborn care in a level II SNCU.
- They should devote long hours for the unit or have full time involvement.
- They are primarily responsible for the complete care of sick neonates admitted in the SNCU, Step Down Unit and Special Care Baby Unit
- They should also cover the neonates beyond SNCU e.g. resuscitation call for difficult deliveries in labor room and Obstetrics OT, taking rounds of neonates in the postnatal wards, taking care of sick neonates in the Pediatric Ward (who are not admitted in the SNCU due to lack of space) and running the follow up clinic.
- They should be exclusively involved in the care of neonates.
- They should also be involved in the training programmes related to newborn health for nurses, medical officers and health workers conducted for the entire district.
- Considering the work load at least 4 medical officers would be the minimum requirement for running such a unit.
- The medical officers with requisite qualifications who have worked in a district level SNCU for at least 2 years should be considered favorably for promotion.

2. Staff Nurse

- 21 for 12 SNCU beds and 6 Step Down Unit beds

- For SNCU -Nurse-baby ratio:1:3-4 in each shift
- For Step Down Unit- Nurse-baby ratio:1:6-8 in each shift
- To cover day off, leave, sickness 30% extra.

3. Nurse-in charge/Nursing Supervisors

- Preferably should have experience in accredited Level II unit.
- Should have good managerial skills.
- Should be clinically sound so as to take care of the neonates in the absence of doctor.
- There should 1 for every shift with 1 extra to cover day off, leave, sickness etc.

4. Designated Nurse

- For conducting in- service trainings

5. Public Health Nurse

- One should be exclusively attached to the unit.

6. Additional Staff Nurse

- This should be mandatory for providing care to the neonates at birth, neonates in the postnatal wards and Pediatric ward where the neonates are not looked after properly.

7. Neonatal Aides/Yashodas/Mamta

- Eight (2 per shift, 2 for covering day off, leave, sickness etc. would be of immense help.

8. Other staff

- Laboratory Technician for side laboratory
- Maintenance Staff (for routine electrical, equipment and other maintenance)
- Computer data entry operator
- Group D staff (2 per sh

Annexure -VII

Management information System (MIS) Format

HOSPITAL MONTHLY REPORT FORMAT - 1		
VOLUME INDICATORS		
NAME OF THE HOSPITAL:		
CS/CMS/CSI:		
Hospital Manager:		
Month & Year :		
SR. NO.	TITLE	VALUE
(A) HOSPITAL STATISTICS		
1	Total OPD Attendance	
1 (a)	Old	
1 (b)	New	
2	BPL OPD Attendance	
2 (a)	Old	
2 (b)	New	
3	Total IPD Admissions	
4	BPL IPD admissions	
5	No. of Deaths	
6	No. of patients attended in Emergency	
7	No of BPL patients attended in emergency	
8	No. of Sanctioned Beds by the State Government	
9	No. of functional Beds on ground	
10 (a)	No. of Outsourced Ambulances	
10 (b)	No. of Inhouse Ambulances on road	
(B) OPERATION THEATRE		
11	No. of Minor Surgeries	
12	No. of BPL Patients underwent Minor Surgeries	
13	No. Major surgeries Done	
14	No. of BPL Patients underwent Major Surgeries	

(C) MATERNAL & CHILD HEALTH		
15	No. of Normal Deliveries in Hospital	
16	Number of Normal Deliveries- (BPL Category)	
17	No. of C-Section Deliveries	
18	No. of C-Section Deliveries- (BPL)Category	
19	No. of Maternal Deaths	
20	No. of Neonatal Deaths including still births.	
(D) BLOOD BANK		
21	No. of Blood Units Issued	
22	No. of units Demanded by Hospital	

(E) LABORATORY							
23	No. of Lab tests done						
24	No. of Lab test done - (BPL Category)						
(F)							
25	No. X-Ray Taken						
26	No. of X-Ray taken - (BPL Category)						
27	No. of ultrasound Done						
28	No. of ultrasound Done- (BPL Category)						
(G) DEPARTMENT WISE STATISTICAL DATA							
OPD							
a.	Medicine						
b.	Surgery						
c.	Paediatrics						
d.	Orthopaedics						
e.	Obstetrics and Gynaecology						
f.	Dental						
g.	Ophthalmology						
h.	Skin and VD						
i.	T.B.						
j.	E.N.T.						
k.	Psychiatry						
l.	ICTC						
m.	Others (if any)						
n.	Others (if any)						
	TOTAL OPD ATTENDANCE						
IPD/ADMISSIONS/DEATHS/REFERRALS	Total Admissions	BP	Discharge	Death	Referred	Absconding	LAM
a.	Male Medical ward						
b.	Female Medical ward						
c.	Male Surgical Ward						
d.	Female Surgical Ward						
e.	Paediatric ward						
f.	Gynaecology ward						
g.	Obstetric ward						
h.	Eye ward						
i.	Emergency ward						
j.	ICU						
k.	NICU						
l.	ENT						
m.	BURN Ward						
n.	Any other ward						
o.	Isolation Ward						
	Total						

HOSPITAL MONTHLY REPORT FORMAT - 2				
PERFORMANCE INDICATORS				
NAME OF THE HOSPITAL:				
CS/CMS/CSI:				
Hospital Manager:				
Month & Year :				
SR. NO.	TITL	METRIC	HOW	VALUE /
(A) HOSPITAL				
1	Bed occupancy Rate (BOR)	Rate	Total Patient Bed Days ÷ (Functional Beds in Hospital × Calendar Days in month) × 100 Bed Patient days- Sum of daily patient census for whole month.	
2	Bed Turnover Rate (BTR)	Rate	Inpatient discharge including deaths in the month ÷ Functional Bed on Ground	
3	Average Length of Stay (ALOS)	Rate	Total Patient Bed Days in the month (excluding New Born) ÷ Discharges in the month (including Death, LAMA, absconding)	
4	Lama Rate	Rate/1000 Adm	Total No. of LAMA cases × 1000 ÷ Total No. of	
(B) PATIENT				
5	Nurse to Bed ratio	Ratio	Total No. of Nurses ÷ Total Hospital Beds	
(C) OPERATION				
6	Percent of Cancelled surgeries	Percent	surgeries Cancelled x 100 ÷ Total surgeries performed	
7	Total No. of death on Operation Table and Postoperative Deaths	Numbers	Count	
8	Anaesthesia related mortality	Numbers	Count	
(D) MATERNAL & CHILD				
9	LSCS Rate	Rate	No. of CS delivery x 100 ÷ No. of Total delivery	
10	Neonatal Mortality (less than 28 days)	Number	No. of newborn dying under 28 days of age	
11	Infant Mortality (less than one year)	Numbers	No. of infant dying under one year of age.	
12	Percentage of mothers leaving hospital in less than 48 hrs.	percent	no. of mothers leaving hospital in less than 48 hrs of delivery x 100 ÷ Total No. of delivery	
13	Percentage of mothers getting JSY benefits within 48 hours of delivery	Percent	No of institutional deliveries, receiving JSY benefits within 72 hrs. of delivery × 100 ÷ Total no. of mothers entitled	
(E) BLOOD				
14	Percentage of Demand met by Blood Bank	Numbers	No. of Units issued x 100 ÷ No. of Units Demanded by the hospital	
(F) LABORATORY				
15	Validation by external laboratories	Numbers	Number of validation per month	

16	Sputum Positive Rate	Rate	No. of slide found positive in AFB x 100 ÷ Total slide Prepared for test	
17	M P Positive Rate	Rate	No. of slide found positive for Malaria Parasite x 100 ÷ Total slide Prepared for test	
18	Cycle Time for Diagnostic Reporting	Hours	Sum of total time in delivering reports ÷ Total Reports <i>*measure at least for five patients in a month that includes- OPD-2 Male Ward-1 Female Ward-1 Emergency-1</i>	
(G)				
19	Cycle time for X-Ray	Minutes/ Hours	Measure	
(H)				
20	Total No. of Cleaning Staff available per day (Outsourced/Contract / Regular)	Number	Number	
21	Number of Toilets and Availability of Checklist in all the Toilets	Number & Availability	Details of number of Toilets & Availability of check list in each toilet	
22	Name of Other Critical Areas/Wards & Availability of Checklist in all these departments	Name & Availability	Details of number of Critical Areas/Wards & Availability of check list in each of these areas	
(I) HOSPITAL INFECTION				
23	Number of Culture Surveillance conducted	Number	Number of Culture Surveillance with details of departments in which they are conducted. <i>Reports of Surveillance to be attached</i>	
(J) ENGINEERING AND				
24	Down Time Critical equipments	In Hours/ Days	Total time critical equipments cannot be used because of being out of order	
25	No. of Instrument Calibrated	Numbers	Count	
(K)				
26	No. of trainings conducted	count	Attach a note on training that includes- 1.Topic 2.No. of trainee 3. Name of trainer 4.Schedule	
(L) SECURITY				
27	Total No. of guards available per day	Number	Count	

(M) PATIENT SATISFACTION SURVEY				
28	Patient Satisfaction Survey Score for OPD	Scale 1 TO 5	1) Survey 2) Analysis 3) Action Plan on Analysis * Reports to be attached	
29	Patient Satisfaction Survey Score for IPD	Scale 1 TO 5	1) Survey 2) Analysis 3) Action Plan on Analysis * Reports to be attached	
30	Waiting time taken for OPD registration	In minutes	Duration for which Patient has to wait for OPD registration	
31	No. of Complaints/Suggestions Received	Numbers	Count	
32	Waiting time for OPD Consultation	In minutes	Survey	
33	Waiting time at Dispensary	In minutes	Survey	
34	Staff Satisfaction Survey Score	Scale 1 TO 5	1) Survey 2) Analysis 3) Action Plan on Analysis * Reports to be attached	
<i>*Patient Satisfaction Survey to be conducted Quarterly.</i>				
(N) COMMUNITY PARTICIPATION (RKS)				
35	Number of RKS meeting held in the month	Number	Count	
36	Utilization of RKS funds	Rs.	1. Opening Balance of RKS account for Month	
			2. Expenditure in the Month	
			3. Funds Received/ Income in the month	
(O) INTERNAL, MEDICAL AUDIT AND DEATH AUDIT				
37	Internal Audit conducted during the month (Yes / No)	Yes / No	1) Details to be attached including report, if audit conducted 2) If Internal Audit not conducted in thios month then specify the due date for the same.	
38	Death Audit conducted during the month (Yes / No)	Number	Medical Audit Conducted - YES / NO Number of cases disussed ?	
39	Medical Audits conducted during the month / Number of cases discussed	Number	Medical Audit Conducted - YES / NO Number of cases disussed ?	
(P) MANAGEMENT REVIEW MEETING				
40	MRM conducted during the month	Number	1) MRM Conducted - YES / NO 2) MOM to be attached. 3) Action plan to be attached	
(Q) ANY FUND RELEASE / ARCHITECTURAL DEVELOPMENT / REPAIR DONE DURING THIS MONTH				
41	Any Fund Release / Architectural Development / Repair done during the month	Details	Attach details if any	
(R) ANY OTHER MAJOR EVENT / REMARKS				
42	Any other Major Events / Remarks	Details	Attach details if any	

List of Statutory Compliances

1. No objection certificate from the Competent Fire Authority
2. Authorisation under Bio- medical Management and handling Rules, 1998
- 3 Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules 2008
3. Authorisation from Atomic Energy Regulation Board
4. Excise permit to store Spirit
5. Vehicle registration certificates for Ambulances.
6. Consumer Protection Act
7. Drug & cosmetic act 1950
8. Fatal Accidents Act 1855
9. Indian Lunacy Act 1912
- 10 Indian Medical Council Act and code of Medical Ethics
- 11 Indian Nursing Council Act
- 12 Insecticides Act 1968
- 13 Maternity benefit Act 1961
- 14 Boilers Act as amended in 2007
- 15 MTP Act 1971
- 16 Persons with Disability Act 1995
17. Pharmacy Act 1948
18. PNDT Act 1996
19. Registration of Births and Deaths Act 1969
20. Gift Tax Act
21. License for Blood Bank or Authorisation for Blood Storage facility
22. Right to Information act

Seismic safety of non-structural elements of Hospitals/Health facility.

- Health Facility/Hospital should remain intact and functional after an earthquake to carry on routine and emergency medical care.
- There may be increased demand for its services after an earthquake.
- Hospital accommodates large number of patients who cannot be evacuated in the event of earthquake.
- Hospitals have complex network of equipment specialised furniture, ducting, wiring, electrical, mechanical fittings which are vulnerable due to earthquake.
- The Non-structural element may value very high from 80% to 90% incase of Hospital unlike office buildings due to specialized medical equipments.
- Even if building remains intact, it may be rendered non-functional due to damage to equipments, pipelines, fall of partitions and store material, etc.
- While the safety of building structure is the duty of PWD and designers of the building, the risk of non-structural component has to be dealt by staff and authorities of the health facility.
- This non-structural Mitigation & reduction of risk can be achieved through series of steps:
 - i) Sensitization (understanding earthquakes and safety requirements)
 - ii) Earthquake Hazard Identification in the hospital
 - iii) Hazard survey and prioritization.
 - iv) Reducing non-structural hazards.

Step I : Understanding Earthquakes and Safety requirements

- Awareness and sensitization about safety
- The structural elements of a building carry the weight of the building like columns, beams, slabs, walls, etc.
- The Non-structural elements do not carry weight of the building, but include windows, doors, stairs, partition and the building contents: furniture, water tank, hospital equipment, medical equipment, pharmacy items and basic installation like water tanks, medical gases, pipelines, air conditioning, telecommunications, electricity etc.

Step II : Earthquakes hazard identification in the hospital

- Tall, narrow furniture like cupboards can fall on people, block doors/ passages/exits
- Items on wheels or smooth surfaces can roll and crash
- Large and small things on shelves, etc. can knock, fall, crash and damage severely.
- Hangings objects can fall

- Shelves/almirahs, storage cabinets can topple and block exits and obstruct evacuation.
- Pipes can break and disrupt water supply

Step III : Reducing non-structural hazard

- a) To relocate furniture and other contents
- b) To secure non-structural building elements with the help of structural engineers
- c) To secure the furnishings and equipments to the walls, columns or the floors with help of engineers and technicians.

Step IV: Hazard Survey and Prioritization

All the non-structural hazard should be identified systematically and prioritise for as high, medium or low priority and action taken immediately or in due course. This involves systematic survey and categorisation of all hazards in each area of the hospital and action thereof. Hospital/health facility should have a Committee dedicated to undertake this task and monitor on continuous ongoing basis.

LIST OF ABBREVIATIONS

BJMC	BJ Medical College
CHC	Community Health Centre
CME	Continuing Medical Education
CSSD	Central Sterile and Supply Department
CRI	Central Research Institute
CRME	Centre for Research in Medical Entomology
DRDE	Defense Research and Development Establishment
ICGEB	International Centre for Genetic Engineering and Bio-technology
EVRC	Enterovirus Research Centre
FRU	First Referral Unit
HSADL	High Security Animal Diseases Laboratory
IGIB	Institute of Genomics and Integrative Biology
IPHS	Indian Public Health Standards
IVRI	Indian Veterinary Research Institute
KEM	King Edmund Memorial Hospital
MRC	Malaria Research Centre
NARI	National AIDS Research Institute
NEERI	National Environmental Engineering Institute
NICED	National Institute of Cholera and Endemic Diseases
NIV	National Institute of Virology
NRHM	National Rural Health Mission
PRI	Panchayati Raj Institution
RKS/HMC	Rogi Kalyan Samiti / Hospital Management Committee
RMRC	Regional Medical Research Centre
STM	School of Tropical Medicines
VCRC	Vector Control Research Centre

References

1. Indian Standard Basic Requirement for Hospital Planning; Part 2 Upto 100 Bedded Hospital, Bureau of Indian Standards, New Delhi, January, 2001
2. Rationalisation of Service Norms for Secondary Care Hospitals, Health & Family Welfare Department, Govt. of Tamil Nadu. (Unpublished)
3. District Health Facilities, Guidelines for Development and Operations; WHO; 1998.
4. Indian Public Health Standards (IPHS) for Community Health Centres; Directorate General of Health Services, Ministry of Health & Family Welfare, Govt. of India.
5. Population Census of India, 2001; Office of the Registrar General, India.
6. Prof. Anand S.Arya, under the GOI- Disaster Risk Management Programme, National Disaster Management Division, MHA, New Delhi.