INDIAN PUBLIC HEALTH STANDARDS

SUB DISTRICT HOSPITAL AND DISTRICT HOSPITAL

2022

VOLUME-I

Ministry of Health & Family Welfare

INDIAN PUBLIC HEALTH STANDARDS

SUB DISTRICT HOSPITAL AND DISTRICT HOSPITAL

2022

VOLUME-I

Ministry of Health & Family Welfare

डॉ. मनसुख मांडविया
DR. MANSUKH MANDAVIYA

सत्यमेव जयते

स्वास्थ्य एवं परिवार कल्याण
व रसायन एवं उर्वरक मंत्री
भारत सरकार
Minister for Health & Family Welfare
and Chemicals & Fertilizers
Government of India

आज़ादी का अमृत महोत्सव

MESSAGE

The National Health Policy 2017 envisages the attainment of the highest possible level of health and well-being for all. It aspires to achieve increased and more equitable access to healthcare by improving quality and investments in public health. An important step towards improving quality of healthcare delivery is through the Indian Public Health Standards (IPHS); a set of uniform standards to provide norms and benchmarks for quality of infrastructure, human resources and services to be delivered from public health facilities at all levels.

Since the last revision of IPHS in 2012, a whole host of important programmes and initiatives, such as the National Urban Health Mission, National Health Policy, Ayushman Bharat, Health & Wellness Centres, free drugs, etc. have been introduced by the Government. An expert group was set up to deliberate and recommend the revised standards to factor-in the needs of the new programmes and interventions. In the recent years, there has been a paradigm shift from selective care to assured comprehensive care. Corona Virus Infectious Disease (COVID-19) which spread rampantly across the globe, widely affected the health systems of the country, and highlighted the need for a resilient health system with assured critical care and robust supply chain. The Revised IPHS provide guidance on the infra-structural, human resource, drugs, diagnostics, equipment, quality and governance requirements for delivering health services at health facilities.

The IPHS have been revised with this approach covering both urban and rural health facilities for ensuring care across the full continuum of care. The revised guidelines also move from a prescriptive approach to decentralized plan approach. The focus now is on reducing Out of Pocket Expenditure by introducing assured functionality of services areas critical for provision of care.

I believe that revised IPHS 2021 will serve as a benchmark for states/ UTs for an improved healthcare delivery system. Accordingly, service delivery defined for each level of health facilities will be the basis for developing other health system strengthening components such as infrastructure, human resource, medicines, equipment etc.

It is my sincere hope that all States and UTs shall utilize these guidelines for strengthening the public health facilities holistically and put in their best efforts to strive towards high quality of health care at all public health facilities and to achieve goals envisaged for better health outcomes for the country.

(Dr. Mansukh Mandaviya)

कार्यालय: 348, ए-स्कंध, निर्माण भवन, नई दिल्ली - 110011 • **Office:** 348, A-Wing, Nirman Bhawan, New Delhi - 110011
Tele.: (O): +91-11-23061661, 23063513 • **Telefax** : 23062358

डॉ. भारती प्रविण पवार
Dr. Bharati Pravin Pawar

स्वास्थ्य एवं परिवार कल्याण राज्य मंत्री
भारत सरकार
MINISTER OF STATE FOR
HEALTH & FAMILY WELFARE
GOVERNMENT OF INDIA

सर्वेसन्तु निरामया

एक कदम स्वच्छता की ओर

MESSAGE

Indian Public Health Standards (IPHS) is an important tool towards achieving the quality healthcare delivery and better health outcomes under the Public Health Care System. Government of India has been revising these standards from time to time taking into account the changes and updates in the existing national programme as per requirement of public health care services. It is essential for public health facilities to deliver quality health services and assured availability of drugs, diagnostic services and Human Resource so that the National and International commitments in health care at various forums can be addressed.

The revised IPHS 2021 is a comprehensive document which includes the minimum standards to be adhered by the public health facilities at rural and urban areas. The document ensures equitable access of essential public health services at primary care through Ayushman Bharat- Health and Wellness Centre; subsequent referrals to secondary care facility assuring emergency, specialist and critical care services.

I urge all States and UTs to adopt and put these Standards into practice for strengthening the public health facilities and put in their best efforts to strive for improved quality of health care services at all public health care system.

I would take this opportunity to congratulate the team at Ministry of Health and Family Welfare led by Secretary HFW, National Health Systems Resource Centre, all subject experts and state representatives for coming up with comprehensive standards. I am sure this will help the states and UTs in further improving the public health services with provision of assured critical care.

(Dr. Bharati Pravin Pawar)

"दो गज की दूरी, मास्क है जरूरी"

Office: 250, 'A' Wing, Nirman Bhavan, New Delhi-110011, Tel. : 011-23061016, 23061551, Telefax : 011-23062828
E-mail : mos-mohfw@gov.in

राजेश भूषण, आईएएस
सचिव

RAJESH BHUSHAN, IAS
SECRETARY

सत्यमेव जयते

भारत सरकार
स्वास्थ्य एवं परिवार कल्याण विभाग
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
Government of India
Department of Health and Family Welfare
Ministry of Health and Family Welfare

Message

Indian Public Health Standards (IPHS), last revised in 2012, are the benchmarks for quality of service delivery expected from various public health care facilities at all levels. They can also form the basis for assessing performance of public health care delivery system.

With the launch of National Urban Health Mission in 2013, National Health Policy in 2017, and Ayushman Bharat in 2018, the focus has shifted from selective health services to comprehensive and quality Primary and Secondary health care services to all population irrespective of their geographical location or financial status from Health & Wellness Centre (HWC) level to District Hospital level.

HWCs have been designated to provide 12 packages of comprehensive Primary Health Care while Community Health Centres (CHCs) have been designated to provide basic secondary care services nearer to the community with special focus to the under-served and remote areas of the country. District Hospitals supported by Sub-District Hospitals are the epicentre in a district for providing assured secondary care referral services for those referred from HWCs and CHCs.

Revision of IPHS guidelines for DHs, SDHs, CHCs and PHCs was required to include the widened scope of Comprehensive Primary Health Care services and strengthen the secondary healthcare service delivery. Government of India therefore constituted an expert group for revision of IPHS norms for DH, SDH, CHC, PHC, Polyclinics and UPHC. While undertaking revision, the experts have given due attention and care in incorporating the needs for various programmes in terms of services, and commensurate infrastructure, human resource, equipment etc. Focused attention has also been given to include delivery of comprehensive surgical services, widening public health surveillance, delivery of emergency and critical services, improving the availability of beds per one thousand population and capacity building of HR etc. in the revised guidelines.

Room No. 156, A-Wing, Nirman Bhawan, New Delhi-110 011
Tele : (O) 011-23061863, 23063221, Fax : 011-23061252, E-mail : secyhfw@nic.in

I extend my compliments to NITI Aayog for providing valuable guidance in development of the IPHS 2021. I also convey my thanks to Director General Health Services, National Health Mission team led by AS&MD, NHSRC, State and institutional representatives and all other experts for their best inputs in framing IPHS 2021.

I sincerely believe that all the States and UTs will expeditiously implement these standards to develop public healthcare institutions at all levels, so as to provide comprehensive and quality healthcare services to our citizens.

Place : New Delhi
Date : 21-09-2021

(Rajesh Bhushan)

Room No. 156, A-Wing, Nirman Bhawan, New Delhi-110 011
Tele : (O) 011-23061863, 23063221, Fax : 011-23061252, E-mail : secyhfw@nic.in

विकास शील, भा.प्र.से.
Vikas Sheel, I.A.S.
अपर सचिव एवं मिशन निदेशक (रा.स्वा.मि.)
Additional Secretary & Mission Director (NHM)

भारत सरकार
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
निर्माण भवन, नई दिल्ली - 110011
Government of India
Ministry of Health & Family Welfare
Nirman Bhavan, New Delhi - 110011

MESSAGE

Since the launch of the National Rural Health Mission in 2005, the Ministry of Health & Family Welfare, Government of India has endeavoured to provide universal and quality healthcare services to the people of India. To facilitate progress in this regard and to ensure quality services through public health facilities across the country, the MoHFW developed the Indian Public Health Standards for Sub-centres, Primary Health Centres (PHCs), Community Health Centres (CHCs), Sub-District and District Hospitals in 2007 and their subsequent revision ensued in 2012.

Several new programmes and initiatives have since been introduced, including National Urban Health Mission, NQAS, LaQshya, Free drugs and diagnostics, Health & Wellness Centres, SUMAN for maternal and new born care, NCD screening and their assured management, etc. necessitating revision of the IPHS.

The revised IPHS 2021 place a greater emphasis on the services to be provided at each level of public health facilities. To preserve equity in healthcare distribution, these services need to be acceptable, accessible, inexpensive, and responsive to the needs of the people, particularly for those who are marginalized. The revised IPHS provides benchmarks for rural & urban PHCs, Polyclinics in urban areas, non-FRU & FRU CHCs as well as District & Sub-District Hospitals in accordance with the changing needs.

This document endeavours to help the states and UTs in achieving the prescribed minimum standards for essential services and also strive for providing the desirable healthcare services for even better quality, assured primary, secondary as well as critical care services in the districts, which can be easily accessed by the community.

The constant guidance of Secretary H&FW helped in revising IPHS after extensive consultations with experts. I would like to thank the NITI Aayog, Directorate General of Health Services, officials of the NHM Program Divisions, teams at the National Health Systems Resource Centre, State government officials & experts whose inputs and contributions helped in development of the revised IPHS 2021.

I am confident these guidelines will prove useful to all the key stakeholders at state and district levels in improving the standards and quality of services being rendered at public health facilities.

(Vikas Sheel)

Tele : 011-2306 3693, Telefax : 011-2306 3687, E-mail : sheelv@ias.nic.in

विशाल चौहान, भा.प्र.से.
संयुक्त सचिव
VISHAL CHAUHAN, IAS
Joint Secretary
Tele: 011-23063585 / 23061740
e-mail: js.policy-mohfw@gov.in

भारत सरकार
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
निर्माण भवन, नई दिल्ली - 110011
GOVERNMENT OF INDIA
MINISTRY OF HEALTH & FAMILY WELFARE
NIRMAN BHAVAN, NEW DELHI - 110011

FOREWORD

India has commitment to achieve Universal Health Coverage (UHC) by 2030. UHC envisages that all the people have access to quality health care services which can be accessed without facing any financial hardships or Out-Of-Pocket Expenditure (OOPE).

Since the last revision of Indian Public Health Standards in 2012 various new initiatives have been launched like Urban Health, augmenting emergency and critical care due to pandemics like COVID-19, provision of comprehensive surgical services beyond C-section, ensuring continuum of care under Ayushman Bharat, District Early Intervention Center, Integrated Public Health Labs, etc. therefore, a need was felt for the revision of IPHS 2012 guidelines.

These revised IPHS guidelines for PHCs, CHCs and DH & SDH have focus on ensuring services and accordingly standards for commensurate infrastructure, equipment, HR etc. to be given to States and UTs. The revised version also incorporates the commitments under NHP, 2017 to fulfill the objectives of delivering high quality services that are accountable, responsive, and sensitive to the needs of the community.

The revision of these standards was possible because of the combined efforts of all the experts who actively contributed as a part of main committee and sub-committee constituted by GoI. I would like to place my sincere thanks to DGHS, NCDC, Program Divisions, experts from Medical Colleges (AIIMS, PGIMER, VMMC, LHMC,), HLL, CDB, DCGI, NIHFW, Regional Directors of Health and Family Welfare, representatives of WHO, World Bank, UNFPA, JSS and other development partners, State/Union Territory Government representatives for their valuable inputs.

The continuous guidance given by the Secretary and AS&MD(NHM) helped us in framing the guidelines. I must give special thanks to the NHM Team especially the Directors and NHSRC Team for their continuous and untiring efforts in giving inputs, compiling responses, and undertaking several revised versions before the guidelines were finalized.

I request all the Principal Secretaries and Mission Directors in the States/UTs to initiate actions for providing commensurate resources through State and other budgetary channels for implementing IPHS 2021 guidelines at public health facilities. I hope that states will adopt these standards and utilize them to develop a state specific comprehensive road map for IPHS certification of their public health facilities.

(Vishal Chauhan)

DR. HARMEET SINGH
JOINT SECRETARY
Telefax : 23062485
E-mail : hs.grewal@nic.in

सत्यमेव जयते

भारत सरकार
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
निर्माण भवन, नई दिल्ली–110011
Government of India
Ministry of Health & Family Welfare
Nirman Bhawan, New Delhi - 110011

FOREWORD

In India, out of the total population of 1210.2 million as on 1st March, 2011, about 377.1 million are in urban areas registering an increase of 32% in the decade from 2001 to 2011. The overall slum population is estimated to be 20% of the total urban population. The National Urban Health Mission aims to address the health concerns of the urban poor by facilitating equitable access to health facilities.

In urban areas, usually the population density is high and there are various types of health care facilities which provide *in*-patient care. However, primary healthcare is inadequate and needs improvement especially in slums/poor localities. So, there was a felt need to expand primary health services in urban areas. Accordingly, a new initiative has been proposed to expand its reach in the community by bringing UHWC for a population of 10,000-20,000. Further, a polyclinic or specialist clinic at UPHC have been introduced for the first time in the programme.

The health care needs of the people in the urban area are different from rural areas. Therefore, looking at the various diversified needs of urban poor, the health facilities need to be equipped to deliver services like critical care, emergency care, and commensurate support services to address the shifting disease burden. Therefore, pre-existing UPHCs and UCHCs providing health care services also needed standards and norms under IPHS.

This is the first time that IPHS for urban health facilities have been developed after wide consultations with the states and experts. It is hoped that this will help states and UTs to upgrade their urban health facilities as per the norms defined under this document. The States/UT officials are expected to undertake gap analysis of services and prepare time bound action plan for filling these gaps for delivery of assured quality services to the people living in urban areas, particularly, in slums and vulnerable pockets.

My sincere gratitude to Shri Rajesh Bhushan, Secretary Health & Family Welfare, Ms. Vandana Gurnani, the then AS&MD and Shri Vikas Sheel, the AS&MD for their support and guidance. I appreciate the efforts taken by Shri Vishal Chauhan, JS (Policy), Director NUHM & NUHM team, Program Divisions of NHM, MoHFW, and NHSRC Team for formulating such uniform standards for the States/UTs which were very much required for further improving the implementation and penetration of urban health programs. I extend my heartfelt thanks to all the experts, state officials and development partners who worked for it and contributed towards the betterment of people in the country.

I hope the guidelines for Community Health Centres for urban and rural will help the States/UTs in improving the standards of services being rendered at public health facilities.

23/09/2021
(Dr. Harmeet Singh)

Dr. Himanshu Bhushan
Member Secretary

New Delhi
11th April 2022

The journey and the vision of IPHS 2022

For public health systems to deliver effectively, standards are important. Standards once developed need to be periodically revisited, so that they continue to be relevant for meeting program requirements. Revision of IPHS followed a systematic process that synthesised the evidences, norms, observations and professional views of the experts.

The IPHS 2022 focusses on the services to be delivered at each level of health facility, which form the basis for developing norms for other health system strengthening components like infrastructure, human resources and capacity building, drugs, diagnostics and equipment, administrative and support services, quality assurance and improvement, monitoring and supervision and related governance issues.

The revision took considerable time since the document was to be representative of the requirements of all the programs of the Health Ministry. Taking inputs from Program Divisions of MoHFW, States, Urban Local Bodies, Experts, Development Partners and other stakeholders helped us relate it further. Various rounds of group meetings and one-to-one discussions took place with all the Program Divisions, and thereafter inputs of senior officials of the Ministry were also incorporated.

It is important to pen down the path traversed for sharing the vision of IPHS 2022, the contribution of experts, the method and learnings, that have implications on implementation and subsequent iterations, which otherwise would be missed out by the people who read it. The long deliberations with the hospital planners, program officers and administrators on the numbers of HR, types of services, diagnostics, drugs, etc. is a reminiscence which I believe is imperative to share.

When it came to norms for human resources, it was unanimously viewed that field realities should not be allowed to dilute the standards. The expectation of services with quality ingrained cannot be fulfilled without adequate human resources. COVID-19 crisis reiterated this fact that human resources are not available in the required ratio which is paramount for service delivery. On one hand was the market demand for health services, and on the other hand was the scarcity of human resources in health, with long working hours and stress for those who chose to stay with public health institutions. This also highlighted the need for comprehensive planning for adequate infrastructure, services, and human resources in the IPHS.

The commitment for IPHS was unequivocal, right from Hon'ble Union Minister of Health and Family Welfare and Union Minister of State - MoHFW, to all senior levels of health functionaries Secretary (H&FW), AS & MD (NHM) and JS (Policy). During the 13th CCHFW, the Health Ministers of States/UTs, under the chairpersonship of the Hon'ble Union Minister of Health and Family Welfare, resolved to

achieve IPHS in all public health facilities across the country in a timebound manner. The Hon'ble Union Health Minister was also taking updates on the progress and his suggestions have been incorporated. Representatives from the NITI Aayog also gave valuable inputs and guidance from time to time.

During the process of this revision, deliberations were led by JS (Policy) Dr. Manohar Agnani, Mr. Vikas Sheel and Mr. Vishal Chauhan at various stages. I would like to place on record the inputs and contributions given by the present Health Secretary Shri. Rajesh Bhushan, former Health Secretary, Ms. Preeti Sudan, former AS & MD, Mr. Manoj Jhalani, and Ms. Vandana Gurnani, all Joint Secretaries (Policy) and ED NHSRC Dr. Atul Kotwal, in guiding us towards framing of these standards. I would also like to thank the experts from Medical Colleges like AIIMS -New Delhi, Patna & Bhopal, Lady Hardinge Medical College-Delhi, PGIMER-Chandigarh, VMMC and Safdarjung Hospital-Delhi and MGIMS-Sewagram. The contribution and valuable inputs given during the expert group meetings by Development Partners like UNICEF, UNFPA, WHO, World Bank, Jan Swasthya Sahyog (JSS), Medical Service Corporations of Kerala, Madhya Pradesh, Odisha, Rajasthan, Tamil Nadu, and also state and district representatives from Madhya Pradesh, Maharashtra, Odisha, Tamil Nadu, Uttar Pradesh, West Bengal is acknowledged in developing these guidelines.

I also recognise the immense support given by the team from NHM and NHSRC for drafting these guidelines. The constant support by all the Advisors at NHSRC and their valuable inputs and suggestions helped in further improving the quality. I vividly recall the contributions of Ms. Mona Gupta in finalizing the HRH norms, Dr. J. N. Srivastava in drugs, Dr. Ranjan Kumar Choudhury, in equipment and oxygen and Dr. M. A. Balasubramanya on wellness components of health. The relentless efforts by the PHA team, particularly, Mr. Prasanth K.S., Mr. Ajit Kumar Singh, Dr. Smita Shrivastava, Dr. Kalpana Pawalia, Dr. Aashima Bhatnagar, Dr. Poonam, Ms. Diksha Rathee, Dr. Aditi Joshi, Dr. Ashutosh Kothari and Ms. Neelam Tirkey in updating IPHS after receiving inputs from the stakeholders cannot be forgotten.

I hope that States will adopt these standards and utilize them to develop a state specific comprehensive road map for IPHS certification of their public health facilities for meeting the commitments under NHM. It is important to know that the journey of the IPHS has been a dynamic one, and all the key stakeholders must be responsive enough to meet the ever-evolving requirements and challenges. The expected output is IPHS certification of public health facilities and provision of respectful, dignified, and quality services to the patients is the outcome envisioned.

The inspiration behind the IPHS 2022 is the conviction to build health facilities that give rich treatment to poor people. These standards play a critical role in minimising the out-of-pocket expenditure by the people who cannot afford healthcare in private sector. This document is dedicated to the citizens of the country so that they remain hopeful of our public health delivery system.

(Dr. Himanshu Bhushan)

TABLE OF CONTENTS

ANNEXURES

LIST OF ABBREVIATIONS

ABG	Arterial Blood Gas
ACP	Assured Career Progression
ACPH	Air Changes Per Hour
ADA	Adenosine Deaminase
AED	Automated External Defibrillator
AERB	Atomic Energy Regulatory Board
AF	Atrial Fibrillation
AFB	Acid- Fast Bacilli
AGE	Acute Gastroenteritis
AHU	Air Handling Unit
AIDS	Acquired Immunodeficiency Syndrome
AIIMS	All India Institute of Medical Sciences
ALT	Alanine Transaminase
AMC	Annual Maintenance Contract
ANC	Antenatal Care
ANM	Auxiliary Nurse Midwife
APH	Antepartum Haemorrhage
AR	Accident Register
ARDS	Acute Respiratory Distress Syndrome
ARI	Acute Respiratory Infection
ART	Anti-Retroviral Therapy
ASHA	Accredited Social Health Activist
ASOM	Acute Suppurative Otitis Media
AST	Aspartate Aminotransferase
ASTM	American Society for Testing and Materials
ATM	Automated Teller Machine
AV	Arterio-Venous
AYUSH	Ayurveda, Yoga & Naturopathy, Unani, Siddha, Sowa Rigpa and Homoeopathy
BCC	Behaviour Change Communication
BIS	Bureau of Indian Standards
BMMP	Biomedical Equipment Maintenance and Management Programme
BMW	Bio Medical Waste
BMWM	Biomedical Waste Management
BP	Blood Pressure
BPMU	Block Program Management Unit

BSL	Biosafety Level
BSU	Blood Storage Units
BT	Bleeding Time
CAPD	Continuous Ambulatory Peritoneal Dialysis
CBR	Crude Birth Rate
CCTV	Closed Circuit Television
CD4	Cluster of Differentiation 4
CDR	Crude Death Rate
CFC	Chlorofluorocarbon
CHC	Community Health Centre
CHD	Coronary Heart Disease
CLMC	Comprehensive Lactation Management Centre
CLW	Cut Lacerated Wounds
CMC	Christian Medical College
CMHO	Chief Medical & Health Officer
CMTC	Child Malnutrition Treatment Centre
CNE	Continuing Nursing Education
COPD	Chronic Obstructive Pulmonary Disease
COVID	Corona Virus Disease
CPM	Continuous Passive Motion
CRP	C-Reactive Protein
CSF	Cerebrospinal Fluid
CSOM	Chronic Suppurative Otitis Media
CSR	Corporate Social Responsibility
CSSD	Central Sterile Supply Department
CT	Clotting Time
CTG	Cardiotocography
CVA	Cerebrovascular Accident
CVP	Central Venous Pressure
DAM	District Accounts Manager
DC	Dilatation and Curettage
DCIP	Di Chloro Phenolindol Phenol
DCM	District Community Mobiliser
DDC	Drug Dispensing Counter
DDM	District Data Manager
DDRC	District Disability Rehabilitation Centre
DEIC	District Early Intervention Centre
DEO	Data Entry Operator
DEWATS	Decentralised Wastewater Treatment System
DGHS	Directorate General of Health Services
DH	District Hospital
DHAP	District Health Action Plan
DHM	District Health Manager
DHS	District Health Society

DLU	Doctor-Led Unit
DM	Doctorate of Medicine
DNB	Diplomate of National Board
DPI	Dry-Powder Inhaler
DPM	District Program Manager
DPMU	District Program Management Unit
DVT	Deep Vein Thrombosis
ECC	Endocervical Curettage
ECG	Electrocardiogram
ECHO	Echocardiogram
ECT	Electroconvulsive Therapy
EEG	Electroencephalogram
ELISA	Enzyme-Linked Immunosorbent Assay
EMF	Erythema Multiforme
EMG	Electromyography
ENT	Ear, Nose, and Throat
EQAS	External Quality Assurance Standards
ER	Emergency Room
ESI	Employees' State Insurance
ESR	Erythrocyte Sedimentation Rate
ETO	Ethylene Oxide
ETP	Effluent Treatment Plant
FAR	Floor Area Ratio
FBMDR	Facility Based Maternal Death Review
FDP	Fibrinogen Degradation Products
FEFO	First Expiry First Out
FIFO	First in First Out
FMR	Financial Management Report
FNAC	Fine Needle Aspiration Cytology
FPC	Family Participatory Care
FRU	First Referral Unit
FSTP	Faecal Sludge Treatment Plant
FTS	File Tracking System
G6PD	Glucose-6-Phosphate Dehydrogenase
GA	General Anaesthesia
GB	Governing Body
GDMO	General Duty Medical Officer
GGT	Gamma-Glutamyl Transferase
GI	Gastro-Intestinal
GIC	Glass Ionomer Cement
GP	Gutta Percha
GRS	Grievance Redressal System
GTT	Glucose Tolerance Test
GWP	Greenhouse Warming Potential

HAI	Hospital Acquired Infection
HCG	Human Chorionic Gonadotropin
HCV	Hepatitis C Virus
HDL	High-Density Lipoprotein
HDU	High Dependency Unit
HEPA	High-Efficiency Particulate Air
HIV	Human Immunodeficiency Virus
HLD	High-Level Disinfectant
HMC	Hospital Management Committee
HMIS	Health Management Information System
HRMIS	Human Resource Management Information System
HT	Hypertension
HVAC	Heating, Ventilation & Air-Conditioning
HWC	Health and Wellness Centre
ICD	Implantable Cardioverter-Defibrillator
ICDS	Integrated Child Development Services
ICT	Information and Communication Technology
ICTC	Integrated Counselling and Testing Centres
ICU	Intensive Care Unit
IEC	Information, Education and Communication
INC	Indian Nursing Council
INR	International Normalized Ratio
IOL	Intraocular Lens
IOP	Intraocular Pressure
IOPA	Intra Oral Peri-Apical
IP	Indian Pharmacopoeia
IPC	Infection Prevention Control
IPD	In-Patient Department
IPHL	Integrated Public Health Lab
IPHS	Indian Public Health Standards
IQAS	International Qualifications Assessment Service
IQC	Internal Quality Control
ISO	International Organization Of Standardization
ISQUA	International Society For Quality In Healthcare
IT	Information Technology
IU	International Unit
IUCD	Intra Uterine Contraceptive Device
IUD	Intra Uterine Devices
IUGR	Intra Uterine Growth Retardation
IV	Intravenous
JRA	Juvenile Rheumatoid Arthritis
JS	Joint Secretary
LABA	Long Acting Beta Agonists
LaQshya	Labour Room Quality Improvement Initiative
LBW	Low Birth Weight

LCD	Liquid Crystal Display
LDH	Lactate Dehydrogenase
LDL	Low Density Lipoprotein
LDR	Labour Delivery Recovery
LED	Light Emitting Diode
LMO	Liquid Medical Oxygen
LMWH	Low Molecular Weight Heparin
LR	Labour Room
LSAS	Life Saving Anaesthesia Skills
LSCS	Lower Segment Caesarean Section
LT	Lab Technician
MAS	Mahila Arogya Samiti
MAT	Microscopic Agglutination Test
MBBS	Bachelor of Medicine & Bachelor of Surgery
MCH	Maternal and Child Health
MD	Doctor of Medicine
MDG	Millennium Development Goals
MDI	Metered Dose Inhaler
MDR	Multi Drug Resistant
MDS	Master of Dental Surgery
MDSR	Maternal Death Surveillance And Response
MGPS	Medical Gas Pipeline System
MIS	Management Information System
MLCU	Midwifery - Led Care Unit
MNCU	Mother and New-Born Care Unit
MNH	Maternal and Newborn Health
MO	Medical Officer
MOEFA	Manually Operated Electric Fire Alarm
MRD	Medical Record Department
MRI	Magnetic Resonance Imaging
MS	Master of Surgery
MTCT	Mother-to-Child Transmission
MTP	Medical Termination of Pregnancy
MVA	Manual Vacuum Aspiration
NAAT	Nucleic Acid Amplification Test
NABH	National Accreditation Board of Hospitals & Healthcare Providers
NBC	National Building Code
NBSU	New Born Stabilization Unit
NCD	Non-Communicable Diseases
NCV	Nerve Conduction Velocity
NDPS	Narcotic Drugs and Psychotropic Substances
NFPA	National Fire Protection Association
NGO	Non-Governmental Organisation
NHM	National Health Mission

NIBP	Non-Invasive Blood Pressure
NICU	Neonatal Intensive Care Unit
NMHP	National Mental Health Programme
NPH	Neutral Protamine Hagedorn
NQAP	National Quality Assurance Program
NQAS	National Quality Assurance Standards
NRC	Nutrition Rehabilitation Centre
NRHM	National Rural Health Mission
NSV	No-Scalpel Vasectomy
NTEP	National Tuberculosis Elimination Program
NTG	Nitroglycerine
NVBDCP	National Vector Borne Disease Control Program
OAE	Oto Acoustic Emission
OBGY	Obstetrics And Gynaecology
OCT	Optical Coherence Tomography
OLCU	Obstetrician Led Care Unit
OOPE	Out of Pocket Expenditure
OPD	Outpatient Department
OPG	Orthopantomogram
OPT	Outcome Present State Test
ORIF	Open Reduction And Internal Fixation
OT	Operation Theatre
PCPNDT	Pre-Conception And Pre-Natal Diagnostic Technique
PCR	Polymerase Chain Reaction
PEP	Post Exposure Prophylaxis
PFMS	Public Financial Management System
PFT	Pulmonary Function Test
PG	Post Graduate
PHACO	Phacoemulsification
PHC	Primary Health Centre
PICC	Peripherally Inserted Central Catheter
PICU	Paediatric Intensive Care Unit
PMR	Physical Medical Rehabilitation
PNDT	Programmatic Management of Drug-Resistant Tb
POP	Pelvic Organ Prolapse
PPE	Personal Protective Equipment
PPH	Post Partum Haemorrhage
PPP	Public Private Partnership
PPTCT	Prevention of Parent to Child Transmission
PR	Premature Rupture of Membrane
PRO	Public Relations Officer
PROM	Premature Rupture of Membranes
PSA	Pressure Swing Adsorption
PSU	Public Sector Undertaking

PT	Prothrombin Time
PUO	Pyrexia of Unknown Origin
PUV	Posterior Urethral Valves
RA	Rheumatic Arthritis
RCH	Reproductive and Child Health
RDS	Respiratory Distress Syndrome
RFA	Radiofrequency Ablation
RH	Relative Humidity
RKS	Rogi Kalyan Samiti
RO	Reverse Osmosis
RPM	Rotations per Minute
RPR	Rapid Plasma Reagin
RTA	Road Traffic Accident
RTI	Right to Information
RVG	Radiovisiography
SAM	Severe Acute Malnutrition
SC	Sub-Centre
SDG	Sustainable Development Goals
SDH	Sub District Hospitals
SE	Structural Elements
SGOT	Serum Glutamic Oxaloacetic Transaminase
SGPT	Serum Glutamic Pyruvic Transaminase
SHC	Sub-Health Centre
SJS	Stevens Johnsons Syndrome
SLEDD	Sustained Low Efficiency Daily Dialysis
SMD	Sub Mucosal Diathermy
SMF	Sub Mucous Fibrosis
SMR	Standardized Mortality Ratio
SNCU	Special Newborn Care Unit
SOM	Secretory Otitis Media
SOP	Standard Operating Procedure
SPC	Suprapubic Catheter
SR	Sustained Release
SRH	Sexual and Reproductive Health
STD	Sexually Transmitted Diseases
STI	Sexuallly Transmitted Infection
SUMAN	Surakshit Matritva Aaswasan
SWD	Short Wave Diathermy
TB	Tuberculosis
TCP	Total Circulating Protein
TDS	Ter Die Sumendum/Thrice a Day
TEN	Toxic Epidermal Necrolysis
TENS	Transcutaneous Electric Nerve Stimulation
TIA	Transient Ischemic Attack

TLD	Thermoluminiscent Dosimeter
TMT	Treadmill Test
TPMU	Thermal Plasma Measurement Unit
TSH	Thyroid Stimulating Hormone
TSSU	Theatre Sterile Supply Unit
TT	Tetanus Toxoid
TURP	Transurethral Resection of the Prostate
TUV	Thermotherapy Ultrasonic View
UC	Ulcerative Collitis
UCHC	Urban Community Health Centre
UHC	Universal Health Coverage
UHWC	Urban Health & Wellness Centre
UIP	Universal Immunization Program
ULB	Urban Local Body
UNICEF	United Nations International Children's Emergency Fund
UPHC	Urban Primary Health Centre
UPS	Uninterrupted Power Supply
USG	Ultra Sonography
USP	United States Pharmacopeia
UT	Union Territory
UTI	Urinary Tract Infection
UV	Ultraviolet
VDRL	Veneral Disease Research Laboratory
VEP	Visual Evoked Potential
VHND	Village Health Nutrition Day
VHSC	Village Health Sanitation Committee
VHSNC	Village Health Sanitation & Nutrition Committee
VIA	Visual Inspection Using Acetic Acid
VLDL	Very Low Density Lipoprotein
WCD	Women and Child Development
WHA	World Health Assembly
WHO	World Health Organization

READER'S GUIDE FOR SUB DISTRICT HOSPITAL & DISTRICT HOSPITAL (SDH & DH)

There is no right or wrong way to use the Indian Public Health Standards (IPHS) 2022. You can straight away go to the section you are interested in and want information on. This could be related to infrastructure, human resources for health (HRH), drugs, diagnostics, or you can read through the entire book to understand what the expected standards are at a particular level of facility. We expect that the public health planners would use this book as a reference and return to it time and again.

Each book has sections dedicated to the objectives of IPHS, its guiding principles, population norms, the essential and desirable standards **(desirable services/HR/diagnostic tests and equipment are over and above indications mentioned as essential)** for service provision, as well as framework for implementation of IPHS.

- **Section 1:** The **Background** section provide a brief on the journey towards the Global Strategy for Health for All and Universal Health Coverage (UHC) and the reasons the IPHS are needed.
- **Section 2:** The section on **Introduction** includes the rationality behind revising the IPHS. It briefly describes how IPHS can accelerate India's progress towards achievement of UHC and Sustainable Development Goal - 3 (SDG3) in alignment with the National Health Policy 2017.
- **Section 3:** This section includes the key **Objectives of the IPHS** for Sub District Hospitals and District Hospitals.
- **Section 4:** It includes the bed requirement for secondary care facilities (District Hospitals and Sub District Hospitals) based on **Population norms.**
- **Section 5:** It contains the **General Principles** that are to be adopted by the States and Union Territories (UT) to strengthen the service delivery and ensure better implementation of National Health Programmes.
- **Section 6:** Defines the minimum **Criteria** for the health care facility to be identified as '**IPHS Compliant**'.
- **Section 7:** The section on **Service Provisions** includes the details of:
    a. Types of service provision through the facilities;
    b. Basis for establishing health facilities, infrastructure requirement and general appearance and upkeep of facilities;
    c. Prescribed norms to be followed for illumination, fire safety, disaster and emergency preparedness, water and sanitation and power backup;
    d. Standard protocol to be adopted for better service delivery;
    e. HRH requirement for ensuring service availability, conduct and behaviour standards and safety measures to be adopted for the HRH;
    f. Essential medicines to be available free of cost in the health facilities under 'Free Drug Services Initiative' of GoI;

g. Essential diagnostics to be provided in the health facilities;

h. Equipment required for providing services being offered through the facilities;

i. Quality assurance protocol to be adopted including roadmap for health care facilities to achieve National Quality Assurance Standards (NQAS) certification;

j. Ensuring accountability and governance in service delivery; and

k. Framework of implementation of IPHS

BACKGROUND

1 SECTION

India has a rich past in the field of medical sciences. Both physical and mental health were considered important parameters of health. The '*Charaka Samhita*" was the mainstay for medicine for centuries and '*Sushruta Samhita'* was the ancient medical compendium of surgery compiled around the 6th century B.C.

The Buddhist era in the 6th century B.C. era saw the establishment of '*Viharas'* - monasteries for the care of the sick, impoverished, and disabled, as well as medical education. Several hospitals were operational throughout King Ashoka's reign in the 2nd century B.C. Modern hospitals and health care systems were constructed. From the late 19th century through the early 20th century, the first medical colleges were established for organised medical training. Further, dispensaries were established at sub-division and district level and hospitals at provincial level were attached to medical colleges.

The present focus of public health has evolved slowly across the globe. Winslow defined public health as "*the science and art of preventing disease, prolonging life, and promoting health through the organised efforts and informed choices of society, organisations, public and private communities, and individuals."*[2] *which gave a broader dimension addressing the wider determinants of health.*[1]

With the emerging recognition of public health, the government-initiated efforts towards formal training in public health. The public health workforce consisted of personnel from both medical and non-medical backgrounds that included auxiliary nurse midwives (ANM), nurses, midwives, sanitary inspectors, sanitary assistants, health officers, and physicians. In 1946, the Health Survey and Development Committee (Bhore Committee) recommended the establishment of health centres for providing integrated curative and preventive services.

With Article 21, the Constitution of India guarantees that no person shall be deprived of his/her life or personal liberty. "*Life*" here is neither the mere physical act of breathing nor connotation of continued drudgery through life. It has a much wider meaning which includes the right to live with human dignity, the right to livelihood, the right to pollution-free air and the right to health. Article 47 enforces the government's commitment further by directing the State to raise the level of nutrition and the standard of living and to improve public health. In the year 2005, the National Rural Health Mission or NRHM (now the National Health Mission or NHM) was launched for *"attainment of universal access to equitable, affordable and quality health care services, accountable & responsive to people's needs, with effective intersectoral convergent action to address the wider social determinants of health*."

The 30th World Health Assembly (WHA) resolved in May 1977, that the main social target of governments and WHO in the coming decades should be the attainment by all citizens of the world by the year 2000 of a level of health that would permit them to lead a socially and economically productive life. The Alma-Ata Declaration called on all governments to formulate national policies, strategies and plans of action to launch and sustain primary health care as part of a national health system. It was left to each country to innovate, according to its own circumstances to provide primary health care.

---

[2] *Ahmed F U. Defining public health. Indian J Public Health 2011 [cited 2021 Jul 18];55:241-5. Available from:* https://www.ijph.in/text.asp?2011/55/4/241/92397

This was followed by the formulation and adoption of the *"Global Strategy for Health for All"* by the 34th WHA in 1981. *"Health for All"* meant that health was to be brought within the reach of everyone in a given community. It implied the removal of obstacles to health that, is to say, the elimination of malnutrition, ignorance, disease, contaminated water supply, unhygienic housing, etc. It depended on the continued progress made in the field of medicine and public health. The foundation for UHC became a universal entitlement to comprehensive health security and an all-encompassing obligation on the part of the State to provide adequate food and nutrition, appropriate medical care, access to safe drinking water, proper sanitation, education, health-related information, and other contributors to good health.

"The foundation for Universal Health Coverage (UHC) is a universal entitlement to comprehensive health security to all."

To meet all these national and international commitments, it is essential for public health facilities to deliver quality services. To meet these objectives, the IPHS were launched to deliver quality services to all citizens with dignity and respect. Thus, the IPHS for Sub-Health Centres, Primary Health Centres (PHCs), Community Health Centres (CHCs), Sub District Hospitals (SDH) and District Hospitals (DH) were published in 2007 and revised in 2012. They were the reference point for public health care infrastructure planning and upgradation in the States and UTs. They are designed to provide guidance on the health system components such as infrastructure, human resource, drugs, diagnostics, equipment, quality, and governance requirements for delivering health services at these facilities.

INTRODUCTION

2
SECTION

The delivery of services through the public health sector in India follows a three-tier structure of primary, secondary, and tertiary care services. This covers both rural and urban areas. Health system inputs (infrastructure, health workers, drugs, equipment, health information system and finances) are combined to provide quality health services that are equitable, accessible, affordable and responsive to the needs of the population.

"Approach of IPHS 2022 is a target-based and outcome-oriented approach rather than an input-based and normative approach to reach under-serviced areas."

The provision of UHC forms the cornerstone for a successful public health delivery system. The High-Level Expert Group on UHC (constituted by the Government of India) defined it as *"ensuring equitable access for all Indian citizens in any part of the country, regardless of income level, social status, gender, caste or religion, to affordable, accountable and appropriate, assured quality health services (promotive, preventive, curative and rehabilitative) as well as services addressing wider determinants of health delivered to individuals and populations, with the Government being the guarantor and enabler, although not necessarily the only provider of health and related services."*

To ensure quality provision of close-to-client health services, an organised provider network is essential. This will not only promote continuity of care but also avoid duplication and fragmentation of services. This will include effective organisation and management of inputs and services in the public health system to ensure access, quality, safety, and continuity of care across health facilities. Thus, it requires a target-based and outcome-oriented approach rather than an input-based and normative approach to reach under-serviced areas.

In an effort to improve the quality of services and provide a uniform benchmark to assess the functionality of public health facilities, a set of standards known as the Indian Public Health Standards (IPHS) were first developed in 2007 and revised in 2012. These standards cover Sub-Health Centres (SHCs), Primary Health Centres (PHCs), Community Health Centres (CHCs), Sub District Hospitals (SDHs) and District Hospitals (DHs). They provide guidance on the infrastructure, human resource, drugs, diagnostics, equipment, quality and governance requirements for delivering health services at these facilities.

Although, the focus on urban health came in Reproductive and Child Health (RCH) – I and continued in RCH-II as part of NRHM, it was only, in 2013, while reorganising the National Health Mission that the National Urban Health Mission (NUHM) was launched. This was with the aim of providing affordable primary health care through UPHCs, UCHCs and outreach services to the urban population in India, with special focus to people living in listed, unlisted slums, homeless, rag-pickers, migrants, and other vulnerable population.

- **Clinical care:** From standalone curative to a preventive, promotive and rehabilitative approach for achieving comprehensive wellness in health.
- **Primary care:** From selective care to assured comprehensive care with linkages to referral hospitals.
- **Drugs, diagnostics, and emergency services:** From user fees and cost recovery to assured free drugs, diagnostic and emergency services to all in public hospitals.

- **Infrastructure and Human Resource Development:** From a normative approach to a targeted approach to reach under-served areas with *"time to care approach"*.
- **Urban health:** From token interventions to on-scale assured interventions to organise primary health care delivery and referral support for the urban poor. Collaboration with other sectors to address wider determinants of urban health is advocated.
- **National Health Programmes:** Integration with health systems for programme effectiveness and in turn contributing to strengthening of health systems for efficiency.

Since then, some key policy shifts have been proposed under THE National Health Policy, 2017 for public health care delivery system in the areas enumerated below.

Since the last revision of the IPHS in 2012, several new initiatives, interventions, programmes and projects have been introduced in the public health system. The introduction of comprehensive primary care through strengthened Sub- health centres and PHCs (now known as Health and Wellness Centres or HWC), similarly, in urban areas, Urban Health and Wellness Centres or UHWC, speciality UPHCs (polyclinics), quality improvement initiatives (Kayakalp, LAQSHYA, Grievance Redressal Systems) and the progression from the Millennium Development Goals (MDGs) to the Sustainable Development Goals (SDGs) have also been key developments in recent few years.

Due to these changes, it is now an opportune time to review, revise and update the existing IPHS norms to ensure that they take cognisance of these recent developments; are informed by stakeholder feedback about the relevance and usefulness of these standards; and remain fit-for-purpose in light of emerging evidence and advancements in health science and technology.

In the year 2020, Corona Virus Infectious Disease (COVID) spread rampantly across the globe. It widely impacted health systems of countries and highlighted the need for preparing infrastructure which was resilient for responding to the need and situations brought upon by outbreaks, disease prevalence etc. This also highlighted the gaps in the availability of assured critical care and the need for a robust supply chain for the operationalisation of health facilities for timely management of critically ill patients.

To accommodate the abovementioned changes it was essential that a matching human resources development strategy along with an effective logistics support system and robust referral backup were duly developed. Successful implementation of these standards was to be contingent on commensurate financial support, adequate HR and an enabling public health system architecture. Previous reviews, assessments and evaluations (such as the successive Common Review Missions) demonstrated the limitations of public health facilities in meeting IPHS norms without adequate financial, HR and logistical support.

Services

Essential: Minimum acceptable functional standards.

Desirable: Aspiring for improvement.

The revised and updated 2022 IPHS norms will retain the earlier approach of supporting government health facilities to attain a minimum acceptable functional standard (indicated as 'Essential') while striving and aspiring for improvement (indicated as 'Desirable') so as to accelerate India's progress towards achievement of UHC and SDG-3.

In addition, the 2022 revised guidelines now focus on the services to be delivered at each level of the facility. Service delivery defined for each level of health facilities is the basis for developing other health system strengthening components (infrastructure, human resources, drugs, diagnostics/equipment, quality improvement, monitoring/supervision, governance and leadership).

The revised 2022 IPHS include the various components related to service delivery, i.e., **infrastructure requirements, HR norms and capacity building, drugs, diagnostics and equipment, administrative and support services, quality assurance and improvement, monitoring and related governance issues.**

This document aims to support states with the implementation of IPHS at public health facilities and includes the general principles that apply to the norms used. The 2022 IPHS guidelines have been framed for-

- District Hospitals (DH) & Sub District Hospitals (SDH)
- Community Health Centres (CHC): Both rural and urban
- Health and Wellness Centres – Primary Health Centres (PHC): Both rural and urban, including multispecialty UPHC (Polyclinics)in urban areas
- Health and Wellness Centres – Sub-Health Centres – HWC – Both rural (SHC-HWC) and Urban Health and Wellness Centres (UHWC)

Indian Public Health Standards- Volume I contains norms for DH and SDH combined together as they both provide secondary care services. It aims to support states with the implementation of IPHS at public health facilities and includes the general principles that apply to the norms used. This considers health service provision holistically for a district and implementation of norms that should be based on the local burden of disease and its projection in terms of likely future trends.

3
SECTION

OBJECTIVES OF IPHS FOR SDH & DH

The broad objectives of the IPHS for public health facilities includes the following:

To define an uniform benchmark ensuring high quality services that are accountable, responsive, and sensitive to the needs of the community.

1. To specify the minimum assured (Essential) and achievable (Desirable) services that are expected to be provided at different levels of public health facilities.
2. To provide guidance on health systems strengthening components which includes architectural design of facilities, human resources for health, drugs, diagnostics, equipment, administrative and logistical support services to improve the overall health related outcomes
3. To achieve and maintain an acceptable standard of the quality of care at public facilities
4. To facilitate monitoring and supervision of the facilities
5. To provide guidance and tools for governance, leadership and evaluation.

POPULATION NORMS FOR SDH & DH

4 SECTION

- The 1946 Bhore Committee report recommended one bed for every 1000 population to be increased incrementally (though several states are yet to achieve this). The National Health Policy, 2017 recommends two beds per 1000 population. It is therefore proposed that the provision of **one bed per 1000 population is an 'Essential' norm for every district while two beds per 1000 is a target they should aspire towards 'Desirable/Advance'.**
- For example, considering that a normative district has a population of 20 lakh (Census 2011 estimates the average population of a district at 19 lakh) this translates to about 2000 in-patient hospital beds (Essential) and up to 4000 beds (Desirable) across every normative district. For each district, the final number will be influenced by its population, local epidemiology, burden of disease, community requirements, health-seeking behaviour of the population, and contribution of the private sector.
- The 'Essential' number of beds in a district should be provided through the public health system of tertiary care (Medical Colleges), secondary care (DH, SDH and selected CHCs) and primary care (PHCs and remaining CHCs).
- However, while calculating the patient-bed ratio in a district, it should primarily rely on the facilities from PHC to DH since tertiary care facilities (Medical Colleges) do not cater only to the district where it is located, but to other districts too. Care should be taken to first saturate beds at primary and secondary level public health facilities as per population norms before achieving the 'Essential' number of beds through tertiary care. To achieve the 'Desirable' number of beds, the contribution of the private sector (based on the access to private health care in the local area), Railways, Armed Forces, Power Grid, Coal fields, Employees' State Insurance (ESI) and other Public Sector Undertaking (PSU) hospitals may also be considered while continuing to strengthen and increase bed provision at public health facilities. As a thumb rule, all such beds that are available and functional for a patient for more than 24 hours, have been calculated as in-patient hospital beds (including critical care beds). The remaining beds such as Emergency, LDR, dialysis, day-care and pre & post-operative beds have not been counted as in- patient hospital beds. However, all such beds will be counted for budgetary allocation, provision of HR, and also clinical and other support services.

Population	Essential beds	Desirable beds
Less than 2 lakh	50 beds + 15 additional (Emergency and day care beds)	100
Between 2–5 lakh	100 beds + 25 additional (Emergency and day care beds)	200
Between 5–10 lakh	200 beds + 38 additional (Emergency and day care beds)	300
Between 10–20 lakh	300 beds + 49 additional (Emergency and day care beds)	400
Between 20–30 lakh	400 beds + 60 additional (Emergency and day care beds)	500
More than 30 lakhs	500 beds + 65 additional (Emergency and day care beds)	700

This grading is useful as it provides a systematic basis for identifying resources required at the DH according to the size of the facility. For example, the number of human resources for health required will vary with the size of the DH and this categorization will provide guidance on the number of doctors, nurses and allied health professionals needed. Depending upon the bed occupancy and local health needs, states can propose more beds to achieve IPHS norms.

Districts with less than 5 lakh population with a functional DH do not need a Sub District hospital. Districts with populations between 5-10 lakh can have one SDH. Thereafter, one SDH for every 10 lakh population can be considered for the provision of comprehensive secondary care health services.

GENERAL PRINCIPLES

5 SECTION

- IPHS defines the standards in the local context of the country and its implementation is the State's/UT's responsibility with technical support from MoHFW. IPHS does not define the implementation process. However, in the interest of rendering quality patient services, it suggests that in-house hiring of clinical and critical staff should be prioritized rather than those services which can efficiently be run even through outsourcing model like security, cleaning, laundry, etc.
- While planning and designing primary and secondary health care services at public facilities, the health needs of the entire district should be considered as a whole, rather than simply focusing on individual facilities within that district. This holistic assessment should include a systematic review of the burden of disease in that district, the local epidemiology and the specific needs and requirements of communities in different parts of the district.
- For each district, the final number of health facilities will be influenced by its population, time to care, geographical need, local epidemiology and burden of disease, community requirements, and the health-seeking behaviour of the population.
- Every district should have a District Health Action Plan (DHAP) where health facilities are identified and mapped indicating the type and level of services they provide. It should be prepared under the guidance of the District Health Society. Member Secretary of the society should organise participatory planning with all stakeholders for the preparation of DHAP.
- Depending on the services provided at a particular facility, it may be deemed as a primary or secondary care service provider facility:
    - Health and Wellness Centres (Sub-Health Centres and PHCs), in both rural and urban areas, will provide primary care services.
    - Multispecialty polyclinics nearer to the community as ambulatory specialist services, particularly in urban areas.
    - Community Health Centres, in rural areas, can be either FRU or non- FRU depending on the range of services it provides. In urban areas, CHCs will provide services at par with FRU.
    - FRUs indicate functionality and go beyond obstetric services. Such units where both elective and emergency surgical services of secondary level care are being provided with complimentary functional infrastructural, HR, equipment and support services would qualify to become FRUs.
    - While operationalising any FRU, the population norms of five lakhs and/or time to care approach should be taken into consideration. The principle for the *'time to care'* approach should ensure the availability of emergency care services and stabilisation of the patient within the '*Golden Hour'* from the onset of the emergency within the population being caterd to.
    - District and Sub District hospitals will provide secondary care services.
    - Sub District hospitals are below the district and above the block level (CHC) hospitals and act as Referral Units for the Tehsil/Taluk/Block population in which they are geographically located.

They form an important link between HWC, PHC and CHC on one end and District Hospitals on the other end. They also save travel time for cases needing emergency care and reduce the workload of the district hospital.

- Every district should have at least one district hospital which should be comprehensively functional for providing secondary care services as defined in the guidelines. While all secondary care services are important, certain critical services like emergency, High Dependency Unit (HDU)/Intensive Care Unit (ICU), Operation Theatre (OT), labour room complex, Special Newborn Care Unit (SNCU), lab and imaging services, etc. need to be prioritised.
- The district hospital has a critical role to play in health care delivery and health professional training under the UHC system, both of which should be well attuned to the needs of the particular district while conforming to national standards of health care provision.
- An adequately equipped and suitably staffed district hospital should aim to meet most of the secondary health care needs of the population within that district, so that only a small number would need a referral to higher-level tertiary care centres.
- For estimating the number of in-patient hospital beds required in a district, the population of the district should be assessed against standards for bed requirement and also review the relative contributions of the public and private health sector.

Provision of additional beds

Although the present IPHS has considered requirement of the total number of beds in a district, it also provisions for additional beds during the time of emergency/disaster. States can still propose for additional beds, depending on disease burden, programme requirements, etc. However, any such addition can only be considered if the Bed Occupancy Rate (BOR) is more than 70%. This will ensure optimal utilisation of bed. Accordingly, provision of commensurate human resource and logistic support system should also be ensured.

- The specific set of services to be provided at a particular facility should be clearly identified from the list of services provided in the IPHS. This will help to identify requirements for infrastructure, HR, drugs, diagnostics and equipment.
- Requirements of individual national health programmes (in terms of service delivery, infrastructure, human resources for health, drugs and diagnostics) have been reviewed and included in IPHS. Therefore, achieving IPHS compliance would go a long way in fulfilling the requirements of various health programmes.
- IPHS prescribes norms for allopathic services. However, human resource for health for AYUSH as mentioned in IPHS 2012 has been retained in 2022 as it is.
- The present IPHS has considered the requirement of MCH beds in the total number of beds itself so that stand-alone MCH beds are not created randomly. States, however, can still propose MCH wings if they are unable to accommodate a holistic district plan which includes the requirement of maternal and child health needs. While setting up MCH wings, the MNH toolkit can also be referred to along with Government of India (GoI) approved layout plans. However, proposing MCH wings below district hospital is not Desirable.
- All statutory and regulatory standards relevant to a particular facility should be followed and adhered to in accordance with the latest national/state guidelines, rules and regulations.
- A Citizens Charter should be prominently displayed near the entrance of the facility. This should provide information about the various services being offered, timings, responsibilities of patients and providers, details of referral vehicles and facilities, the number of free drugs and diagnostics

being provided and other citizen-friendly information. Patients' rights should be ensured and they should also be made aware of their responsibilities (e.g., to keep the facility clean and avoid spitting in corners, avoiding over-crowding by attendants, respecting visiting hours etc.). Important information such as mandatory notices (RTI Act, PCPNDT Act, MTP Act) and contact numbers (such as fire, police, ambulance, blood banks and referral centres) must be clearly visible. A sample citizen charter is placed at **Annexure 1**. Provision of real-time data and information through digital citizen charter should be considered.

6
SECTION

CRITERIA FOR IPHS COMPLIANCE

For any public health facility to be considered compliant with IPHS, a minimum standard for both the quantity and quality of services should be achieved. A facility will be deemed as IPHS compliant if it provides all the 'Essential' services rendered through corresponding availability of infrastructure, human resource for health, drugs, diagnostics and equipment identified for that level of facility.

The norms for service provision, infra-structural and human resource for health requirements, drugs, diagnostics and equipment, quality assurance, monitoring and governance will apply uniformly across all facilities in rural and urban areas. General guidance on these components is presented in the sections that follow.

The mechanism and criteria for IPHS certification can be accessed at the link given below.

https://nhsrcindia.org/IPHS2022

SERVICE PROVISION

7 SECTION

District hospital services have three pillars; clinical care, a knowledge hub for capacity development of HR in health, and public health programme to ensure the continuum of care and reduce the disease burden.

DH services have three Pillars: Clinical care, Knowledge hub and Public health programme.

Clinical care includes curative, palliative, and rehabilitative services along with services for implementation of national programmes (as appropriate), provision of drugs, diagnostic services, administrative/maintenance services and other support services. Apart from curative services, there should be a strong focus on health promotion, prevention, palliation and rehabilitation at all district and Sub District hospitals. The details are placed in **Annexure-2**.

The services to be provided at different facilities are identified as 'Essential' and 'Desirable/Advance'. The former includes those '*minimum assured services*' that every facility at that level must provide. Desirable/ Advance services are those that a facility should aspire to ultimately achieve (if not already being provided) over a period of time in a phased manner. 'Desirable' services indicated in the guidelines are in addition to the 'Essential' services.

All infrastructure plans and human resource requirements should be based on the range of services to be provided at that facility. Critical and support services should be offered and distributed across the district in such a way that out-of-pocket expenditure (OOPE) of the community is decreased.

For smaller districts and/or those with a smaller population, it may be appropriate to share some services across districts. This will be especially relevant where there is a shortage of specialists. However, to be considered IPHS compliant, all Essential services should be available at the facility. Such intensive care facilities (such as a Cardiac ICU, Cath Lab) which requires superspecialists HR, sophisticated infrastructure, and Equipment can be aspirational and shared across more than one district. The same principles also apply to medical, surgical and pediatric super-speciality services (Cardiology/Gastroenterology/Urology/Nephrology/Oncology services). This helps in optimal utilisation of limited resources including HR.

For smaller districts and/or those with a smaller population, it may be appropriate to share some services across districts.

In addition, it may not be viable to offer some specialised services at smaller district hospitals and can be linked with other districts health facilities for such services.

While clinical services will be provided by the facility, some of the support services such as mechanised laundry, security and cleaning are also 'Essential'. The quality of the services should be delivered and monitored as per GoI guidelines.

District hospitals should aim to become the knowledge hub of their corresponding districts by providing services like medical courses including Diplomate of National Board (DNB), nursing schools, ANM training centres, district training centres for miscellaneous training, and a resource centre equipped with computers, information resources and telemedicine capability. This may be managed through a partnership with universities.

To ensure the continuum of care, assured referral with facility readiness to manage referred cases must be established. The referral transport network should have the requisite number of equipped ambulances (depending on population norms), adequately trained manpower and a 24/7 control and communication room for coordinating the service.

Service Flow at SDH and DH

The suggestive flow of services as underneath should be followed for IPHS compliance in any SDH & DH.

Enquiry → Registration → Waiting → Nursing station → Clinic → Dressing room/Injection room → Diagnostics (lab/imaging) → Drug dispensation → Message to the patient for *Mera Aspatal* feedback → Exit

Collaboration with other sectors has also been identified and listed for certain services (such as District Disability Rehabilitation Centre (DDRC) with Ministry of Social Justice and Empowerment, School health with the education department, and Vector control activities with the local government in rural and urban areas).

7.1. INFRASTRUCTURE

The infrastructure for all facilities should follow the rules and regulations as laid down in National Building Code and in the state by-laws.

Sufficient space and infrastructure should be provisioned for the services being provided. Planning should be prospective and take into account the expected burden of disease and future trends (such as the increasing prevalence of non-communicable and lifestyle-related diseases). New infrastructure should be planned, designed and built to take account of future expansion both with regards to the quantity and range of services to be provided.

Old and dilapidated facilities may need to be demolished to build new infrastructure at the same site. However, while demolishing any old building, it should be ensured that alternate arrangements are made for effectively running the existing services. Factors to be considered while building a new facility either at the same site or selecting a new site for a facility include:

- Accessibility to the public (with good road connectivity)
- Ensuring the facility is not in a low-lying flood-prone area
- Ensuring it is adequately serviced by public utilities such as water, electricity and telephone connectivity, sewage and storm-water disposal. In areas where these are not available, appropriate substitutes should be identified such as a deep well for water, generators for electricity and radio communication for telephony
- Ensuring elderly and disabled-friendly access
- Minimizing exposure to air, noise, water and land pollution and having facilities with vector-breeding proof buildings
- Reviewing land utilization in adjoining areas, the general topography, proximity to the local bus stands, railway station and other modes of transport and obtaining the necessary environmental (including seismic safety), fire safety and administrative clearance.
- The local agency by-laws and rules should be strictly adhered to. While adhering to these, 60% of the total area of the facility should be reserved for landscaping, play area, circulation area etc. and the remaining 35-40% should be the plinth area (including residential areas). The built-up portion will include areas for core clinical services, support services such as the Central Sterile Services Department (CSSD), kitchen and mechanised laundry, residential areas and the knowledge hub (teaching and training sites). An estimated 80% of the built-up areas should be dedicated to core patient services and clinical areas. Use of this space for administrative and related services (e.g., offices and general stores) should be avoided.
- Wherever possible, new buildings should be constructed vertically than horizontally (within state norms and compliant with the National Building Code) so that there is more space available for creating green spaces.

As per National Building Code (NBC) 60% of the total area of the facility should be reserved for landscaping, play area, circulation area etc. and the remaining 35-40% should be the plinth area (including residential areas) an estimated 80% of the built-up areas should be dedicated to core patient services and clinical areas.

While maps for the general lay-out, flow and suggested dimensions are provided for each level of the facility, these may have to be adapted to fit space constraints. The existing infrastructure, where possible and appropriate, can be changed, renovated or upgraded to fit these requirements as far as possible. Some degree of flexibility and innovative planning will therefore be required to accommodate additional services to be provided in existing infrastructure and ensure that the facility is compliant with the necessary rules and regulations while remaining fit for purpose, from a clinical perspective. Where lack of space is a particular concern (as in urban areas or pre-existing spaces), **the possibility of expansion vertically based on floor area ratio (FAR) rather than horizontally should be seriously considered, while bearing in mind that at least 10 metre of space all around the boundary wall should be left open.** Adequate width to allow easy access to the fire engine should be provisioned for and in no case should it measure less than6metre.

As a general principle and wherever possible, clinical areas especially Emergency services, LDR complex, OPD should be on the ground floor. Administrative offices, teaching and training areas and general store rooms should be located on higher floors. In this document, a suggestive layout plan for all categories of district and Sub District hospitals have been provided at ***Annexure 4*.** For such hospitals where space is a constraint, apt workflow and quality should be ensured in the existing infrastructure.

Emphasis should be given to creating a positive, client-friendly ambiance around the facility. This includes due consideration to the provision of facilities for patient registration, waiting areas, clear way-finding, and sign-posting, parking, gardens, washrooms, drinking water, and disabled-friendly facilities. The facility should be environment friendly with scope for adequate natural light, water harvesting and solar energy, if appropriate.

The foundation of the health facility infrastructure should be strong enough to meet the requirement of the seismic zones of that area and any future vertical expansion. It should strictly adhere to the statutory fire safety norms. An open area to facilitate the management of disasters and emergencies should also be provisioned. Infrastructural requirements for certain support services are common for all facilities.

7.1.1. General appearance and upkeep

The facility should have a high boundary wall with at least two gates for entry/exit. For larger facilities, three gates may be required, two for patients and related traffic and one for support services (e.g., kitchen, laundry & CSSD). The number of gates should not be more than this as it may be difficult to monitor safety concerns. There should be no unwanted/outdated posters or hoardings on the walls of the building and the boundary of the facility. There should be no encroachment in and around the facility. As per The Noise Pollution (Regulation & Control) Rules, 2000; an area of 100 metres around the hospital should be defined as a *"Silence Zone"*. Clear access to vehicles should be maintained. No vehicle should be parked outside the gate and no waiting areas should be allowed for autos, buses etc. The Public Address System must be installed for efficient traffic management in and around the facility.

As per the Noise Pollution (Regulation & Control) Rules, 2000; an area of 100metres around the hospital should be defined as a "Silence Zone". Clear access to vehicles should be maintained. No vehicle should be parked outside the gate.

Adequate lighting should be ensured so that the facility is clearly visible from the approach road. The facility should be plastered and painted in a uniform colour scheme and free from seepage, cracks and broken window panes. The floors should be anti-skid and non-slippery.

7.1.1.1. Way-finding/Signage

Adequate and clear signage should be displayed on the main and connecting roads to the facility. They should be in a font that is easily visible from a distance. A board clearly indicating the name of the facility, should be placed at the front of the facility and; each department and room should be clearly marked (including English, Hindi and local language). Colour coding could be used for clarity at larger facilities.

The layout of the hospital should be displayed near the entrance. Safety, hazard and caution signs should be prominently displayed at relevant places. A fluorescent fire exit plan should be considered where appropriate. Tactile pathways should be made for visually incapacitated visitors.

7.1.1.2. Parking

Clear access for vehicles and ambulances should be maintained, especially near the emergency department. Inside the premises, there should be an open space available in line with the average expected load of vehicles for parking. Wherever possible, separate parking spaces should be allotted for staff parking and visitor parking. Fringe parking can be created, if such space is available.

7.1.1.3. Garden and Landscaping

Gardens, landscaping and open spaces give a positive, healing environment that reduces stress, anxiety and mental fatigue. So, wherever possible, identify and promote greenery and open spaces. Herbal gardens should be promoted on the campus. A dedicated play area for children should also be identified.

General greenbelts and landscaping including plantation of shrubs and trees help to a certain extent in enhancing the environmental quality. Planting of trees in internal streets and open spaces should be done carefully to take advantage of both shades and sunshine without obstructing the flow of wind circulation and sight. Their advantage for abating glare and for providing cool and/or warm pockets in congested areas should also be taken.

The types of plants, distance between trees/plants from the building and distance between plants should be carefully worked out, keeping in view the structural safety and aesthetic requirements of buildings.

7.1.1.4. Facility entrance

This should take into consideration the flow of facility traffic at different speeds from the walking wounded and patients on wheelchairs to fast-moving ambulances. There should be a clear, separate entrance for the emergency area, OPD area and the main entrance for other clinical services, including in-patient areas. Entrance for service areas such as supplies and logistics, equipment should be separate.

The infrastructure being created or renovated should meet the requirements for isolating critical care and emergency services in view of existing or future pandemics or outbreaks. So, various wings and critical care areas can have separate entry or exit to maintain isolation, if required.

The mortuary should invariably have a separate and discreet exit to avoid unnecessary public attention.

7.1.1.5. Environmentally friendly features

The facility should be environment-friendly and energy-efficient. Where possible, the use of rainwater harvesting, solar energy and energy-efficient bulbs/equipment should be encouraged. Use of low-energy LED lighting or alternate low-energy option to save indoor lighting energy costs is recommended. The facility should have a plan for the usage of renewable energy with battery backup during times of storms, floods, or power blackouts. Refrigerants used in the Heating, Ventilation & Air-conditioning (HVAC) equipment should be CFC (Chloro Fluoro Carbon) free, with a low Greenhouse Warming Potential (GWP) when available. **When choosing the technology, guidelines and standards issued by the Ministry of New and Renewable Energy must be adhered to (these are provided in the Gazette of India April 16, 2018, No 1456).**

While constructing the facility building, the effect of sun, rain, wind, soil and other climactic factors which could have an adverse effect on the building needs to be considered, e.g., excessive rain can lead to spoilage of medicines in drug stores. To minimize the heat island effect which results in increasing the room temperature and causing other heat-related issues, use material with a high solar reflective index to cover at least 75% of the exposed roof area or provide vegetation to cover at least 50% of the exposed roof area.

7.1.1.6. Disabled and elderly friendly access

For easy access of non-ambulant (wheelchair, stretcher), semi-ambulant, visually disabled, and elderly people, infrastructural norms in line with the 'Guidelines and Space Standards for the barrier-free built environment for Disabled and Elderly Persons' of the Government of India should be followed. Also, **provisions of the 'Rights of Person with Disability Act 2016' should be implemented.**

In order to support the needs of visually impaired visitors, it is also advised that tactile signs be used with good contrast between letters and background, which should also contrast well with the background upon

which it is mounted. It is recommended to install one/two rows of tactile guiding blocks along the entire length of the proposed accessible route. Care shall be taken to ensure that there are no obstacles, such as trees, poles or uneven surfaces, along the route traversed by the guiding blocks.

A dedicated section in OPD for geriatric patients with provision for sample collection and report area should also be provisioned to ensure convenient elder-friendly access.

7.1.1.7. Circulation areas, corridors and ramps

The flooring of circulation areas such as corridors, lifts, ramps, staircases and other common spaces should be anti-skid and non-slippery. The size of corridors, ramps, and stairs should be conducive to the maneuverability of wheeled equipment. Corridors should be at least 3 metres wide. Corridors should follow fire safety norms and be wide enough to accommodate two passing trolleys easily along with some additional space for equipment. All two-way swing doors or doors in general circulation areas should be provided with vision panels giving visibility from a height of800mm to1500mm. Also, there should be clear headroom of at least2100mm height above the tactile guiding blocks. This will enable both the wheelchair user and the ambulatory disabled to be noticed by a person on the opposite side and hence prevent him/her from being accidentally struck by the door. **Ramps shall have a slope of 1:15 to 1:18 and should be checked for maneuverability of beds and trolleys at turning points.**

7.1.1.8. Disaster and emergency preparedness

All health care facilities should be resilient to climatic and environmental changes. They should also be capable of handling sudden healthcare needs during disasters and unforeseen emergencies/epidemics/pandemics etc. While creating infrastructure seismicity of zones needs to be considered. Wherever the health facilities are already existing possible retrofitting should be planned.

There should be a clearly defined authority, roles, and responsibilities of all cadres of staff and a mechanism for mobilisation of resources. All staff members should be trained on relevant disaster prevention and management procedures. Regular mock drills should be conducted, competence assessed, gaps identified and an action plan for addressing these prepared.

Structural and non-structural earthquake proof measures (in line with State Govt. guidelines) should be incorporated, especially in high seismicity earthquake-prone areas. This includes simple non-structural measures like fastening of shelves, almirahs and movable equipment, as appropriate.

Compliance as per state and central government guidelines for fire regulations should be ensured while planning for a health facility. Access to fire tender and rescue teams, availability of open spaces on each floor, clearly visible fire exits with proper illumination and lighting (even during an interruption in electric supply) are some of the important considerations for creating fire-safe infrastructure. As a principle, none of the fire exit doors should be kept locked. These doors should be fire resistant must be opened towards the outside with a push bar system on the doors. Fire detectors, extinguishers, sprinklers, and water connections should be functional and easily accessible. Periodic monitoring and audit for fire safety and drills should be organized and conducted.

Access of fire rescue teams, availability of open spaces on each floor, clearly visible fire exits with proper illumination and lighting (even during interruption in electric supply)

As a principle, none of the fire exit doors should be kept locked. These doors should be fire resistant and must be opened towards the outside with a push bar system on the doors.

Detailed provisions regarding disaster and fire preparedness are placed in **Annexure 5.**

Guidelines for Hospital Safety, 2016 - NDMA

"Building space directly adjoining, and visible from, a main vertical evacuation route, robustly and reliably protected from heat, smoke and flame during and after a fire or any type of disaster, where people can temporarily wait with confidence for further information, instructions, and/or rescue assistance, without obstructing or interfering with the evacuation travel of other building users should also be provisioned for. Further details are available in the link provided: Guidelines-Hospital-Safety.pdf (ndma.gov.in)

7.1.1.9. Electric power supply

Public health facilities should have access to adequate, affordable, and reliable electricity supply.

Distribution of electric load along with the load balancing to various equipment and installations in a facility is very important since overloading at any point can result in a mishappening like an electric fire hazard or can even damage the equipment. Similarly, fluctuation in voltage also adversely affects the equipment. Which is why it becomes important to provide automatic voltage regulators which regulate fluctuating input power voltage and maintain constant output voltage. Placing electrical installation is a specialised job and must be given due importance to ensure proper care with reduced risks to the patient.

Adequate number of electric points on the various walls (at < 1.5 m height from the floor) needs to be ensured for easy connection. The use of explosion-proof plugs, plug connectors, and the socket are essential to ensure safety against explosion.

New electrical appliances should have a minimum of a 3-star rating from the Bureau of Energy Efficiency or equivalent recognised organisation to minimise the energy input.

Monitoring: Constant digital display for neutral and earthing should be there. (The voltage between neutral and earthing should not be more than 5 volts otherwise it can harm the semiconductor devices. Hence digital display should be installed to monitor the voltage between neutral and earthing).

Detailed points are mentioned in **Annexure 5.**

7.1.1.10. Fire Safety

Compliance as per state and central government guidelines for fire regulations should be ensured while planning for a SDH/DH. Availability of open spaces, clearly visible fire exits with proper illumination and lighting (even during an interruption in electric supply) are some of the important considerations for creating fire-safe infrastructure.

As a principle, none of the fire exit doors should be kept locked. These doors should be fire resistant and must be opened towards the outside with a push bar system on the doors. Fire detectors, extinguishers, sprinklers, and water connections for the water should be functional and easily accessible. Periodic monitoring and audit for fire safety and drills should be organised and conducted. All health care facilities should be so designed, constructed, maintained, and operated as to minimise the possibility of a Fire emergency requiring the evacuation of occupants, as the safety of hospital occupants cannot be assured adequately by depending on evacuation alone. Hence measures shall be taken to limit the development and spread of a fire by providing appropriate arrangements within the hospital through adequate staffing and careful development of operative and maintenance procedures consisting of:

- Design and construction.
- Provision of detection, alarm and fire extinguishment.
- Fire prevention
- Planning and training programmes for isolation of fire; and
- Transfer of occupants to a place of comparative safety or evacuation of occupants to achieve ultimate safety.

The facility should have an identified nodal officer for ensuring fire safety. ***Detailed norms for Disaster management and preparedness including safe electricity have been placed in*** **Annexure-5.**

7.1.1.11. Illumination

The illumination and lighting in the SDH/DH should be according to the prescribed standards (BIS) given below. Shadowless lights in the operation theatre and delivery rooms should be provided. Emergency portable light units should be provided in the wards and departments.

Table: Illumination at SDH/DH

Sl. No.	Department	Illumination (lux)
1	Reception and waiting room	150
2	Wards	
2a	General	100
2b	Beds	150
3	Operation Theatre	
3a	General	300
3b	Tables	Shadow less light
4	Laboratories	300
5	Radiology	100
6	Casualty and Outpatient Departments	150
7	Stairs and Corridor	100
8	Dispensaries	300

7.1.1.12. Water Supply

The arrangement should be made for round the clock piped water supply along with an overhead water storage tank with a provision to store at least three days of water requirement. Water supply preferably through two independent sources must be ensured. A separate water tank for critical care areas should be made available. It should have pumped and boosting arrangements. Approximately 450 to 500 litres of water per bed (including day care, emergency, dialysis and LDR beds) per day is required for a district hospital. Separate provision for firefighting and water softening plants is to be made available. Cleaning of all water tanks should be ensured on a regular basis (at an interval of a maximum of three months) and records should be maintained accordingly.

In view of the critical shortage of water, conservation of water by rain water harvesting and by use of recycled water to the maximum extent possible is required. Hospitals must encourage the use of a safe clean rainwater harvesting system to help reduce the municipal water demand and enhance the ground water table. Fitment requirements for water supply in various areas are given in the table below.

Table : Fitment requirements for water supply

Sl. No.	Fitments	Hospital for indoor patients' wards (male & female)	Hospital with outdoor patient		Administrative building	
			Male	Female	Male	Female
1	Water closet	One for every 6 beds	One for every 100 persons	Two per 100 persons	One for every 25 persons	One for every 15 persons
2	Wash basins	Two for up to 24 persons, add one for every additional 24 beds	One for every 100 persons	One for every 100 persons	One for every 25 persons	One for every 25 persons
3	Baths with shower	One bath with shower for every 6 beds	-	-	One on each floor	One on each floor

Sl. No.	Fitments	Hospital for indoor patients' wards (male & female)	Hospital with outdoor patient		Administrative building	
			Male	Female	Male	Female
4	Bed pan washing sinks	One for each six beds in a ward	-	-	-	-
5	Cleaners sink	One for each ward	One per floor (minimum)	One per floor) minimum)	One per floor (minimum)	One per floor (minimum)
6	Kitchen sinks and dish washers	one per ward	-	-	-	-
7	Urinals	One per 20 persons	one per 50 persons	-	One/20 persons, add one per additional 20 persons. From 101 to 200 persons add @ 3% and over 200 persons add 2.5%	

7.1.1.13. Drainage and Sanitation

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

A separate drainage system for effluents being generated from various service areas to Effluent Treatment Plant (ETP) needs to be in place, so that all effluents are treated before discharge. Provision for an Effluent Treatment Plant (ETP) based on the estimated effluent load (and separate from the treatment of sewage) should also be provided at the district hospital and larger public health facilities.

As per Bio Medical Waste Management Rules (BMW) rules, it is mandatory to establish a Sewage Treatment Plant at a health facility with more than 10 beds. Faecal Sludge Treatment Plant (FSTP) by Decentralised Wastewater Treatment System (DEWATS) method is a greener and climate-resilient alternative that is suggested so that the treated wastewater is also re-utilised for gardening and landscaping while the wastewater is completely treated and even the sludge, after drying is utilised as manure.

7.1.1.14. Waste management

All such waste that can adversely harm the environment or health of a person is considered infectious and termed as biomedical waste. Every health care facility should ensure collection, transportation, treatment and disposal of biomedical waste as per the latest BMW Rules. Each healthcare facility should ensure that there is a designated central waste collection room situated within its premises for storage of biomedical waste, till the waste is picked and transported for treatment and disposal at the common Biomedical Waste Treatment Facility. Such room should be under the responsibility of a designated person and d be under lock & key. It should also be ensured that disposal of human anatomical waste, soiled waste and biotechnology waste is done within 48 hours.

It should also be ensured that disposal of human anatomical waste, soiled waste and biotechnology waste is done within 48 hours.

As per Biomedical waste management guidelines, deep burial pits need to be constructed only at such DH where the common biomedical treatment plant is located at a distance of more than 75 kms. Before disposal of biomedical waste in the pits, the facility needs to ensure that biomedical waste is decontaminated and shredded.

The general waste consists of all the waste other than bio-medical waste and which has not been in contact with any hazardous or infectious, chemical or biological secretions and does not include any waste sharps.

Such waste is required to be handled as per the latest Solid Waste Management Rules and Construction & Demolition Waste Management Rules, as applicable.

Liquid waste management is another area which needs adequate attention for separate drainage system to ETP. Other wastes consist of electronic equipment, used batteries, and radio-active wastes which are not covered under biomedical wastes but have to be disposed as and when such wastes are generated as per the provisions laid down under E-Waste (Management) Rules, Batteries (Management & Handling) Rules, and Rules/Guidelines under the latest Atomic Energy Act, respectively.

District Administration should coordinate with other departments including urban local bodies (ULB) for the shared responsibilities in the disposal of waste generated by health facilities through a common treatment plant. Subsequent to general principles for infrastructure, the following considerations should be kept in mind while planning for the infrastructure of clinical services.

7.1.1.15. Infrastructure for Clinical Services

Subsequent to general principles for infrastructure, following considerations should be kept in mind while planning for infrastructure of clinical services.

1. Out Patient Services

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

2. Registration area

It should be well ventilated, lit, and spacious with each counter ensuring a minimum space of 15-20$m^{2.}$ The number of counters should be as given below. Out of the total number given below, dedicated counters each for women and elderly and differently-abled should be provisioned.

Type of Hospital	SDH 100 beds	DH 50 beds	DH 100 beds	DH 200 beds	DH 300 beds	DH 400 beds	DH 500 beds
Number of Counters	**3**	**3**	**3**	**4**	**4**	**6**	**6**

For registration, computers with an attached printer should be available with facility for computerised registration. A patient calling system with an electronic display should be promoted for easy communication at the registration counter, there should either be no glass barrier between visitors and the registration clerk or it should be at a height that allows audible communication between them.

Patients should be given an OPD registration slip mentioning the date, the patient's particulars, the OPD details and a token number or use an electronically supported queue system.

3. Waiting area

Adequate seating arrangements/chairs should be available. The waiting area should be organized in designated areas such as near the registration counter, OPD, and outside critical areas. This should be built to a scale of 1 sq. ft. per one-third of peak hour load for the registration area and about one-half of peak hour load for OPD areas. A minimum of 400 sq. ft. of area should be provided. Adequate seating arrangements preferably such, which are less space occupying and easy to maintain should be placed. Messages conveying people to provide seats to elderly, pregnant women, children and patients should be properly displayed. In maternity OPD, provision should be there for the seating of all pregnant women while waiting in the queue.

Adequate space should be allocated for persons using mobility devices, for example, wheelchairs, crutches and walkers, white cane, etc., as well as those walking with the assistance of others. The dimensions prescribed in the NBC manual may be used for guidance while designing facilities and equipment to be used by persons with disabilities.

The waiting area for paediatric OPD can have colourful wall paintings with cartoon characters. The play area can be equipped with toys, games, puzzles, etc. to create an environment where children enjoy themselves and learn while waiting to be treated.

Patient amenities in waiting areas should include

- Essential amenities
  - Fans
  - Clean drinking water
  - Clean and gender-sensitive toilets
- Desirable amenities
  - Air-conditioning
  - Television/LCD in waiting area displaying facility-related information, health-related IEC

4. Nursing Station

A common nursing station in the OPD complex is required where nurses will record vitals of patients such as Blood Pressure, temperature, etc., and guide patients before they enter the consultation/examination room. They should also keep with them emergency resuscitation kits and tray for management of anaphylactic shock. Separate stations for high case load OPDs (such as OBGY, immunization, family planning, and NCD services) to be provisioned. A common nursing station for the remaining OPD clinics should also be made available. The stations should have space to seat nurses, keep equipment/consumables to measure vitals, and maintain records. Digital record-keeping is preferred.

5. Consultation room

This should have enough space with a minimum area of 12 sq. m.to accommodate the required furniture and examination equipment so that interaction with patients can be conducted with privacy and dignity. It should be well lit and ventilated with minimum furniture in the room which is compact so that there is adequate space for the patient and/or attendants. An examination table, X-ray view box, single curtain screens and hand washing facilities should be provided, as needed. The services to be provided, cleaning schedule and monthly performance chart should be clearly displayed in the room. Speciality wise consultation rooms are provided in the table below:

Table: Specialty wise consultation services in SDH and DH

Service Area	Sub District Hospital	District Hospital					
	100 beds	50 beds	100 beds	200 beds	300 beds	400 beds	500 beds
Out-Patient Consultation Rooms							
Medicine	E	E	E	E	E	E	E
Surgery	E	E	E	E	E	E	E
Paediatrics	E	E	E	E	E	E	E

Service Area	Sub District Hospital	District Hospital					
	100 beds	50 beds	100 beds	200 beds	300 beds	400 beds	500 beds
Obstetrics and Gynaecology	E	E	E	E	E	E	E
Ophthalmology	E	E	E	E	E	E	E
Orthopaedics	E	E	E	E	E	E	E
ENT	E	E	E	E	E	E	E
Pre-Anesthetic Check up & Consultation	E	E	E	E	E	E	E
Oral/Dental	E	E	E	E	E	E	E
Family Medicine	D	D	D	D	D	D	D
Pathology/ Microbiology/ Biochemistry	E	E	E	E	E	E	E
Dermatology	D	D	E	E	E	E	E
Psychiatry	D	D	E	E	E	E	E
Oncology	-	-	-	D	D	D	D
Neonatology	-	-	-	D	D	E	E
Cardiology	-	-	-	D	D	D	D
Gastroenterology	-	-	-	D	D	D	D
Nephrology	-	-	-	D	D	D	D
Urology	-	-	-	D	D	D	D
Geriatric	-	-	-	D	D	D	D
Neurology	-	-	-	-	D	D	D
NCD	E	E	E	E	E	E	E
Counselling	E	E	E	E	E	E	E
Family Welfare Clinic	E	E	E	E	E	E	E
Nutrition	E	E	E	E	E	E	E
AYUSH	D	D	D	D	D	D	D
Health & Wellness service	E	E	E	E	E	E	E
Physiotherapy	E	E	E	E	E	E	E
Physical Medicine and rehabilitative services	D	-	D	E	E	E	E

Note: The desirable OPD services will be over and above the essential services.

6. Examination room

It should be co-located with the consultation room or both can be part of the same room with arrangements for privacy for examination of the patient (a curtained off area). It should have adequate space for an examination table, curtains (wheeled, wall-mounted, single-piece), free movement around the examination table, and a wall-mounted cupboard where essential equipment and registers can be kept. Three colours should not be used in clinical service areas of a health facility namely– red/pink, blue and yellow to avoid

interference with examining pallor, cyanosis, and icterus respectively. Larger examination rooms/OPDs will be needed for certain specialities, e.g., Dentistry (for dental chair) and Eye care (for vision testing). Ultrasound services, nursing station and separate toilet should be attached/at one place for obstetrics and gynaecology services. The Ultrasound room attached to the obstetric services should contain a patient couch, a chair and adequate space for the equipment. The lighting must be adequate for proper examination. The hand-washing facility and toilet should be attached to the ultrasound room. Immunization clinic with waiting room having an area of 3 m × 4 m and cold chain facility in Maternity Wing/Paediatric Clinic should be provided.

7. Adolescent Friendly Health Clinic

A dedicated room should be available specifically for the adolescent population entailing a whole gamut of clinical and counselling services on diverse adolescent health issues ranging from Sexual and Reproductive Health (SRH) to Nutrition, Substance Abuse, Injuries and Violence (including Gender-based violence), NCDs, and Mental Health issues at various levels of health care facilities. The room should have pleasent ambiance, adolecents friendly environment and must be designed in a way that it ensures privacy and confidentiality. It should have the provision of space for adolescent counselling and space also to keep necessary commodities and equipment.

8. Counselling room

A dedicated room should be available for counselling services on diverse health issues at various levels of health care facilities. The room should be designed in a way that enables both interpersonal and group counselling as and when required. Integrated counselling should be done and the design of the room should ensure privacy and confidentiality. It should have the provision of space to keep necessary commodities and equipment.

9. Sound treated room for audiometry

A sound-treated room to perform audiometry should be placed in/near the OPD complex. There should be cavity walls filled with sound insulation material in the room. The inside of the cubicle should not be less than 8ft x 8 ft and have acoustic treatment on wall and ceiling. Sound absorbent flooring should be ensured. The room should be airconditioned. A sound treated door for the main entry of 750 mm width and double glass window of at least 2ft x 2 ft thickness should be provisioned.

10. PFT/ECG room

Separate rooms for procedures such as PFT, ECG and/or other diagnostics should be provisioned with enough space to accommodate equipment, changing room (if required), sub-waiting area etc.

11. Health and Wellness room

The health and wellness room is ideally a platform for community interaction for all health education and promotional activities. The room should be provisioned with adequate space to accommodate 18-20 persons and facilities to conduct yoga, group counselling sessions on health, nutrition, adolescent and other health promotional activities. The room should be equipped with training, audio-visual and IEC material. The primary objective of this room is not to provide curative services but to provide preventive and promotive care. Ideally, Family Medicine Specialist can be in-charge of this room.

12. Integrated Clinical and Public Health Laboratory

The laboratory should be located such that, it has easy access to Emergency, Critical Care service areas, IPD as well as OPD patients. Routine lab services should be available during the daytime (general working hours) whereas emergency lab services should be functional round the clock (24x7). Both general and out of hours laboratory services (emergency services, critical care services) should be provided from one central laboratory. The design/workflow of the laboratory should conform to the layout plan of Integrated Public Health Lab (IPHL).

The layout of the lab should ensure logical flow of specimens from receipt to disposal. Zoning should clearly identify areas i.e. testing for routine, emergency and critical care cases.

There must also be demarcated areas for collection and delivery of reports, sample collection, sample processing, haematology, biochemistry, pathology, and microbiology.

The processing areas of the laboratory do not necessarily have to be accessible to patients but the collection point for specimens must be conveniently located, especially for ambulatory patients. The collection point must provide space for patient reception, registration, waiting for the area, and toilet facility. There should be an adequate specimen collection area for blood, urine, and faeces. Hatch windows may be provided through which the specimens can be passed.

The Laboratory should have adequate space from the point of view of workload as well as maintenance of cleanliness and hygiene to prevent cross-contamination and infections. A minimum area of 150 m^2 is suggested for a lab load with 100 collections. This may be scaled up as per requirement. The design should help in implementing the "Single Prick Policy" i.e. Irrespective of the number of tests or location of the testing labs, the blood sample of a patient would be taken only once, at the first point of contact. The laboratory area should not be a thoroughfare and various testing areas should be clearly marked. The layout should ensure the logical flow of specimens from receipt to disposal zone. Proper zoning with clearly marked areas of restricted access while ensuring efficient functioning of the lab i.e. testing for routine, emergency, and critical care cases; demarcated areas for collection and delivery of reports, sample collection, sample processing, hematology, biochemistry, pathology, microbiology, an area for public health investigations and reporting should be ensured. The microbiology section may be located farthest from the reception area to isolate the biohazards activities from other procedures.

The table top should be acid and alkali proof. There should be provision for safety, including eye flushing devices, emergency shower and fire extinguishers. The drainage system of work areas where highly corrosive liquids are used should consist of glass-lined iron traps and pipes. Counter sinks for handwashing should be provided. Chemical and stain-resistant materials should be used for laboratory work. Storage space should be adequate to facilitate storage for refrigeration, reagents and supplies, maintenance of patient records with separate storage space for inflammable items. Vented Storage for volatile solvents should be provided.

The laboratory should be cleaned regularly including at the beginning and end of the day and at times of spill. The use of personal protective equipment (apron, gloves, mask) and scrupulous attention to hand hygiene must be adhered to as per the Guideline document that indicates the design of BSL 2 labs which should be referred to for further details.

The guidelines on Integrated Public Health Laboratories (2022) should be referred for further details.

13. Medical Imaging

Imaging services should be located in a place that is accessible to both OPD and wards and also to the emergency and operation theatre complex. It is essential to install digital imaging facility at all health care facilities which are installing new system. Except the functional equipment, all old condemned equipment must be replaced. The room housing imaging equipment should have an appropriate area to facilitate easy movement of staff and proper patient positioning. The room should have a sub-waiting area with a toilet and change room facility.

Appropriate structural shielding should be provided for walls, doors, ceilings and floors of the room housing the imaging equipment so that radiation exposures received are kept to the minimum and do not exceed the respective limits for annual effective doses as per directives issued by the Competent Authority. Appropriate overlap of shielding materials should be provided at the joints or discontinuities. Appropriate radiation protection devices such as barriers, aprons, goggles, and thyroid shields should be used during the operation of imaging equipment. These devices should be verified periodically for their shielding adequacy. The requirements for radiation protection devices are as specified in *Chapter 2- AERB guidelines on Medical Diagnostic Radiology*. TLD badges should be provided to all the operators and workers involved during the imaging procedure. During non-working hours, TLD cards must be stored along with a Control TLD card outside the X-ray room (in a radiation-free area).

In Medical imaging services, requirements for radiation protection devices are as specified in Appendix-II of AERB guideline.

TLD badges should be provided to all the operators and workers involved during imaging procedure.

The control console of equipment should be installed in a separate room located outside but adjoining to the room and provided with appropriate shielding, direct viewing and oral communication facilities between the operator and the patient. The gantry and couch should be placed such that it enables the operator to have complete view of the patient from the control room viewing window. In case of the room housing radiography equipment, a chest stand shall be located in the room such that no significant stray radiation reaches the control console/entrance door/and areas of full-time occupancy such that the dose limits are not exceeded.

Mobile X-ray equipment, when used as fixed X-ray equipment, shall comply with all the requirements of those of fixed X-ray installation. The movement of mobile X-ray equipment shall be restricted within the institution for which it is registered. A permanent radiation warning symbol and instructions for pregnant/ likely to be pregnant women shall be placed on the entrance door of the X-ray installation, illustrating that the equipment emits x-radiation.

14. Drug Dispensing Counter

The drug dispensing counter should be located in an area conveniently accessible from all clinics. It should be well ventilated, lit, and spacious with each counter ensuring a minimum space of 15-20 square meter. The number of counters should be as given below in the table. Out of the total number of counters, dedicated counters each for women, elderly, and differently-abled should be provisioned. Storage space should be built for inventory worth consumption in a week. Separate space for storage of temperature-sensitive, narcotic drugs should also be ensured. There should be a computerised system for receiving, inspecting, storing, and dispensing drugs. Principles for effective storage of drugs such as first expiry first out (FEFO), checking of pilferage, date of expiry and pest and rodent control should be in place.

Type of Hospital	SDH 100 beds	DH 50 beds	DH 100 beds	DH 200 beds	DH 300 beds	DH 400 beds	DH 500 beds
Number of Counters	3	3	3	4	4	6	6

15. Emergency Care

The emergency wing of a district hospital should be comprehensively created to meet the emergency needs and management of medical, surgical, accidental, burn, and trauma cases. Every DH should have a separate burn unit and all burn cases should directly go there. Similarly, obstetric emergencies should go directly to Labour Delivery Recovery Complex while neonatal emergencies should go directly to SNCU. Polytrauma cases will be directed to the Polytrauma unit (demarcated in larger facilities – 400-500 bed DH). If such units are not available, all these cases will also report to Emergency. The design/workflow of the Emergency

should conform to the layout plan as per *"Operational and Technical Guidelines on Emergency Services at District Hospitals".*

- The emergency wing should be planned to keep in mind easy accessibility and quick response.
- Emergency service provision through adequately trained human resources for health should be available round-the-clock.
- It should preferably have a distinct entry independent of OPD main entry so that minimum time is lost in attending to cases that need resuscitation and also to others requiring emergency management. There should be easy approach and access for ambulances with adequate space for the free passage of vehicles and a covered area for alighting patients.
- Stretchers, wheelchairs, and trolleys should be available at the entrance of the emergency at a designated area.
- Lay out should be such that it follows the functional flow for clinical management of the patient.
- Signage of emergency should be displayed at the entry of the hospital with additional signage at key points.
- The Emergency should have a dedicated triage and four clinical management zones (red, yellow, green, black). The triage area should have dedicated space with wall-mounted multipara monitors and medical gas outlets.
- Emergency beds earmarked for different zones should be there as given in the table below:

Type of Hospital	SDH 100 beds	DH 50 beds	DH 100 beds	DH 200 beds	DH 300 beds	DH 400 beds	DH 500 beds
Red Zone	**3**	**2**	**3**	**5**	**6**	**10**	**10**
Yellow Zone	**5**	**2**	**5**	**10**	**12**	**15**	**20**
Isolation Beds	**1**	**1**	**1**	**2**	**2**	**4**	**4**
Pediatric Beds	**2**	**2**	**2**	**4**	**6**	**8**	**10**
Total Number of Emergency Beds	*11*	*7*	*11*	*21*	*26*	*37*	*44*

Separate areas for registration and drug dispensation for patients should be earmarked.

- Separate provision for examination of gender-based violence victims should be made available in the emergency as per GoI guidelines. Provisions for privacy and confidentiality must be maintained.
  - ➢ A separate area for medico-legal cases should be identified.
  - ➢ Duty rooms for doctors/nurses/allied health professionals should be available.
- Sufficient separate waiting areas and public amenities for patients and relatives should be available and located in such a way that it does not disturb the effective functioning of the emergency department.
- The emergency area should have close linkages with the emergency OT, procedure room, dressing room, plaster room, lab and radiology services, and critical care areas (HDU/ICU). There should be ready access to vital diagnostic and supportive equipment such as ECG, Pulse Oximeter, Cardiac Monitor with Defibrillator, and Multipara Monitor.
- An open space equipped with multiple electrical plug points for placing equipment should be earm arked for disaster preparedness. Multiple points should also be available for oxygen and suction apparatus to be used during disasters.

- All the points should be checked every fortnight for their functionality and a record for this should be available with the emergency in charge.
- The hospital should also designate a nodal officer, preferably the casualty/emergency in charge who will ensure that all required actions are taken to implement the disaster management plan for managing unforeseen incidences.
- Regular monitoring must be done to ensure availability of buffer stock of various consumables and their periodic replenishment, training of various stakeholders such as doctors, allied health professionals, and security personnel, mock drills including inter-departmental drills, adequate human resources for health, and rapidly available ambulance services.
- Two isolation beds should be identified for potentially infectious patients.
- Two to four paediatric beds (in red and yellow zones) should be demarcated.

The Emergency area should have close linkages with the emergency OT, procedure room, dressing room, plaster room, lab and radiology services and critical care areas (HDU/ ICU). There should be ready access to vital diagnostic and supportive equipment such as ECG, Pulse Oximeter, Cardiac Monitor with Defibrillator, and Multipara Monitor.

Figure Flow of patients in an Emergency

16. Burn Unit

Burn Unit in a district hospital should preferably be located in a quiet environment, free from noise and other disturbances, contamination, and possible cross-infection. It should have the following number of beds:

Type of Hospital	SDH 100 beds	DH 50 beds	DH 100 beds	DH 200 beds	DH 300 beds	DH 400 beds	DH 500 beds
Number of Beds	6(D)	3(E)	6(E)	6(E)	6(E)	10(E)	10(E)

A 3 bedded unit would have 2 beds in ward and one bed earmarked for acute care, six-bedded unit consists of 4 beds in a ward and 2 beds earmarked for acute care and 10 bedded unit 4 should be marked for acute care. A sub-waiting area with client-friendly amenities should be made available. In order to prevent infection, zoning protocols should be adhered to. Provisions for body wash/shower facilities, rehabilitation, and dressing, air conditioning with regular air exchange should be ensured.

17. Dialysis Unit

The dialysis station should be designed to provide an adequate space area and safe treatment as well as to ensure the privacy of patients. An area of 120 sq. ft. per machine should be provided. The nursing station should be located in an area that allows adequate surveillance of patients on haemodialysis machines. The facilities such as observation rooms, recovery rooms, isolation rooms, RO room should be provisioned. There should also be a designated area for continuous ambulatory peritoneal dialysis (CAPD) training for the patient and her/his family member. The number of dialysis machines required at different levels of District Hospitals are as under:

Type of Hospital	SDH 100 beds	DH 50 beds	DH 100 beds	DH 200 beds	DH 300 beds	DH 400 beds	DH 500 beds
Number of Dialysis Beds	4	4	4	4	8	8	8
Isolation Units	1	1	1	1	2	2	2

18. Critical Care

Critically ill patients requiring highly skilled lifesaving medical aid and nursing care will be admitted here. This will include the continuing management of major surgical, medical cases, severe injuries, head injuries, severe haemorrhage, acute coronary occlusion, kidney, and respiratory catastrophe, poisoning, etc.

Generally, HDU beds are for patients which do not require invasive ventilation where any specialist can monitor and manage their condition. ICU beds are for patients whose lives are in danger, requiring ventilator support with backup for super and multispecialty care. An isolated area for immunocompromised patients with regulated air pressure should also be made available. So, every DH should have a hybrid critical care area (HDU +ICU) with both ventilatory and non-ventilatory beds. Ideally creation of a hybrid model having both HDU and ICU beds helps in optimal utilisation of HR and other resources. The number of critical care beds to be provisioned for at different levels of facilities are as under table:

HDU beds are for patients with single organ failure where any specialist can monitor and manage.

ICU beds are for patients with multiple organ failure and life is eminently at threat requiring ventilator support.

Type of Hospital	SDH 100 beds	DH 50 beds	DH 100 beds	DH 200 beds	DH 300 beds	DH 400 beds	DH 500 beds
General HDU beds	4	4	4	5	6	8	8
General ICU beds	-	-	-	3	4	4	4
General Isolation bed	1	1	1	1	2	2	2
Paediatric HDU beds	2	-	2	2	4	4	6

Type of Hospital	SDH 100 beds	DH 50 beds	DH 100 beds	DH 200 beds	DH 300 beds	DH 400 beds	DH 500 beds
Paediatric ICU beds	-	-	-	1	2	2	3
Obstetric HDU beds	6	-	6	7	7	8	10
Obstetric ICU beds	2	-	2	2	4	6	6
Isolation unit	1	-	1	1	1	2	2
Polytrauma Unit beds	-	-	-	-	-	4	4
Total Number of Beds	**16**	**5**	**16**	**22**	**30**	**40**	**45**

This unit should be located close to the operation theatre complex and other related departments such as imaging and laboratory so that the staff and ancillaries could be shared. Easy and convenient access from the emergency department is also Essential. The nursing station must be placed in a way that the patients are visible from the station. The unit will also need other specialised services such as piped suction and medical gas supply, uninterrupted electric supply, heating, ventilation, and air handling unit. The room should be sound treated and air-conditioned with facilities of environmental control for each room. Heating, Ventilation and Air conditioning system (HVAC) should be such that 10-12 Air Changes Per Hour (ACPH) with 4 – 5 fresh air changes can be provided in the unit. AHU should be equipped with fine filters and continuous air circulation system (24 x 7). A Temperature of about 23 ± 2^{0}C and Relative Humidity of 45-65% throughout the year should be maintained inside ICU/HDU. Ceilings, flooring, and walls should be constructed of materials with high sound absorption capabilities. The recommended noise level should be in the range of 35-50 decibels. Facility for the exhaust to eliminate any odour should be made available. For further details, *'Operational guidelines for HDU/ICU at a District Hospital'* can be referred to. Space requirements for each type of bed are as follows:

The room for Hybrid HDU/ICU should be sound treated and air-conditioned with facilities of environmental control for each room.

Air-conditioning should ensure 45 -65% humidity, and 23±2^{0}C temperature.

Ceilings, flooring and walls should be constructed of materials with high sound adsorption capabilities. The recommended noise level should be in the range of 35-50 decibels.

There should be 10-12 air changes per hour and positive air pressure maintained.

Type of bed	Floor space per bed	Space between head-end and wall	Space between Foot end and wall	Space between the centre of two adjacent beds
ICU bed	25-30 m^2	0.9 m	1.2 m	3.5 m
Paediatric ICU bed	12 m^2			
HDU bed	20-24 m^2			

19. Operation Theatre Complex

The location of Operation Theatre Complex should be in a quiet environment, free from noise and other disturbances, contamination, and possible cross-infection. Close linkages with the surgical ward, high dependency/ICU, imaging, laboratory, blood bank/storage unit, CSSD/TSSU, and mechanised laundry should be ensured. This unit also needs constant specialised services such as piped suction and medical gas supply, electric supply, heating, air-conditioning (air handling unit), ventilation, and efficient lift service, if the theatres are located on upper floors. Ductless air handling units should be preferred.

Zoning should be maintained to keep the theatres free from microorganisms. There should be four well-defined zones of varying degrees of cleanliness/asepsis 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 Complex should also have a Reception, Pre-operative Room, and Post-Operative Resting Room. The operating room should be made dust-proof. **The temperature should be maintained at 21 + 3 degrees Celsius inside the theatre at all times. Corresponding relative humidity should be between 50-60%. Ideally, 20 air exchanges, and out of these, four should be fresh air exchanges per hour.** Appropriate devices should be installed inside the OT to monitor and display these conditions.

OT Complex should have close linkages with the surgical ward, high dependency/intensive care unit, imaging, laboratory, blood bank/storage unit, CSSD/TSSU and Mechanised Laundry

Also needs constant specialized services such as piped suction and medical gas supply, electric supply, heating, air-conditioning

Following parameters needs to be assessed and monitored regularly to ensure effective management of OT complex:

- Temperature, humidity inside the OT
- Differential pressure inside and outside OT
- Maintenance record of Air Handling Unit, frequency of air exchange per hour and cleaning its filter
- Last HEPA filtration report and HEPA validation report

There should also be a scrub-up room where the operating team washes and scrubs their hands and arms. A pair of surgeon's sinks and elbow or knee operated taps are Essential in the scrub area. There should be a trolley change area for shifting the patient from protective to clean and from clean to the sterile zone. **Laminar flow should be maintained in the operation theatre. It should have a single leaf door with a self-closing device and a viewing window for communication.** The Operation Theatre Complex should also have a Sub-Sterilizing Unit (TSSU) attached to the operation theatre limiting its role to cleaning of surgical instruments on an emergency basis only. There should be a storage room to keep functional equipment. This will ensure adequate space inside the theatre. A separate documentation room and pantry for staff are also desirable.

Theatre refuses, such as dirty linen, used instruments and other disposable/non-disposable items should be removed in separate zipped bags to a designated room (dirty utility room) after each surgery via hatch box and dirty utility corridor. Non-disposable instruments after an initial wash are given back for instrument sterilization and the rest of the disposable items are disposed of and destroyed. Dirty linen is sent to the laundry through a separate exit/dumb waiter. This room should be provided with a sink, slop sink, workbench, and draining boards. A separate room for trolley wash is also to be provisioned. For further details, 'Operational guidelines for Operation Theatre at a District Hospital' can be referred to.

Table: Number of Operation Theatres in an OT complex:

Type of Hospital	SDH 100 beds	DH 50 beds	DH 100 beds	DH 200 beds	DH 300 beds	DH 400 beds	DH 500 beds
Emergency	1	1	1	1	1	1	1
Obstetrics and Gynaecology	1		1	1	1	1	1
General				1	1	1	1

Type of Hospital	SDH 100 beds	DH 50 beds	DH 100 beds	DH 200 beds	DH 300 beds	DH 400 beds	DH 500 beds
Eye	1	1	1	1	1	1	1
Orthopaedics	-	-	-	-	1	1	1
Total	**3**	**2**	**3**	**4**	**5**	**5**	**5**

20. Labour room complex

Since the country has achieved more than 90% institutional deliveries, the focus is now to achieve quality in the delivery of MCH services. Respectful maternity care emphasises the need for women to be treated with dignity and respect. The Labour Delivery Recovery (LDR)design model ensures respectful maternity care by accommodating the birthing process from labour through delivery and recovery of mother and baby in one suite. The patient is moved from this suite only in case of complications requiring surgery or after recovery.

Privacy of women must be ensured by having walls between labour beds. Area requirement for one LDR unit (consisting of one labour bed and space for alternate birthing positions) is 225-350 sq. ft. Natural light and views by means of a window are Essential as windows are an important aspect of sensory orientation and psychological well-being of mothers. Lighting in the suite should be dimmable. Darkness spurs the body to produce melatonin, which in turn increases the production of oxytocin. Oxytocin is the hormone that causes the uterus to contract during labour. Thus, to induce unmedicated labour, a conducive environment backed by infrastructural design is Essential.

In the LDR Suite, natural light and views by means of window is Essential Lighting in the suite should be dimmable.

Darkness spurs the body to produce melatonin, which in turn increases the production of oxytocin.

Oxytocin is the hormone that causes uterus to contract during labour. Thus, to induce unmedicated labour,

A conduciveenvironment backed by infrastructuraldesign is Essential.

The suite should be located in the labour room complex near the obstetric operation theatres and preferably on the ground floor. Planning the number of LDR beds required should be based on the estimated number of deliveries in a year in a district out of which currently 50% of such deliveries are occurring at the level of district hospitals while remaining are occurring at the remaining of the public health facilities (SDH, CHC). Taking an average length of stay in the LDR as 12 hours and CBR as 20 for a district, the following number of LDR bed requirements have been estimated:

Type of Hospital	SDH 100 beds	DH 50 beds	DH 100 beds	DH 200 beds	DH 300 beds	DH 400 beds	DH 500 beds
Number of LDR beds	3	3	4	6	10	15	15

While planning Labour Room Complex, it should be considered that any pregnant woman coming for delivery should first be taken to the examining room for quick triaging followed by a detailed examination. This will help the service provider to decide whether the delivery needs care by the midwives or by the Obstetricians/Doctor. Accordingly, she should be transferred either to the midwifery led care unit (MLCU) or to Obstetrician Led Care Unit (OLCU) within the same complex. However, both the units will have LDRs as explained above. Some of the other important points for consideration of a Labour room complex are:

- It should not be a thoroughfare and have provisions to change footwear at the entry.
- A dedicated triage space should be ensured.
- The unit should be airconditioned with an attached toilet with each labour bed. Drinking water and hot water facilities should be available.

- Separate areas for dirty linen and decontamination should be clearly demarcated.
- Other facilities such as Doctors Duty Room, Nursing Station, Staff changing room, Store with the capacity to keep consumption worth not more than one week should be provisioned.
- Cleanliness shall always be maintained by regular washing and mopping with disinfectants and should be done after every delivery. Close linkages with CSSD and mechanised laundry to be adhered to ensure autoclaved delivery kits and other instruments.
- The area should be away from the draught of air and should have a power connection for plugging in the radiant warmer. A clear floor area should be provided in the room for the newborn corner. It is a space within the labour room, (20-30 sq. ft in size), where a functional radiant warmer is present.

21. Special New-born Care Unit & Mother and New-born Care Unit

Special New-born Care Unit (SNCU) is a neonatal unit that will provide special care (all care except major surgery) for sick newborns. Along with SNCU, certain beds will be designated as **neonatal intensive care** beds (NICU) for assisted ventilation. In addition to this unit, a **ward for mothers and babies to stay together – Mother and New-born Care Unit** (MNCU) should also be provided which should not be less than SNCU beds. Adjustable beds to facilitate kangaroo mother care should be made available in the MNCU.

The location of the unit should be in a quiet environment, free from noise and other disturbances, contamination, and possible cross-infection. Close linkages with the labour room complex, nutritional rehabilitation centre, and district early intervention centre should be ensured. The unit should comprise of **Triage and Reception area** for receiving cases and assessing in the triage area. A **Waiting Area** in front of MNCU with simple amenities like comfortable sitting space, safe drinking water, AV system, Tea/Coffee vending machine, and a washroom for the parents or attendants should be provided. **Follow up area** to be provisioned for with AV facilities and adequate space for daily counselling, during discharge and imparting Family Participatory Care (FPC) training. Additional handwashing facilities within the SNCU, mother's area, and feeding room will help in ensuring handwashing before handling the newborn. 'Facility-Based Newborn Care – Operational Guidelines' and 'Concept Note- MNCU' can be referred to for further details.

The number of beds required in SNCU and MNCU is given as under:

Type of Hospital	SDH 100 beds	DH 50 beds	DH 100 beds	DH 200 beds	DH 300 beds	DH 400 beds	DH 500 beds
Number of SNCU beds	12	6	12	16	20	24	24
Number of beds with assisted ventilation (NICU)	-	-	4	4	6	6	8
Number of beds in mother's ward (MNCU)	12	6	12	30	39	45	48

22. DEIC: District Early Intervention Centre

Developmental impairment is a common problem in children's health that occurs in approximately 10% of the childhood population and even more among "at-risk" children discharged from the sick newborn care unit. The idea behind the early intervention is to intervene early and minimise disability. Research has proved that the period from birth to 6 years is the most critical year for all children. Once the disability is already established then the intervention would include enhancement of child development for the child to reach the highest potential and prevent progression to handicap that may arise from activity limitation.

Research has proved that the period from birth to 6 years are the most critical years for all children.

After screening and identification of any of the 4Ds i.e. Defects at Birth, Deficiencies, Diseases and Developmental delays including disabilities, the cases get referred to the DEIC

Developmental intervention requires an interdisciplinary approach of a multidisciplinary team placed under one roof. After screening and identification of any of the 4Ds i.e., Defects at Birth, Deficiencies, Diseases and Developmental delays including disabilities, the cases referred to DEIC will be assessed, investigated, evaluated, planned and executed in a comprehensive manner. "*Operational Guidelines on DEIC"* can be referred to for further details.

DEIC should comprise of the following space/rooms (ideal size of DEIC would be approx. 4900-5000 sq. feet):

- Waiting space
- Play/therapy area
- Reception space for Registration including anthropometry
- Paediatrician and Medical officer room
- Dental examination room (Dental Doctor/Dental technician)
- Vision testing room
- Hearing testing room: soundproof room having two partitions -One smaller and separated by one-way looking glass with carpeted and double doors
- Speech room with looking mirror extending from the floor to one and a half feet above the level of the table
- Early intervention room cum occupational therapy room
- Psychological testing room
- Laboratory
- Nursing/nutrition room cum Feeding room
- Sensory integration room
- ECG cum Echo room
- Computer room (Manager/DEO) including Store
- Pantry and space for drinking water and washing
- Toilets (gender based, staff - all equipped with facilities for handicapped)
- Open space
- Outer sensory garden (Desirable)

23. Nutritional Rehabilitation Centre (NRC)

Nutrition Rehabilitation Centre (NRC) is a unit in a health facility where sick children with Severe Acute Malnutrition (SAM) are admitted and managed. Children are admitted as per the defined admission criteria and provided with medical and nutritional therapeutic care. It should comprise of following areas:

- Reception
- Play Area
- Counselling Area
- Nursing Station
- Kitchen with cooking demonstration aids
- Store
- Toilets

Table: The number of NRC beds at different levels of facilities

Type of Hospital	SDH 100 beds	DH 50 beds	DH 100 beds	DH 200 beds	DH 300 beds	DH 400 beds	DH 500 beds
Number of NRC beds	10(D)	6(D)	10 (E)	15(E)	20(E)	30(E)	30(E)

24. Inpatient wards

Given below is an indicative requirement of general in-patient beds in a district hospital. However, the requirement of beds indicated here is only suggestive. The administration and RKS of the district hospital should take the final call on the exact distribution of beds per speciality based on the district's local epidemiology and burden of disease, resources available, time to care approach, community requirements, and the health-seeking behaviour of the population. Ideally, all the wards should be situated in close proximity to each other and away from congested places. Linkages should be established with OT, critical care, LDR complex, Emergency and OPD.

Service Area	*Sub District Hospital*	*District hospital*					
	100 beds	50 beds	100 beds	200 beds	300 beds	400 beds	500 beds
Inpatient Services							
Beds including: **Surgery, Medicine, ObGyn, Paediatrics, Orthopaedics, Eye, Geriatric/Palliative, Mental**	55	33	35	90	150	210	300
Isolation				8 beds	8 beds	10 beds	10 beds
Prison ward/Beds				4 beds	5 beds	5 beds	5 beds
Burn ward/Beds	6* beds	3 Beds	6 Beds	6 beds	6 beds	10 beds	10 beds
Private Ward/Beds	5 beds	-	5 beds	5 beds	16 beds	20 beds	20 beds
Day Care Beds	4 beds	4 beds	6 beds	8 beds	10 beds	10 beds	15 beds

***Desirable**

For larger facilities, a typical ward would accommodate about 30 patients, although flexibility will be needed to factor in local requirements while determining ward size. The beds should be placed either on one side or both sides of a nursing station ensuring good visibility and ventilation. Wherever possible, segregation of beds based on gender to maintain dignity and ensure privacy (with access to separate toilets and bathing spaces) should be ensured. Toilets should be conveniently located. Security arrangements should be adequate and appropriate, for example, female security guards for female and maternity wards.

Every ward should have a procedure room, a small store that can accommodate supplies of drugs and linen for five to seven days, a pantry and a janitors/housekeeping room. A changing room will help ensure the privacy and dignity of patients. All beds in the ward should have a wall fitted cupboard for the patient's belongings. Call bells with switches for all beds should be provided in all types of wards with indicator lights and with the location indicator situated in the nurse's duty room.

In every ward, one-third of the beds should be demarcated with a separate port for oxygen, suction and air so that patients can be provided emergency or short-term support.

Apart from general wards, certain beds for patients should be demarcated for isolation. The number will depend on the total number of beds in the district hospital. The table depicting the number of isolation beds is given above. The isolation rooms should be separated from general wards, have negative air pressure and at least 6 air changes per hour. Only Essential personnel should enter such rooms with standard infection control precautions. These include basic hand hygiene, use of PPE, respiratory etiquettes, and environmental disinfection. Dedicated or disposable equipment should be used. If equipment is to be used for more than one patient, it should be cleaned and disinfected before use on another patient.

Any patient who requires observation for a few hours after undergoing certain clinical procedures may require to be admitted temporarily to daycare beds. Procedures like PHACO, chemotherapy, IV sucrose administration, etc. may require admission in daycare rooms.

A system of visitor passes may be used in busy areas such as Emergency and critical care areas to control the flow of hospital traffic. Visiting hours forwards/indoors and critical care areas should be clearly displayed and adhered to.

25. Communication systems

A 24/7 working telephone line for both incoming and outgoing calls should be available at public health facilities. Information about the facility in terms of OPD hours, lab/imaging services, speciality clinics, ambulance services, national and state programmes/schemes, and other information as mentioned in Citizen Charter should be available to the public through this channel. Besides telephone and mobile networks, web facilities can also be used.

Internal communication systems through either the telephone line or wireless services for connecting departments such as Emergency, Labs, Imaging, Wards, OT, Kitchen, Laundry, CSSD, administration etc. should be established.

Wireless services with police assistance and priority communication networks with the collector should be installed so that they can be used in emergencies. A 24/7 communication room should be present with linkages to ambulance services for emergency preparedness and any state centralised health call centre(s). Besides telephone and mobile networks, web facilities can be used for both routine and emergency communication. Communication plan during times of emergency should be a part of the disaster management plan. Training of staff through orientation, mock-drills, regular supervision should be done on a regular basis.

26. Record keeping room

Every facility should have space clearly earmarked for keeping necessary records and registers, inventories and records of financial accounts. A proper system of collection, sorting, filing, indexing and storage of documents along with quick retrieval should be designed for effective and efficient record keeping management. In light of the Right to Information Act 2005, it is also a mandatory requirement.

In light of the Right to Information Act 2005 in the health facilities a proper system of collection, sorting, filing, indexing and storage of documents along with quick retrieval should be designed for effective and efficient record keeping management

The room should be spacious, well ventilated, and have adequate protection from pests and rodents. It may be prudent to have air-conditioning so as to control humidity and improve comfort levels. The walls, floors and ceiling should be leak and seepage proof, especially in the storage portion. Compactor system for storage areas effectively increases the storage space as compared to conventional racks. Fire sprinklers and smoke detector systems must be installed as a safeguard against fire. Sewerage systems from toilets should be away from storage areas, so as to prevent accidental seepage in walls.

Digitization of records wherever possible should be done while adhering to the data security guidelines of GoI.

27. Store-room

The usual practice of storing large quantities of commodities and supplies in every service area is a wrong trend. This compromises the space needed for the delivery of clinical services and maintaining infection prevention protocols in various service areas.

Health facilities should have adequate and spacious stores located away from patient traffic with facilities for storing drugs, consumables, linen, furniture, equipment, and sundry articles. Based on the nature and number of items, the main store may be divided into sub-stores such as medical and drug stores, surgical stores, furniture, and equipment, general, linen, and stationery stores.

Stores should be designed in such a way that spoilage, damage and other losses are minimized. Compactor system as compared to conventional racks may be used. Buffer stocks should be kept in separate spaces or cupboards in the drug store and basic principles like 'first expiry, first out' for drugs and vaccines should be followed. Stored materials should be periodically inspected. Dunnage, to prevent moisture, termite, and insects passing up the material, should be 45 cm high for outside stacks built on the ground, and 30 cm high for stacks on floors. Depending on the volume of items requiring temperature control during storage, an adequate number of refrigerators/walk-in coolers should be available. A separate inspection and stock holding section/area should be provisioned for so that there is no chance of mixing old and new stocks.

28. Knowledge hub

District hospitals should aim to be developed as knowledge hubs in order to enhance the quality of health workers' education and training. The objective of decentralising healthcare education and developing such knowledge hubs at district hospitals is to address the severe shortage of educational infrastructure. It also ensures competency-based training to meet the health needs of local communities. Thus, infrastructure for conducting medical, nursing, and allied health teaching and training as based on their respective curriculum requirements should be developed. The infrastructure for the knowledge hub at a district hospital includes the below-mentioned areas. The area and structural requirements would be as per *"District Hospital Strengthning" guidelines.*

- Medical courses (DNB) including Teaching/Seminar rooms, Faculty room/Staff Room, Library (with internet facility), Hostel, Canteen/Pantry etc.
- Skill Lab
- Training for Allied Health Professionals
- B.Sc. Nursing Schools & Post Nursing specialities.

29. Administrative unit

Administrative block with the provision of the Medical Superintendents Office and the following areas should be provided:

- Office including administrative rooms for MS, Nursing I/c, Hospital Manager.
- Meeting Hall
- Record Room
- Staff Room/cubicles including Establishment and Accounts (number to be based on number of administrative staff)
- Pantry

The administrative unit/block should be located on the top floor of the main hospital building and away from clinical areas, wherever feasible.

7.1.2. Other Support Services

7.1.2.1. Blood Bank& Blood Storage Units

District hospitals should have blood banks while Sub District hospitals should have Blood Storage Units (BSUs)as per GoI guidelines. The blood storage units should have a minimum area of ten square meters.

The Blood bank should be in close proximity to the laboratory and at an accessible distance from the OT complex, ICU, and emergency department. Blood bank should be functional round the clock (24x7). It should follow existing guidelines and fulfill all requirements of the various Acts pertaining to the setting up of the Blood Bank.

The blood bank should be located at a place away from open sewerage, drain, public lavatory or similar unhygienic surroundings. It should be well-lit, ventilated and screened (mesh) to avoid entry of insects, rodents and flies whenever necessary. The walls and floors of the rooms where the collection of blood or preparation of blood components or blood products is carried out should be smooth, washable, and capable of being kept clean. Drains should be of adequate size and connected with ETP. The ergonomics of the workbenches, cabinets, and stools, chairs should be such that the staff does not have to work in awkward postures such as reaching overhead, twisting, bending too often, kneeling, or squatting.

The blood bank should have proper signage and restricted area demarcation for the safety of staff, donors, patients, and others. It should have the following areas demarcated to provide the scope of services as per regulatory requirements.

- Registration and medical examination with adequate furniture and facilities for registration, waiting and selection of donors
- Donor motivation and Counselling area
- Blood collection (air-conditioned)
- Refreshment-cum-restroom (air-conditioned)
- Laboratory for blood transmissible disease like hepatitis, syphilis, malaria, HIV antibodies (air-conditioned)
- Blood component preparation. (This shall be air-conditioned to maintain the temperature between 20 to 25 degrees C, with a provision of quarantine area/equipment
- Laboratory for blood group serology (air-conditioned),
- Sterilization-cum-washing (to be linked with CSSD and mechanized laundry)
- Store-cum-record room
- Blood bag refrigerators with real-time temperature monitoring devices

Blood Storage Units situated at SDH should have a minimum area of 10 square meters. It should be well lit, clean and air-conditioned. The access to BSU area should be restricted to blood storage staff and should not be a thoroughfare. There should be clearly demarcated areas with adequate space for sample receiving, blood grouping, red cell antibody screening (Coombs Test), issue of blood, blood/component storage and documentation for each process, to prevent overcrowding. The doors, frames, casework, and benchtops shall be of non-absorptive, non-fibrous, and non-corrosive material (the use of organic material such as wood is to be avoided). The edges of the benchtops should be able to contain spills of liquids by having marine edges or drip stops. Benches, doors, door handles, drawers and furniture etc., should have rounded rims and corners so as to prevent accidental injury.

7.1.2.2. Centralised Sterile Supply Department

In the developing world, the health care-associated infection rate is 25% or more i.e., 25 infections per 100 patient admissions. As the operation theatre complex is the major consumer of this service, the department should be located within easy and direct access to the OT complex. It should develop and implement SoPs for sterilisation of different items, the complete process cycle, validation of the sterilisation process, labelling, FIFO procedures, calibration and maintenance of instruments, transfer of unsterile and sterile items between CSSD and other departments and recall.

CSSD should have areas including sorting area, cotton & gauze preparation area, cleaning area, ultrasonic cleaning, automated washer/disinfector, preparation and packaging area, labelling and packaging area, autoclave, ETO process area, sterile storage area, change room/scrub room and issue of instruments area. Unidirectional flow should be adhered to.

7.1.2.3. Hospital Laundry

Once the segregated linen reaches the laundry, it should be processed for decontamination, washing, drying, ironing, tailoring (if needed) and storage of clean linen. Mechanised laundry at district hospital is divided into decontamination area (separate for soiled, contaminated and non-contaminated linen), washing area (separate area for dry cleaning), drying/hydro extraction area, ironing/tailor area, sorting area and storage area.

If possible, the Mechanized Laundry should be linked with the CSSD and can be established together to ensure the smooth bi-directional transit of materials used in critical care areas that need to be autoclaved. This however is not a limiting factor for such hospitals where it is established separately. If the workflow is maintained with competency and ensuring quality, the facilities can operationalise these services separately in their existing CSSD and Mechanised Laundry.

'*Operational guidelines on CSSD& Mechanised Laundry at a District Hospital*' can be referred to for further details.

7.1.2.4. Dietary Services

Diet and food offered during hospital stay are an important part of patient-centric services available at the district hospital. Adequate meal consumption to meet patients' dietary requirements is necessary and important to aid in recovery.[2] It is crucial for the hospital team to provide patients with food that is appropriate and aligned to treatment.[3] Patients have the right to ensure their nutritional requirements are met during their stays in hospitals.[4]

Dietary services should be provided at the district and Sub District hospitals by qualified and adequately trained staff. While smaller hospitals may opt outsourcing, however, hospitals with 300 or more beds can have either in house or outsourced dietary services with well defined performance and quality criteria. To ensure quality, it is important to have a systematic and well-structured kitchen with proper zoning and restriction for entry to only authorised persons. Infection prevention and quality control should be properly enforced and monitored by qualified personnel.

The dietary service should be easily accessible from outside (along with vehicular accessibility) and have separate rooms for the dietician and stocking of special diets. It should be located such that the noise and cooking odours from the department do not cause any inconvenience to the other departments. Apart from a normal diet, diabetic, semi solid and liquid diet should be available. Food should be distributed in

[2] *Edwards & Hartwell, 2006; Stanga et al.*

[3] *Huq, 2001; Norton, 2008; Sheehan-Smith, 2006a*

[4] *Beck et al., 2001*

prepacked individual plates in covered containers fitted in trolley. Kitchen food waste should be segregated at source. Quality and quantity of diet should be checked by competent persons on a regular basis. Dietary department should include receiving area, store- dry storage, perishable storage and day care storage, preparation area, packing/loading area, washing area, gas manifold, administrative cum training office.

'*Guidelines for Modern Kitchen and Dietary Services*' can be referred to for further details.

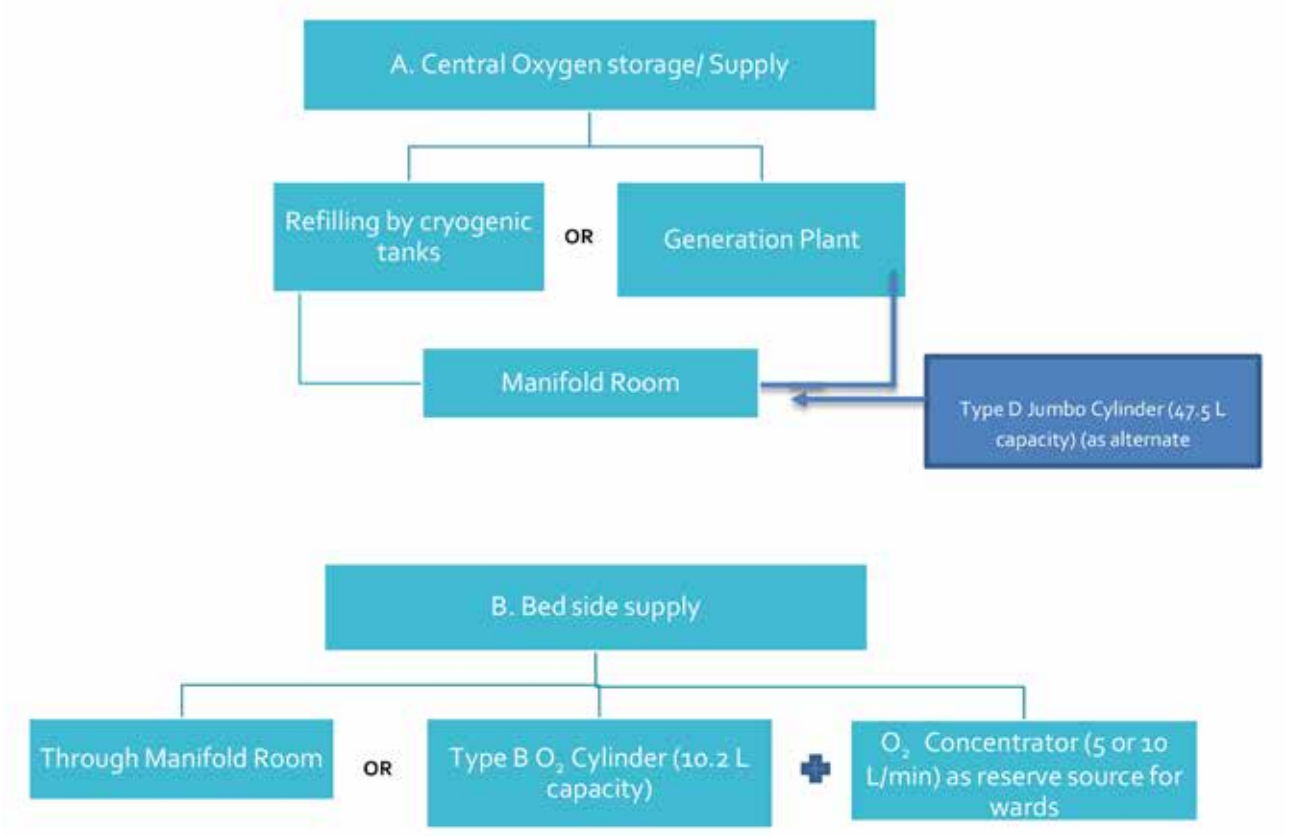
7.1.2.5. Medical Gas Pipeline System

Medical Gas Pipeline System (MGPS) is designed to provide a safe and effective method of delivering medical & anaesthetic gases, vacuum & compressed air from the source of supply to the appropriate terminal unit by means of a pipeline distribution system.

Facilities with more than 50 beds would have MGPS which can be utilized for supply of oxygen from a storage tank or an oxygen generation plant to bed side or critical care units like OT, labour room, emergency and other critical beds.

The Medical gas pipeline system supplies medical gases like oxygen and nitrous oxide and mixtures of gases to different areas of the sub district/district hospital. The supply of oxygen to the hospital can be basically through a storage system or from a generating unit.

Figure: Oxygen storage system



Oxygen generation is through PSA technology[5] which could either be at the bed side (oxygen concentrator) or at the institution level (oxygen generation plant). Storage of oxygen will depend on the capacity of the storing system. e.g., oxygen cylinder (Type D) or liquid oxygen which is supplied through cryogenic tanker etc. The bed side supply would either utilise the oxygen concentrator or oxygen cylinder.

[5] *Pressure swing adsorption (PSA) is a technology used to separate the oxygen from a mixture of gases under pressure according to the species molecular characteristics and affinity for an adsorbent material. The Generator with this technology can produce significantly more oxygen at 90-95.4 % purity.*

Manifold (for medical gases)

A definite area for "*manifold*" will be designated in the facility as per *'Gas cylinder rule 1981, ISO 7396-1:2016 and Indian Explosive Acts, 1984.* Manifold helps by connecting to a Jumbo-sized oxygen cylinder[6] (Type D) which also acts as an alternate and emergency source of oxygen supply in case the generation plant or storage tank (primary source) fails due to any reason.

Manifold should be in a cool, clean area that is constructed of fire-resistant materials. Non-conductive flooring must be present. Adequate ventilation to allow leaking gases to escape, safety labels and separate places for empty and full cylinders to be ensured.

The medical gas pipelines should be made of copper, seamless pipe with flux less silver brazing as per HTM/ ASTM standard and Lloyd's/TUV/SGS certified.

The MGPS final delivery points should be color coded as per HTM02-01/NFPA 99 C/EN (ISO -7391-1)/din standard. Maintenance of oxygen manifold, central pipelines and pressure levels should be monitored by a dedicated team of train manpower to maintain the oxygen supply system at the facility.

[6] *These cylinders are filled at a gas manufacturing plant, either via a cryogenic distillation or a process known as pressure swing adsorption (PSA) and transported to health facilities to be connected to manifold systems.*

Peak oxygen requirement in public health facilities in litres per day							
Sr.No.	**Beds**	**Oxygen supported beds**	**Ventilatory supported beds**	**Oxygen requirement** *(For Oxygen Supported Bedsassuming 10 liters per minute is the requirement of oxygen supported beds) in Litres*	**Oxygen requirement** *(For Ventilatory Supported Bedsassuming 30 liters per minute is the requirement of oxygen on ventilatory supported beds) in Litres*	**Total Oxygen Requirement in litres per day**	**Remarks**
1	**50 bedded DH**	34	2	4,89,600	86,400	5,76,000	(30* Type D Oxygen Cylinder, 15**Type B Oxygen Cylinder, 7** Oxygen Concentrators with 10 Lts capacity) *Oxygen Cylinder bank with Manifold (20X20) Type D Cylinder) for 24 hours depending upon uses and case loads **Reserve Cylinders & Concentrators (PSA Plant/LMO Plant)
2	**100 bedded DH/SDH**	67	9	9,64,800	3,88,800	13,53,600	(40* Type D Oxygen Cylinder, 20**Type B oxygen Cylinder, 10** Oxygen Concentrators with 10 Lts capacity) *Oxygen Cylinder bank with Manifold (20X20) Type D Cylinder) for 24 hours depending upon uses and case loads **Reserve Cylinders & Concentrators (PSA Plant/LMO Plant)
3	**200 bedded DH**	107	15	15,40,800	6,48,000	21,88,800	Manifold room needs to be established as per the local need of the health care facility.
4	**300 bedded DH**	148	22	21,31,200	9,50,400	30,81,600	Manifold room needs to be established as per the local need of the health care facility.

Peak oxygen requirement in public health facilities in litres per day							
Sr.No.	**Beds**	**Oxygen supported beds**	**Ventilatory supported beds**	**Oxygen requirement** *(For Oxygen Supported Bedsassuming 10 liters per minute is the requirement of oxygen supported beds) in Litres*	**Oxygen requirement** *(For Ventilatory Supported Bedsassuming 30 liters per minute is the requirement of oxygen on ventilatory supported beds) in Litres*	**Total Oxygen Requirement in litres per day**	**Remarks**
5	**400 bedded DH**	188	28	27,07,200	12,09,600	39,16,800	Manifold room needs to be established as per the local need of the health care facility.
6	**500 bedded DH**	232	31	33,40,800	13,39,200	46,80,000	Manifold room needs to be established as per the local need of the health care facility.
	Total	**776**	**107**	**1,11,74,400**	**46,22,400**	**1,57,96,800**	

Note regarding Oxygen requirement calculation

1. The State/UT shall refer the D.O.No. 1830290/Immunization/2020; Dtd: 25th September 2020 with subject: Guidelines for Rational Use of Oxygen for Management of COVID-19 for calculating the Oxygen requirement in "*moderate*" and "*severe*" category of patients while planning oxygen requirement, particularly in severe category according to EG-1 recommendation.
2. Calculation is based on the indicative for estimating oxygen requirement by committee of experts constituted by DGHS (DO.No. T-20017/03/2021-NCD (FTS-8110554) dtd: 21st June 2021.
3. Ideally a hospital should have a central oxygen storage (PSA plant and Liquid Medical Oxygen Tank) supplied with medical gas pipeline system. It should be available at the bedside of the patient with Type D oxygen cylinder as alternate emergency/back-up source. Hilly areas and remote places where availability and refilling LMO tank is a constraint, in such places PSA along with oxygen cylinder bank is recommended.
4. The oxygen requirement for each facility shall be calculated with adequate back-up of minimum 24-72 hours. The norms used above caters to 24 hours oxygen supply during the peak of Covid-19, however, the actual requirement may be 40-60% less than the norms used depending upon the case load during non-COVID times for oxygen supported beds. The norms for ICU/ventilatory beds are recommended for 24 hours oxygen supply during non COVID times.
5. The capacity of the PSA plant for installation at higher altitudes areas should be higher than the calculated norms required to cater to the deficiency of oxygen in the atmosphere.
6. For ambulances being served through the National Ambulance Service network with toll-free number, there should be an in-built oxygen capacity. However all standalone ambulances/Patient Transport vehicles should have two Type B (capacity of 1500 litres of oxygen) oxygen cylinders per ambulance.
7. There is a requirement of one flowmeter with pressure regulator per bed for both oxygen supported and ICU beds.
8. A separate dry, well ventilated well-lit room away from the main area should be available for storage of cylinders.
9. Oxygen cylinder refilling should be done with the nearest government facility (if available) or IOL supported facility under MoU/price agreement.

7.1.2.6. Residential Quarters

All the Essential medical staff and allied health professionals should be provided with residential accommodation so that Essential staff is available 24 x 7. In case space is not available on the campus, residential accommodation of critical staff should not be more than 3 kms away from the hospital. Adequate facility for parking, recreational activities, play areas should be provided. The facility of transit accommodation must also be provisioned. For residential accommodation outside the campus, shuttle service for easy commute and to ensure punctuality of staff should be made available.

7.1.2.7. Guest House

This will be important to provide temporary accommodation for relatives and visitors of admitted patients. The guest house should provide clean and must have a separate toilet and bathing facilities. An exclusive cooking area adhering to fire safety norms can be provisioned for. Such a facility can be outsourced through public private partnership (PPP) models. The capital cost can be supported by private partners and they can charge as per the rate fixed by the government from those who are using it.

6.1.2.8. MortuarY

It provides a facility for keeping dead bodies and conducting autopsies. The Mortuary should be located in a separate building on the ground floor and must be easily accessible from any of the wards, Emergency Department and Operation Theatre. It should be located away from general traffic routes used by the public. The post-mortem room should have stainless steel autopsy table with a sink with running water for specimen washing and cleaning and a cupboard for keeping instruments. Proper illumination and air conditioning should be provided in the postmortem room. A separate room for body storage with at least two deep freezers must be made available for preserving bodies. There should be a waiting area for relatives and a space for performing religious rites. Separate rooms for the doctor and documentation would be necessary.

7.1.2.9. Toilets

Gender-sensitive and disable friendly, functional and clean toilets with 24 x 7 facility for running water and flush should be provided. The cleanliness of toilets determines the overall hygiene standards of the hospital. It is important to adhere to infection control measures, keep toilets dry and free of dampness and seepage. Architectural design, location, plumbing, and drainage play a key role in defining the cleanliness of toilets. Being a high source of infection, it is critical that toilets are well maintained and cleaned on a regular basis.

Architectural design, location, plumbing and drainage play a key role in defining the cleanliness of toilets.

7.2. HUMAN RESOURCE FOR HEALTH

For an effective and efficient functioning of a district/Sub District hospital, the mere number of human resources is not enough. It is important that available human resource is motivated, empowered, trained and skilled. Since IPHS 2022 focuses on the services at the forefront, there is need to emphasize on planning of service delivery before investing in other components like infrastructure, human resource, drugs, diagnostics, equipment etc. Services defined above in the document have been categorised as 'Essential' and 'Desirable' and with this reference so have the human resource been categorised in a similar fashion. For Essential services, human resources should be provisioned. The number and type of staff in terms of specialists, GDMOs, nurses, allied health professionals, administrative and support staff has been developed taking into consideration secondary care services and programme requirements.

While planning for human resource, it is important to prioritize in-house hiring of such staff which is required for rendering clinical services (eg Specialists, GDMOs, Nurses, Technicians, etc) rather than those whose services can be outsourced like Security guard, data entry operators and other group-IV employees. The IPHS norms should be looked as standardised norms for achieving Essential services and should aspire to achieve Desirable norms. The norms permit any addition of human resources based on the criteria given under the IPHS guidelines. Apart from this, since health is a dynamic subject, various programmes and schemes when implemented keep on adding human resources. When such programmes/schemes are integrated at the public health facilities, addition of staff shall also be based on the principles & norms defined under IPHS.

IPHS norms for human resources for health at various levels of facilities is a good starting point to identify positions and vacancies, the actual number to be deployed at a particular facility will depend upon certain performance parameters such as time spent by doctors in a day per OPD session, in-patient rounds, emergency cases handled, surgeries performed etc. Similarly, for nurses, the parameters include nurse to patient ratio differential in terms of level of care provided. For allied health professionals, the parameters are based on the amount of work done per shift. Care should be taken that the staff should not be below an agreed critical number. Details are placed in ***Annexure 6.***

It should also be noted that transfer/deputation of staff in less than three years to other specialties/service areas/facilities should be avoided. If there is a need for additional staff, it should be based on the service area's performance against agreed targets and standards. For example, for an additional specialist, 60 patients per doctor per OPD session per day, a 70% bed occupancy rate, at least 10 invasive procedures/four major surgeries per OT session per week of six functional hours are required. Staffing requirements (especially for nursing and allied health professionals) should also include arrangements to cover for leave and holidays.

IPHS 2022 has not calculated leave reserves for any level of staff. However, states have the flexibility to determine their own level of 'leave reserve' to be sanctioned and this additional number of nurses and allied health professionals can be deployed to cover for leave and absences. Leave and Training Reserves of 15% or as per the state rule is recommended for all staff in IPHS.

All posts related to a particular service area must be filled to ensure that it is functional. Induction and specialized training of the entire team prior to posting in a particular speciality/service area should be ensured. Hiring of staff should be for the entire complement of the team for ensuring optimal outcome. For example, an OT, apart from the surgeon and anaesthesiologist, will also include the full complement of nursing staff, allied health professionals and support staff.

Hiring of staff should be for the entire complement of the team for ensuring optimal outcome.

Although every service area in SDH/DH will need all essential staff however, the critical areas like OT, HDU, ICU, LDR, Emergency, SNCU, NICU, PICU etc are such areas where different types and level of HR are complementary to each other and are needed for getting optimal outcome. So, recruitment for these areas should be undertaken with a focus on availability of the core team rather than stand alone HR/Specilaity.

As the workload of a facility increases, the first option should be to deploy existing staff rationally across the district to address the increasing footfall rather than immediately increase infrastructure or HR. Based on gap analysis for the full complement of services, rational deployment of staff should be done. Specialists, LSAS and EmOC trained doctors should not be posted at primary care facilities. Deputations to other facilities are also not encouraged under IPHS. Doing so, will result in the wastage of highly skilled and scarce resources. It also leads to compromise in the delivery of assured quality services. In addition, the ratio of support staff for every department (or where appropriate for every specialist, for example, the number of support staff for a surgeon) should be maintained in accordance with the standards described here to ensure optimum functioning of the health care team. For instance, while posting specialist HR, it needs to be ensured that the team comprising specialists and other staff are also available, otherwise, delivery of expected services may be compromised. E.g., an anaesthesiologist will be required for surgeons to undertake surgery.

In secondary care facilities with a heavy workload, consideration should be given to posting an MBBS Medical Officer with each speciality, especially in critical care areas. States may take a call to provide additional incentives and/or additional points in PG entrance to those MBBS doctors who manage Emergency and critical care services after being adequately trained.

An accurate, timely, reliable and complete Human Resource for Health Policy will provide useful information to make these decisions. Information and monitoring regarding deputation, training, promotion, posting, transfer, leave, suspension, termination and retirement should be utilised for a transparent payment and transfer system. ***The policy backed by an efficient Human Resource Management Information System (HRMIS) can be used for better human resource for health planning and effective utilisation of existing staff***.

MBBS Medical Officers need to support each specialty, especially in critical care areas. This will also help the specialists in devoting more time for specialised care to patients. Simultaneously, GDMOs will benefit by getting better skills in the speciality they are posted. All such MOs should not be given GDMO's duty and transferred elsewhere.

In addition to clinical service providers in specific specialties (General Surgery, Ophthalmology), ***various national health programmes also recommend posting of staff at public health facilities. Such staff have already been considered while calculating the number and type of human resource for health required***. It is pertinent to note here that to ensure delivery of assured comprehensive services, an integrated and rational deployment plan should be adhered to. Isolation and verticality of programmes should be avoided at all levels.

Whenever an administrative post is considered for a doctor/nurse sanctioned to provide a clinical service, the following principles should apply:

- Dedicated time should be set aside and allotted for staff to provide their programme manager/ administrative function – in addition to their clinical duties (example one day/week or 2 hours/day for program activities). This should be factored in when developing performance indicators for staff, during staff appraisals and when assessing work load of the unit (for example, when requesting for additional staff)

Financial and non-financial incentives such as additional weightage for further education (specialist post-graduation training and continued professional development), preferential access to quality education for children and job opportunities for spouses, staff accommodation or house rent allowance, insurance cover and other benefits will greatly facilitate the achievement of IPHS and retention of human resources for health in public health system. Annual performance appraisals based on ToRs developed for each category of staff should be done. Regular health check-up of all categories of staff should be done.

The Human Resources for Health for health and general principles for identifying the number of health workforce under each category recommended for District Hospitals and Sub District Hospitals is described under five broad categories. Some of the key responsibilities and number required of certain. staff is described here. ToRs of all staff at public health facilities as per GoI guidelines should be referred to for detailed job description.

1. Administrative staff
2. Doctors (Medical Officers and Specialists)
3. Allied health professionals
4. Nursing staff
5. Support staff

7.2.1. Administrative staff

- The Medical Superintendent/Civil Surgeon will be responsible for overseeing the general administration and management of the facility
- Nursing supervisors have been calculated based on the following principles:
  - Nursing In Charge for every 30 beds. One each for critical care area, OT, and LDR (for more than 20-bed unit).
  - Assistant Nursing Superintendent for every 10 Nursing In-Charges and atleast one in each DH from 50 to 200 beds.
  - One Deputy Nursing Superintendent for every district hospital having 300 or more beds.
  - One Nursing Superintendent for larger DH having 400 or more beds.
- As there is a shortage of specialists, Programme manager/administrative positions should be considered for managerial staff members so that doctors are free to provide clinical care.
- All district and Sub District hospitals should have one hospital manager. In larger facilities, Assistant Hospital Managers are desirable. While the hospital manager will be responsible for the management

of the entire facility, area-specific supervisors such as the Store Manager, CSSD/Laundry Supervisor have also been provisioned.

- It will also be prudent to link the services of a specialized personle like a civil engineer to oversee infrastructure and civil works at the DH.
- To avoide electric and fire hazards it is important to have a Fire Safety Officer at the facility particularly for the hospitals having 200 or more beds.
- Sanitary Inspector for overall supervision of housekeeping and cleaning staff, monitoring of adherence to infection control protocols, routine pest and rodent control etc. The person appointed will also be responsible for calculation of chlorine requirement, sampling and testing of water, microbiological samples etc.
- Data Entry operators will be needed for specific areas, e.g., one for the Medical Superintendent's office, one for HMIS, one for Diagnostics/Radiology/Blood bank, one for the MCH wing and for paediatric services (DEIC, NRC, SNCU etc.). In addition to this, one each for every registration counter should also be counted. Data entry in other areas can be done by existing staff, e.g., by the technicians in CSSD/laundry or dietician for kitchen services. Apart from data entry operators, training of all staff on computer skills should be done.
- A post for Biomedical Engineer has also been defined in the document to oversee equipment maintenance as per AMC at public health facilities within the district. The engineer will also be responsible for training of technicians on equipment handling and ensuring calibration of equipment.
- Health Information Management Professional/Medical Record Analyst/Medical Record Assistant are required for collection, deficiency checking, coding and indexing, analysis and statistical reporting, filing, numbering, storage and retrieval of records. They are also custodians of medico-legal documentations and responsible for coordinating issue of birth/death/medical certificates and notification of communicable/notifiable disease cases.
- Finance Officer/Accountant will be responsible for maintaining RKS, Treasury route and NHM accounts, audits and timely submission of financial utilisation certificate to concerned authority.
- Receptionist is responsible for informing and guiding visitors on flow and layout of the hospital. They should also help patients/visitors in information about national and state programmes/schemes.
- ***The staff positioned at GR help desk will be responsible for receiving, registering, ensuring immediate assistance and facilitating resolution of grievances.***
- ***The detailed list of administrative staff at Sub District Hospital and District Hospitals is placed in Annexure 6.***

7.2.2. Doctors (specialists and Medical Officers)

- OPD and elective OTs should be conducted six days a week. Emergency and round the clock OTs should be functional on all days. Duties among specialists can be divided between Emergency, OPD and OT days.
- The Emergency services should be led and supervised by a specialist in Emergency Medicine. If such Emergency Medicine specialists are not available then, the supervisor could be an Intensivist/ anaesthesiologist/Medicine specialist or a surgeon. While they will be the over-all in-charge of Emergency Services, clinical service delivery in this Unit will mainly be provided by GDMOs and nurses trained in Emergency care. Paediatric emergency care should be a part of the main Emergency department of the hospital while all neonatal emergencies will directly go to SNCU.
- The number of anaesthesiologists will depend on the number of elective OT(s) and round the clock OTs. They will also be expected to provide clinical supervision and leadership for service provision in critical care units.
- All critical care areas should be manned by round the clock GDMOs trained for specificservices in that area. Ratio of such MOs should be one for every ten emergency beds.

- ***The detailed list of Specialists and medical officers at Sub District Hospital and District Hospitals is placed at Annexure 6.***
- ***The minimum performance standards (Essential and Desirable) for specialists is placed below:***

Table : Minimum performance standards for Specialist & Health care staff

Staff (Essential)	Break up of activities
Medical Officer	• OPD = 75 patient/day • IPD assistance with specialists • OT assistance, emergency and other duties
General Medicine	• OPD = 60 pts/day • IPD = 20 pts/day • 10 procedures/week
General Surgery	• OPD= 60 pts/day • IPD= 20 pts/day • OT= 7 major surgeries/week
Obstetrics & Gynecologist	• OPD= 60 pts/day • IPD= 20 pts/day • OT= 7 major surgeries/week
Pediatrician	• OPD= 60 pts/day • IPD= 20 pts/day • 10 Procedures/week
Orthopedic	• OPD= 60 pts/day • IPD= 20 pts/day • OT= 7 major surgeries/week
Anesthesiologist	• As per the surgical requirement in OT's, in-charge and emergency services, pain clinics
Ophthalmologist	• OPD= 60 pts/day • IPD= 20 pts/day • OT= 10 major surgeries/week
Dentist	• OPD = 20 pts/day • Dental Procedures= 8-10
ENT	• OPD= 60 pts/day • IPD= 20 pts/day • OT= 7 major surgeries/week
Psychiatry	• OPD= 20-30 pts/day • IPD= Admitted Psychiatric cases • Consultation for referred patient
Radiologist	Reporting on imaging (X-ray, CT scan, Ultrasound etc.) – 20-30pts/day Conducting diagnostic tests, supervising and mentoring technicians Technical advice to doctors/nurses Teaching and training

Staff (Desirable)	Break up of activities
Dermatologist	• OPD= 60 patient/day • IPD= Technical advice for in-patients • Minor surgeries (Skin biopsies, cauterization etc.)
Cardiologist	• OPD= 40 pts/day • Conducting and supervising Echocardiography, Doppler test, Treadmill test and other cardiac tests.
Nephrologist	• OPD = 40 pts/day • Monitoring dialysis patient (Morning and evening) • IPD = 20 pts/day
Urologist	• OPD= 40 pts/day • IPD= 15 pts/day • OT= 7 major surgeries/week • Cystoscopy and other procedures
Gastroenterologist (surgical and medical)	• OPD= 40 pts/day • IPD= 15 pts/day • Endoscopy, Coloscopy and other procedures

** Assuming an 8-hour shift and 75% of productivity and efficiency, it is estimated that there will be 6 hour working time for 6 days a week.*

** Both surgical and medical specialist are expected to conduct IPD rounds every day.*

** If a doctor is nominated as the nodal officer for a National Health Programme, one day per week may be dedicated to provide support to that programme (Administrative duties, monitoring, training, supervision etc. This could also be spread out on a day to day basis (e.g. 2 hours/day for national programme work).*

** It is assumed that each surgical specialist would be having 3 OPD days and 3 OT days each week. Each surgical specialist is expected to perform at least 7 major surgeries in a week. For medical specialist with no OT duties, the OPD will be all days in a week. Both medical and surgical specialist are expected to make IPD rounds every day.*

** One GDMO for each specialist has been proposed to strengthen the service delivery and also to support the specialist in teaching and training. These GDMOs will work only in that speciality for which they are hired for.*

7.2.3. Nurses

Critical Care Area:

As per the Indian Nursing Council (INC) regulations, there should be one nurse for every six beds on the general wards. In adult critical care areas, the nurse: bed ratio should be 1:1 for ICU and 1:2 for HDU. In case a facility with a hybrid critical care unit (i.e., with both ICU and HDU beds in the same unit), distribution of nursing care for ICU and HDU beds should be in the same ratio described above, i.e., 1:1 and 1:2 for ICU and HDU beds respectively.

Nurse bed ratio is as given below:
(Beds: Nurse)
General ward- 1:6
ICU - 1:1
HDU- 1:2
SNCU- 1:3
NICU/PICU/Ped HDU- 1:2 (Considering an 8-hour shift, three shifts to cover a 24-hour period)

For paediatric critical care beds, a nurse to bed ratio of 1:3 for SNCU and 1:2 for NICU/PICU/Paediatric HDU is to be maintained. Considering an 8-hour shift, nurses will be needed in three shifts to cover a 24-hour period and this will be needed for calculating staff requirements.

Operation Theatre:

- Two nurses will be needed to cover every OT shift. OTs that will be functional round the clock on a 24/7 basis (e.g., Emergency OT and OBG OT) will need six nurses to provide 24-hour cover. On the other hand, other OTs that may run for one shift only (e.g., Eye OT, Ortho OT) will need two nurses to cover each of these shifts. There should also be a nurse in charge of the OT complex and two nurses for the common pre-operative and post-operative areas.

Emergency:

- In the Emergency, there should be one nurse each to cover the triage area, paediatric area and isolation area. Apart from these at least two to cover the red, yellow zone and green zones each. The nursing staff will be required over three shifts to provide the 24/7 services.

Labour Room Complex:

- In the maternity unit, i.e., LDR, trained mid-wives can be posted instead of nurses, as and when the former is available. In either case, one nurse/midwife will be needed to monitor every two LDR beds. In addition, one trained neonatal nurse will also be needed to monitor every four neonates.

OPD:

- In OPD clinics, it is expected that every patient before going to the consultation room, will first go to the nursing station to get their vitals checked. After consultation, nurses will also explain treatment and prescription to patients. Accordingly, apart from a dedicated nurse each for obstetrics/ gynaecology, family planning services, immunization, and NCD, the following number of nurses have been considered for posting at OPD nursing stations.

Other Areas:

- Apart from service areas mentioned above, additional nurses as mentioned below will also need to be inducted e.g., for DEIC, NRC, CLMC, dialysis etc.
- IPHS 2022 has not calculated leave reserves for any level of staff. However, states have the flexibility to determine their own level of 'leave reserve' to be sanctioned and this additional number of nurses and allied health professionals can be deployed to cover for leave and absences.
- Leave and Training Reserves of 15% or as per the state rule is recommended for all staff in IPHS.
- ***The detailed list of Specialists and MOs at SDH DHs is placed at Annexure 6.***

7.2.4. Allied Health Professionals

- The number of allied health professionals required at a facility depends on their job responsibilities and workload. In addition, to calculating the number of staff required, certain estimations have also been factored in.
- Apart from providing advice and support for general in-patients and/or specific OPD clinic settings, dieticians will need to provide dietary advice and guidance for critical care areas and NRCs (where present).
- Every DH should have physiotherapists based on the services and number of beds. Out of the available, one will provide services in the physiotherapy OPD while the second will be ambulatory to provide physiotherapy support and advise on the wards (e.g., critical care areas, for stroke, respiratory distress patients and/or those on chronic bed rest). The rest will support both these staff members, wherever the workload demands.
- Counsellors have been recommended to cover the requirements of the major national health programmes. Wherever possible, integration of counsellors who provide advice for similar and/or over-lapping programs should be preferred over counsellors for individual programmes. In case of the former, states will need to develop, strengthen or access training modules to cover related programs

for integrated counselling. In addition, recruitment of both corresponding gender counsellors is imperative to cover for issues where gender sensitivity is important (e.g., for adolescent health, family planning, reproductive health etc.)

Medical Lab Technologist/Lab Technicians

- Presently the LTs might be supported under various programmes like NTEP, HIV-AIDS, NVBDCP, DEIC and also existing DH LTs conducting other clinical lab tests, but all these LTs are the employees of SDH/DH and as such will work in an integrated manner for each and every programme as per the duty assigned by the Lab and Hospital In-Charge.
- All Medical lab technologist/Lab technicians will perform integrated functions even if their source of salary is from different programmes. The state should ensure to give refresher training to all Lab technicians so that they are proficient in performing various lab tests/assignments.

All Medical lab technologist/Lab technicians will perform integrated functions even if their source of salary is from different programmes. All district labs will be functional 24 x 7.

For the Blood bank, number of lab staff also provisioned for as per Schedule F, Part XII B, Drugs and Cosmetics Act, 1940

- All laboratory staff should report to the central lab which is the Integrated Public Health Lab at district hospitals to identify their duty allocated for the week/month (e routine tests in the main lab, Emergency Unit/critical care, programme tests, etc.). All district labs will be functional 24 x 7. Since a lot of samples are to be collected early in the morning, it is expected that the OPD lab will be functional from 8 am onwards. However, if fasting samples are to be collected prior to 8 am, night shift staff may collect the samples and hand them over to the morning shift staff/LT.
- For blood bank, apart from lab technicians, a dedicated blood bank technician/Hemato Technologist with additional experience based on Schedule F, Part XII B, Drugs and Cosmetics Act, 1940 should be provisioned for.
- While calculating the total number of Medical lab technologist/lab technicians the expected workload of the health care facility and also the presently functional LTs under various health programmes have been considered for an integrated functioning of lab services.
- Now onwards, MLT/LTs under all programmes will have a single umbrella of MLT/LTs working for district integrated public health lab.

Pharmacist

- It has been estimated that a pharmacist will dispense about 120 prescriptions/day. Additionally, a senior pharmacist also needs to maintain drug and equipment inventory.. Wherever AYUSH services are being provided, AYUSH pharmacists must be provisioned for.

Other Allied Health Professionals

- Cytotechnologist/Cytology technicians, are responsible for preparing, staining slides and analysing cell samples or various bodily fluids, especially in cellular anomalies.
- 1 OT Technologist/OT technician and TSSU assistant will be required for every shift in all OT complexes. They are responsible for ensuring functionality of all equipment used in OT and TSSU respectively.
- Radiology and Imaging Technologist/Radiology technician, ECG Technologist/ECG Technician, Dialysis Therapy Technologists/Dialysis Technician should be available at all levels and hospitals having 200 or more beds should be available during OPD hours and during emergencies.
- Since neurology services are Desirable at DHs, posting of EEG technologist/EEG technician will also be Desirable.
- Staff for certain areas such as CSSD and laundry have been factored in to cover two 8-hour shifts. While the CSSD/Laundry technicians will ensure functionality of all equipment being used in the

area, the CSSD/Laundry Assistants will be responsible for undertaking the defined processes of the service area (decontamination, cleaning, autoclaving etc.)

- For dental services, three types of paradental staff have been provisioned for. Dental Hygienists will be responsible for carrying out supervised oral prophylaxis. Dental Assistants are expected to support dental surgeons in routine dental procedures and Dental Technicians are responsible for fabricating and repair of dentures.
- Pulmonary function test technicians use standardised equipment to measure lung function. The tests include simple screening spirometry, formal lung volume measurement, diffusing capacity for carbon monoxide.
- Allied Ophthalmic Assistants/Vision Technician/Optometrists are responsible for refraction, screening of glaucoma, cataract, corneal blindness and other related disorders.
- Audiologist is responsible for provision of audiological services, speech language assessment and rehabilitation along with prescribing hearing aids and assisting in training programmes in collaboration with ENT surgeon. One each for adult and paediatric services have been provisioned for.
- ***The detailed list of Allied health professionals at Sub District Hospital and District Hospitals is placed in Annexure 6.***

Table: Minimum performance standards for staff Nurses and Allied health professionals is placed below:

Staff	Break up of activities
Staff nurse	As per INC norms (for OPD, IPD shifts and specialist services)
Medical lab technologists/Lab technician	100 tests/day (semi-autoanalyzer), 200 tests/day (autoanalyzer)
Pharmacist	120 dispensations of prescription/day, maintain stock registers, store, inventory management
Clinical Psychologist	15-20 counselling sessions/day (30 min/per patient/day)
Physiotherapist	• 15-20 physiotherapy intervention/day (15-20 minutes/service) • Physiotherapy advices for IPD patient
Medical Social Worker	• Asses and support welfare needs (5-7 patient/day) • Counselling (15-20 minutes/patient) • Home visit 4/week
Counsellor	20-25 counselling sessions/day
Dietician	• Providing dietary advice to patients, 20 patient/day • Conducting nutritional assessments • Taking anthropometric measurements • Participating in medical rounds • Record keeping
ECG technologist/technician	30-40 ECG/day, technical support with TMT's
Echo technologist/technician	Assisting in 15-20 ECHO's/day (20 min/ECHO)
OT technologist/OT technician	Assisting in OT's, maintaining infection control practice
Radiology and imaging technologist/ Radiographer	• X-ray: 30-40 pts/day (12 -15 min/X-ray) • CT scan: 7-9 pts/day (40-50 min/X-ray)
Ophthalmic Assistant/Vision Technician/Optometrists	25-30 cases) for refractive assessment
Dental Technician	Fabricating dental prosthetics including bridges, crowns, and dentures. Maintain dental laboratory records

Staff	Break up of activities
Dental Hygienist	Oral prophylaxis, 15-20 procedure/day (20-25 min/pts) Record keeping
Dental Assistant	Assisting the dental surgeon with oral procedures Record keeping
Dialysis therapy technologists/ Dialysis technician	• Assisting procedures in a dialysis ward • 4 hour/patient/day (hemodialysis), 4-6 hours/patient/day (peritoneal dialysis)
Blood bank technician/Hemato Technologist	• Screening of donors • Blood collection and dispensing • Record keeping
CSSD Technician	Sterilization services on time, packaging and labeling, pre-sterile storage, autoclaving and storage, documentation of servicing sessions
Laundry technician ***(for a mechanized laundry)***	• Laundry services, washing, drying, folding and ironing, sorting (critical linen for autoclaving) • Documentation of servicing session

-Assuming 8 hours shift and 75% productivity and efficiency, it is estimated that there will be 6 hours of working time spread over 6 days in a week.

7.2.5. Support Staff

The deployment of support staff is critical for the efficient, hygienic and safe delivery of services at the facility. Working shifts and allocation of areas to the support staff shall be the responsibility of hospital in-charges or the person deputed by him/her.

As indicated in the document, IPHS does not define the implementation process. However, in the interest of rendering quality patient services, it suggests that in-house hiring of clinical and technical staff should be prioritized rather than those services that can efficiently run even through outsourcing model like security, housekeeping, cooks, food trolly bearers etc.

Cleaning Staff

- The cleaning staff is responsible for cleaning and mopping with the disinfectant of all floors, staircases, corridors, ceilings, toilets etc. of all OPDs, wards, critical and support care areas as per cleaning protocols of the facility. They will also be responsible for cleaning of overall campus. They are responsible for transportation and storage of all waste material including bio medical waste (BMW) at the designated BMW storage room. Cleaning blood spills and others such as human excrement, urine, vomitus, sterile body fluids, as & when required, are also the responsibility of the cleaning staff.
- The staff should be trained as per 'Pradhan Mantri Kaushal Vikas Yojana' or state sponsored skill development programme prior to appointment in specific service area.
- Number of cleaning staff required in specific areas as mentioned below accounts for three shifts in round the clock functional service areas such Emergency, OT, LDR, critical care areas, wards, DEIC, NRC, burn unit etc. Certain service areas may not require staff in all three shifts, e.g. CSSD& laundry, kitchen, diagnostics, administrative areas, mortuary, outer premises and stores.
- Some of the service areas like DEIC, NRC, Burn Units etc, can be cleaned by the staff posted on various floors also. Hiring of certain category of staff for cleaning of kitchen, CSSD, laundary etc, will depend upon operational mode of respective areas. In house hiring will only be needed if they are not outsourced.

Housekeeping (including ward attendants)

- Housekeeping services are Essential in providing a safe, clean, aesthetic and hygienic environment for not only the patients, attendants and visitors, but also for health care providers.
- They are responsible for cleaning, disinfection and maintenance of equipment used in patient care, sorting and transportation of items to and from patient care areas to support care areas like CSSD, laundry, manifold and dietetics. They are also expected to transport samples to labs.
- The staff should also be trained for bed making, ensuring patient's personal hygiene, turning and positioning patients, transfer of patients from wards to other areas, and other patient care activities.
- In labour room complex, the housekeeping staff should be responsible for labour bed making, and, assisting the nursing staff in patient care activities.
- The staff should be trained as per 'Pradhan Mantri Kaushal Vikas Yojana' or state sponsored skill development programme prior to appointment in specific service area.
- Adequately trained sufficient number of housekeeping staff/ward attendants should be available round the clock either in house or through outsourcing. Its number can be decided locally by the state/district health authorities.

Security Guards

- Security guards and/or provision of CCTV cameras should be made available round the clock for ensuring the safety of staff, property, and Essential commodities. Security is also needed for restricted access areas such as critical care and ED. There should be female security staff for female wards and LDR.
- The hospital should be divided into various security zones. Security cameras should be placed in a way that they cover all details of these zones. Security persons are to be designated to watch every zone at a regular interval in the control room. security requirements of various critical and support areas should be laid down. For each area, Security guards should be trained accordingly and preferably not rotated. All security guards manning fire exit doors should be trained in fire safety.
- Entry and exits of the hospital needs to be synchronised with the patient flow and services available at various floors. Since this will depend upon the size of the hospital, horizontal/vertical extension, So, its number will vary from one health care facility to another and as such needs to be decided locally.
- Adequately trained sufficient number of security guards should be available round the clock either in house or through outsourcing for managing all entry points, outer premises and critical care areas like OT, LDR, ICU/HDU/SNCU/MNCU, Emergency etc.

Food Trolley Bearer

- They are responsible for sorting and transporting of food trolleys to and from patient care areas to dietetics. They should be skilled in respectful distribution of food trays to patients. They will also aid the cleaning staff in cleaning of utensils and trolleys. The staff should be trained as per 'Pradhan Mantri Kaushal Vikas Yojana' or state sponsored skill development programme prior to appointment in specific service area.
- Hiring of this category of staff will depend upon the operational mode of the kitchen. In house hiring will only be needed for hospitals having 300 or more beds that too, if the kitchen is not outsourced.

7.2.6. Capacity Building

All posts related to a particular service area must be filled to ensure that it is functional. Induction and specialised training of the entire team prior to posting in a particular service area should be ensured.

Along with placement of qualified HRH, the States should make all efforts to continuously build on their skills and competence as per their job requirement.

Different training programmes for induction, skill building and leadership, new programmes and if required, refresher training should be planned systematically. Diligent records of all trainings attended by the HRH should be maintained by the facility In-Charge. Cross-learning should be promoted where the HRH upon successful completion of the training programme briefs the other staff about their key learnings.

7.2.7. Conduct and Behavioural Standards

The HRH placed in the public health facilities should adhere to the highest ethical and behavioral standards, and provide patient care with the utmost respect for the dignity of life. States must orient health professionals to discharge their duties in a professional and courteous manner, facilitating greater acceptability of HRH in the community as well. They should also be oriented to the concept of gender sensitivity and efforts should be made to ensure that gender sensitivity is inculcated in their conduct and actions.

Soft skills including an empathetic attitude, manners and courteousness at bedside should be a core value, especially towards the marginalised and vulnerable. The privacy and dignity of patients should be maintained, and the principles of patient confidentiality strictly adhered to. Dress codes (with a name badge) and adherence to punctuality should be emphasised.

7.2.8. Safety Measures for HRH

It is crucial that the safety of the HRH providing services at all levels be ensured. For this purpose, the following must be adhered to:

- Sufficient provision of protective gear like gloves, masks, gowns, caps, PPE, lead aprons, dosimeters etc. and their use by health care workers must be as per the standard protocols in place.
- Promotion of hand hygiene and practice of standard precautions by health care workers should be standard practice.
- Display of SoPs at strategic locations in the hospital.
- Regular training of health care workers in standard precautions, patient safety, infection control and biomedical waste management should be part of their training requirements.
- Immunization of health care workers against Tetanus, Typhoid and Hepatitis B should be ensured.
- Provision of round the clock PEP against HIV in case of needle sticks injuries should be initiated in the emergency department.

7.3. MEDICINES

Access to Essential medicines is a major determinant of health outcomes and an integral, and often crucial component of health care. An approach to ensuring access to medicines has been promoted through "Essential drug policy". It is necessary for the states to prioritize which medicines should be made available based on the existing demographic profile and disease prevalence rate.

Expenditure incurred on irrational or unnecessary drugs and diagnostic tests lead to out-of-pocket expenditure. Government procurement of generic drugs in bulk substantially lowers the cost compared to the price paid for a branded drug by an individual consumer. If quality Essential medicines are provided free of cost to all patients visiting public health facilities, it would bring significant savings to the patients. Based on the above and adhering to the 'Free Drug Service Initiative' of GoI, all Essential medicines should be available free of cost in all public health facilities.

If quality Essential medicines are provided free of cost to all patients visiting public health facilities, it would bring significant savings to the patients.

The list of medicines mentioned under IPHS should be included in the Essential List of Medicines for different levels of facilities. From this list placed at ***Annexure 8***, the state should identify a proportion of medicines that are critical for service delivery in OPD, IPD and the Emergency and ensure that these are available round the clock. All medicines required in the Emergency Department and those that are included in national health programmes must be included in the List of 'Essential Medicines' for that facility. Additional medicines for the management of locally prevalent diseases should also be included. These norms do not preclude the inclusion of other medicines which are on the state list but are not mentioned in the IPHS guidelines. With the launch of universal NCD screening and comprehensive primary care, long term dispensing (one to three months) of medicines for the management of chronic illnesses such as diabetes and hypertension has been initiated. Procurement, adequate storage space, and systematic NCD registers and records will need to be maintained for these. Temperature-sensitive medicines should be stored in a proper cold chain/refrigerator as deemed by the manufacturer's instructions. Relevant AYUSH medicines and a pharmacist to dispense should be available at facilities where AYUSH services are being provided.

The hospital should have SoP for indenting, stocking of medicines, logistics for their stocking up and transportation. Indenting based on consumption, stock rotation, and the distribution network should be robust and ideally through a centralised medicine purchasing and distribution system to ensure that there is no stock-out of Essential medicines at public facilities. This will ensure quality check and provision for recall if required.

Provisions for the local purchase of medicines during emergency situations and critical stock-outs, including during outbreaks and epidemics, should be in place. Every effort should be made to procure generic medicines and include a mechanism for robust quality control. There should be a computerised system for receiving, inspecting, handing over, and retrieval of medicines. A mechanism for checking the quality of medicines, inventory management, storage of narcotic drugs, checking of pilferage, date of expiry, and pest and rodent control should be in place.

Additionally, monitoring the rational use of higher generation antibiotics, slow- and fast-moving medicines, timely replacement of rapidly prescribed medicines, maintaining a buffer stock of critical medicines and quality control are other Essential parameters. All prescriptions should be clear, legible, in capital letters and contain the generic/non-propriety name. Ideally, computerised prescriptions should be ensured. Standard treatment guidelines should be followed for medicine prescriptions and patient management. Prescription audits should include a review of medicine being prescribed from outside (as they are not available at the facility) and those that are not being prescribed under their generic names. Internal audit of stores should also be done on a regular basis to assess procurement of items as per laid down procedure by respective state government.

To prevent pilferage, there should be fixed working hours of the store beyond which functioning and receipt of supplies should not be allowed.

7.4. DIAGNOSTICS

Diagnostics are an integral part of the health care system and provide information needed by service providers to make informed decisions about care provision related to prevention, screening, detection, treatment and management. Limited availability and access to quality laboratory and radiology services are among the major challenges contributing to delayed or inappropriate responses to disease control and patient management.

The diagnostics mentioned under IPHS ***(Annexure 9)*** should be included in the list of tests being offered at different levels of facilities. Additional diagnostic tests for the management of locally prevalent diseases should also be included (screening tests for Kala Azar in locally endemic areas). These norms do not preclude the inclusion of other diagnostic tests that the state decides to provide at public health facilities.

All tests mentioned under the 'Free Diagnostics' initiative as per the GoI guidelines must be offered in-house through the public health system. The complete list of all tests being provided should be clearly displayed. For specialized, advanced and specific diagnostic tests, linkages with Medical Colleges and National Reference Laboratories should be established. In all cases, transport must be managed carefully in order to maintain integrity of the sample, giving attention to temperature, preservation needs, special transport containers and time limitations. It is also important to ensure the safety of those handling the material before, during and after transport.

There should be an integrated public health laboratory with comprehensive testing facilities for pathology, bio-chemistry, microbiology, serology and other samples in every district. The District Hospital is well positioned to take on this role and should be able to perform all tests required for common outbreaks of communicable diseases and incidents of public health relevance. Linkages with National Reference Laboratories should exist for novel pathogens and illnesses of unknown etiology. A regular programme of diagnostic audits should be conducted to monitor the quantity and quality of diagnostic tests being offered through public health facilities.

A regular diagnostic audit should be conducted to monitor the quantity and quality of diagnostic tests being offered through public health facilities.

Along with lab services, imaging services such as Ultrasound, X-Ray, CT scan etc. should also be provided while adhering to PCPNDT & The Atomic Energy (Radiation Protection) Rules, 2004, promulgated under the Atomic Energy Act, 1962 respectively. It is mandatory for all users of imaging equipment to obtain requisite 'Licence' from AERB for carrying out any of the above activities.

The test and test results should be provided to patients during the same working hours as the OPD and the availability of doctors so that repeated visits by the patient or their family members are avoided. Round the clock functionality is recommended at larger facilities to cater to the needs of the Emergency services and intensive care and high dependency areas. The turnaround time for test results should also be standardized, adhered to and monitored.

The availability of necessary reagents and equipment, laboratory personnel and their capacity building, mechanisms for internal and external quality assurance and follow-up with clinicians should be strengthened. Internal Quality Control (IQC) to detect, evaluate and correct errors due to test system failure, environmental conditions, or operator performance, before patient results are reported is also an Essential measure.

Validation of procedures and equipment should be carried out by running samples in parallel using both old and new equipment and methods for a period of time to determine that the expected results can be obtained. These validation procedures should be completely recorded. The staff posted in diagnostic services can be trained under EQAS programme run by AIIMS, New Delhi and CMC Vellore.

The staff posted in diagnostic services should be trained under EQAS programme

7.5. EQUIPMENT

Medical equipment plays a significant role in patient care. It is a crucial component of health systems, as it enables the service providers to diagnose, monitor and treat various kinds of diseases. Having appropriate quality of medical equipment, helps to prevent patients from being denied any health services.All the necessary equipment to provide clinical, support and other services should be quality assured through the state procurement policies and procedures. And all the areas having critical and electric Equipment to have conductive flooring with proper earthing. The list of equipment provided in these guidelines **(Annexure 9)** is not exhaustive. Additional equipment, if required, can be procured to provide the full range of services being offered at the facility.

A systematic and robust programme for biomedical equipment maintenance and monitoring should be in place at all public health facilities. To improve the functionality and life of equipment, simultaneously improving healthcare services in public health facilities along with reducing the cost of care and improving the quality of care, provisions have been made in the IPHS for biomedical engineers and technicians to oversee equipment maintenance at public health facilities within the district. An effective equipment audit assesses the present equipment status and ensures better equipment procurement in the future. The audit should be done on a periodic basis and contain details like name, cost of equipment, date of purchase, manufacture, and installation, name and address of the supplier, the department where installed, environmental control, spare parts inventory, technical manual, after-sales-service agreement, guarantee, warranty period, the life of equipment, depreciation per year, up/downtime, date of condemnation and replacement. The number of services delivered by each major equipment needs to be noted down, to analyse the value for the money invested in purchasing high-cost equipment.

The equipment audit should be done on a periodic basis and contain details like:

- Name, cost of equipment,
- Date of purchase,
- Manufacture
- Date of installation,
- Name and address of supplier,
- Department where installed

Along with maintenance and monitoring programme, it is also Essential that a condemnation policy is in place at all facilities so that the practice of out-of-use equipment and furniture being scattered around the facility is mitigated. Condemnation should be done periodically by the condemnation committee after careful examination of items. The list of items with codification number, the date of purchase, repair and other relevant details should be thoroughly prepared by the committee.

The maintenance of medical equipment requires a wide range of technical abilities, and the costs and time required to train a technician increase with the level of skill that has to be attained. Training of technicians to do front-line maintenance for medical equipment in public health facilities is Essential. The selection of candidates should emphasize technical aptitude and motivation rather than just academic qualification. Practising electricians and plumbers already working in the health facilities could be one such resource pool. Multi-skilled training should be encouraged. For example, frontline medical equipment maintenance can be combined with electrician training. The content of training should emphasize more on practice (70%) and less on theory (30%). These courses can be offered at the district level under the ambit of DH strengthening programme.

7.6. QUALITY ASSURANCE

Well maintained infrastructure, adequate & skilled human resource for health, functional equipment & instruments, and sufficient drugs & consumables ensure the fulfilment of the 'Structural' requirements for establishing a well-functional health facility. However, for attaining enhanced satisfaction with improved clinical outcomes, it becomes equally pertinent to ensure 'Quality' in the 'Processes' of the care within a health facility.

As a healthcare provider, while it is important to ensure provision of safe and evidence based clinical care, it is equally fundamental to provide the care that makes patients' and visitors' experiences rewarding. Ensuring 'Quality of Care' as a key component would require undertaking conscious and concerted efforts to identify the 'Gaps' by measuring the Quality of Care (QoC) in all its three dimensions, namely structure, process and outcome (Donabedian Model of QoC).

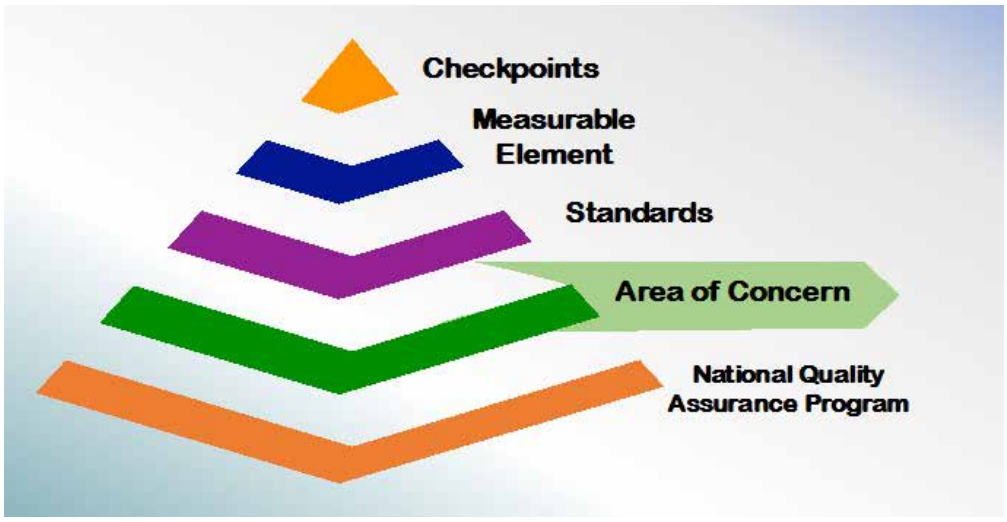
Subsequently, available resources are channelized, and focussed efforts undertaken for closing the gaps and bringing about the 'Improvement' in the services.

For ensuring provision of 'Quality of Care', ISQua (International Society for Quality in Health care) accredited *National Quality Assurance Standards (NQAS)* for District Hospitals, CHCs, PHCs, UPHCs and Health and Wellness Centre- Sub centres have been formulated by the MoHFW, GoI. Setting standards is dynamic process, and the standards provide roadmap for the health facilities to improve the care.

The main pillars of Quality Measurement Systems are Quality Standards. These standards have been defined for various level of facilities under NQAS. The standards have been grouped within the eight Areas of Concern. Each standard further has specific Measurable Elements. These standards and Measurable elements are checked in each department of a health facility through department specific checkpoints. These defined standards are available at:

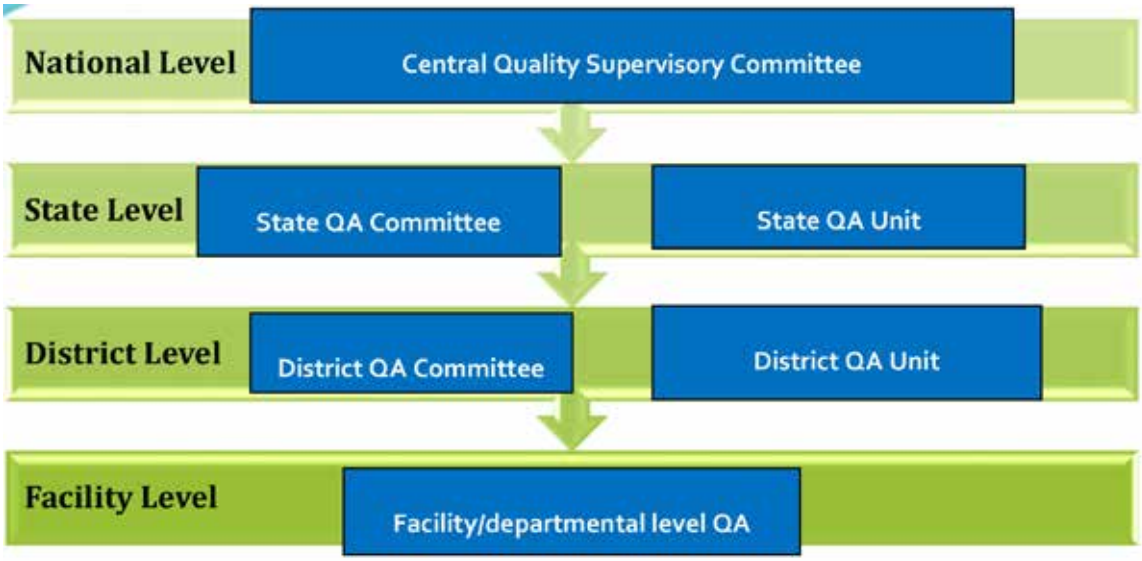
http://qi.nhsrcindia.org/cms-detail/revised-national-quality-assurance-standards/MjM3

Figure: Mesurement System under NQAS



A well-built institutional framework from the facility (Quality team) to the National level (Central Quality Supervisory Committee) supports the seamless implementation of the standards. Facilities that can meet the defined standards and criteria are certified and incentivized (subject to annual surveillance and ensure sustaining the changes). With this, National Quality Assurance Programme (NQAP) envisages instiling the culture of Quality and Safety in our health systems.

Figure: Institutional Framework under NQAS

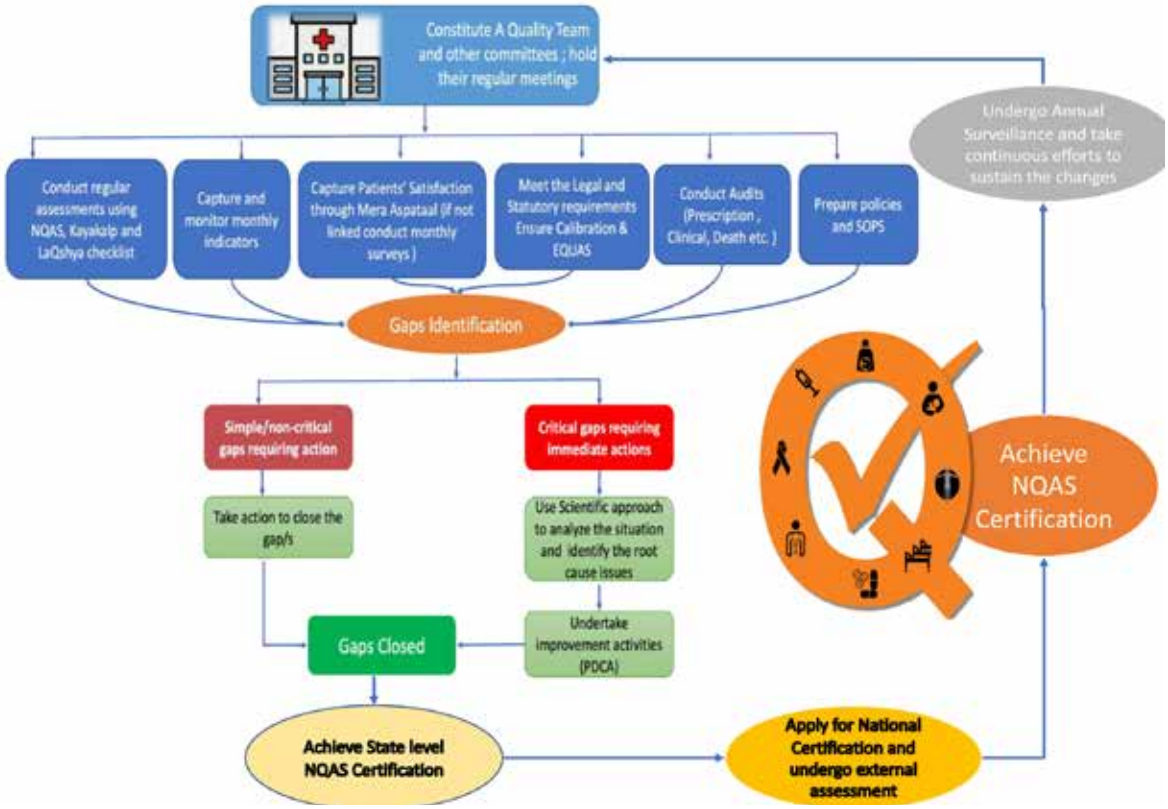


It is expected that all public health facilities would implement these standards by undertaking the following steps:

1. Formation of the Quality team
2. Plan for quarterly Internal Assessment

3. Monthly Patient Satisfaction Survey
4. Collation and Analysis of Key Performance Indicators
5. Define Quality Policy and Objectives
6. Plan for Medical and Death Audits
7. Preparation of SoPs and Work Instructions
8. External Quality Assurance of Lab-EQAS and calibration of measuring equipment
9. Traversing the Assessed Gaps
10. Quality Certification- State and National
11. Sustenance and incentives

Figure: Road map for healthcare facilities to achieve NQAS certification



Under the ambit of the National Quality Assurance Programme various other initiatives like *Kayakalp, LaQshya and Mera Aspataal* (My Hospital) have also been initiated to work on specific domains of quality improvement. These domains together support the implementation of the National Quality Assurance Programme.

- Kayakalp aims to promote Cleanliness, Hygiene and Infection Prevention. It is an award scheme in which facilities are assessed at three-levels (Internal, Peer, External) using an objective checklist coveringeightthematicareas(a) Hospital upkeep, (b) Sanitation & Hygiene, (c) Waste Management, (d) Infection Control, (e) Support Services(f) Hygiene Promotion, and (g) Beyond the hospitalboundary(h) Eco- Friendly facilities. Facilities scoring 70% and above after external assessment are recognised and incentivised.
- *LaQshya* is a quality improvement initiative, which aims to improve facility-based quality of care around birth, which normally takes place in the Labour Room and Maternity OT of a high case-load facility.

- *Mera Aspataal* (My Hospital) is an ICT based platform that captures the 'Voice of Patients' visiting and receiving care from the healthcare facilities. Inputs received on *Mera Aspataal* support facilities to identify the "Dissatisfiers" and to take up further actions to mitigate them.

7.7. CLINICAL GOVERNANCE

The quality of care at public facilities can be significantly improved by adopting and implementing a robust mechanism for clinical governance. This will cover a range of quality improvement initiatives:

- **Risk management** (by putting in place systems to reduce risk): This is vital to ensure a safe and effective environment where patients receive a high-quality service while health professionals work in an enabling 'no-blame' culture. Various interventions to improve patient safety, reduce clinical errors and improve the quality of care provided should be introduced or strengthened. This includes athorough review of maternal and child deaths (MDSR/CDR); incident reporting (e.g., near-miss reporting; adverse event reporting) in a no blame culture so that appropriate lessons can be learnt to avoid future mistakes and the corrective actions are undertaken. Particular attention should be paid to patient safety, infection control, bio-medical waste management and health care worker safety. Early detection of warning signs is critical for an early intervention and prevention of clinical errors. e.g., increase in post-surgical infections or increase in cases of cervical tears.
- **Clinical audit** (to assess and improve the quality of care): This includes measuring the quality of care provided by health workers and departments against agreed standards, identifying gaps and instituting corrective measures. A re-audit to confirm that corrective actions are being sustained will effectively close the audit loop.
- **Evidence based care and effectiveness**: This includes adherence to SoPs, Standard Treatment Protocols and the latest guidelines for national/state health programmes to ensure high quality, standard and consistent care is provided. Facility based quality team should orient the staff on standard protocols.
- **Education, training and continuing professional development**: The quality and capacity of health workers at public facilities should be enhanced through continuing professional development and refresher courses and in-service training after a thorough training needs assessment.
- **Patient and carer experience and involvement**: Feedback from patients about the quality of services is of paramount importance. These should be conducted regularly, should include both OPD and IPD services and a review of the feedback and suggestions received should be used to address gaps and deficiencies in service delivery. The GoI 'Mera Aspatal' app is one mechanism to obtain feedback about the quality of services from patients visiting public health facilities. Community participation and involvement of civil society organizations in quality improvement initiatives is vital. In addition, an assured grievance redressal system is mandatory at all facilities. This should include the provision for written complaints (e.g., through a help desk or a complaints box, letters to the administrators, online reporting) and a formal system for escalation and resolution in a time bound manner. Facilities should monitor the number of grievances received and resolved every month. A mechanism for appeals should also be built-in. Awareness should be raised so that users are aware about the existence of this facility.

7.7.1. Cleaning

A major risk of all surgical procedures is the introduction of pathogenic microbes, which can lead to infection. In the developing world, the health care associated infection rate is 25% or more i.e., 25 infections per 100 patient admissions.

High Touch Surfaces in all regular occupied spaces should be mopped and, sanitised on a daily basis. Good sanitation & hygiene, design & maintenance practices reduce cross infections, thereby reducing risk of Hospital Acquired Infections (HAIs). Products that are manufactured with carcinogens, mutagens, reproductive toxicants and teratogens, asthma-causing agents, respiratory irritants, and chemicals that aggravate existing respiratory conditions should not be procured. Usage of aldehyde products for fumigation and fogging are banned at the facility. Hospital shall have an ongoing induction training program for all the housekeeping staff for the cleaning of various areas in the hospital. They must also provide ongoing and regular staff training and communication on safe handling, storage and disposal of chemicals and materials.

Facilities should have a written and agreed protocol for critical and non-critical areas. This should include the frequency of cleaning for different areas, the type of reagents to be used, the method of cleaning and a mechanism to monitor its quality (e.g., cleaning checklists for washrooms etc.). Cleaning staff should have appropriate training in all these aspects. A sample of cleaning protocols is placed at ***Annexure 11***.

7.7.2. Monitoring

It is assumed that rigorous monitoring, continuous support and encouragement by supervisors and higher levels of management and most importantly ownership by the staff will be strengthened as part of continuous quality improvement initiatives. The RKS of the facility should periodically review the reporting on adverse events, infection control measures, safe clinical, injection, blood transfusion practices etc. Internal mechanisms include systematic and proper record keeping and timely reporting.

A mechanism for robust internal and external monitoring is vital to maintain standards, identify gaps and address deficiencies in service delivery at public health facilities.

Internal mechanisms will include proper record keeping and maintenance, supportive supervision and a regular system of audits (clinical audit, death audit, disaster preparedness audit) as part of clinical governance.

Daily Rounds

For delivery of quality services, it is critical that the nursing in-charge undertake daily rounds jointly with hospital manager to assess cleanliness, adherence to infection prevention protocols, respectful care to all patients particularly to poor, vulnerable, weaker sections of society, women and children. They should ensure technical protocols are adhered in all service delivery areas, unnecessary stores and junk are removed, room-wise protocols are displayed in each department along with performance indicators, equipment maintenance schedule and cleaning schedule, adequate medicines, equipment, consumables for that particular day. They should also monitor whether equipment are in functional state or not. Monitoring and recording the critical indicators of hospital like – bed occupancy, death rate, mid-night head count etc., handing-over and taking-over protocols being followed in critical departments like LR, SNCU, O.T etc. sharp management protocols, checking whether biomedical waste disposal practices are being followed as per protocols are also Essential activities to be done during the daily rounds. Removal of unnecessary items, non-functional equipment etc. undertaking of pest control measures inside hospital building & all over the campus especially during winter & rainy season should also be done.

Health intelligence in terms of standard formats to capture data on key performance indicators will facilitate a system for robust internal monitoring. This should be regularly reviewed by senior administrative and clinical personnel to enable gap analysis. An action plan with corrective measures, the person/department responsible and time lines should be prepared and reviewed at the next meeting.

Management Information System (MIS): Computer with Internet connections must be provided for entering facility MIS information. Provision of flow of Information from PHC/CHC to district hospital and from there to district and state health organisation should be established. Relevant information with regards

to emergency, outdoor and indoor patients should be recorded and maintained for a period of time as stated in the state health policy.

A variety of measures should be used for external monitoring; these include patient satisfaction surveys, social audit through Rogi Kalyan Samitis and/or Panchayati Raj Institutions, community surveys and *Jan Sunawais* and *Jan Samvads,* systematic assessments with a defined checklist by senior/deputed health officials.

Laboratories should be monitored through an internal and external quality assurance programme.The District Monitoring and Vigilance Committee constituted under NHM should also monitor standards and provide support for the strengthening of facilities to IPHS standards. External evaluations can also be commissioned to obtain independent reviews of the functional status and quality of service delivery at public facilities.

7.7.3. Governance

Effective governance of the public health system includes the establishment of institutional arrangements and policies along with their continuous monitoring to ensure proper implementation. Apart from promoting good leadership, it also includes specific interventions such as the establishment of facility-based Rogi Kalyan Samitis (RKS) or Hospital Management Committees (HMC); building accountability into the system (e.g. performance appraisal, target setting and monitoring, social audit, displaying citizens' charter); patient centric services (patient feedback, reducing out-of-pocket expenditure, improving the patient experience, grievance redressal); compliance with statutory norms (acts and regulations) and ensuring robust clinical governance (adherence with SoPs and standard treatment guidelines, adverse incident reporting, near miss reporting, clinical audits and MDSR/CDR).

Some aspects of *governance mechanisms in the public health facilities are described below:*

7.7.3.1. RKS/HMC

These are health facility-based committees (at PHC, CHC, SDH and DH level) that have been created to hold hospital management and administration accountable for ensuring access to equitable and high-quality services without financial hardship to service users and to enable community oversight in the functioning of health facilities.

The RKS should be constituted according to national guidance. It should play an active role in the supervision of provision of quality services and improving the patient experience through regular meetings and follow-up. At the facility level, the RKS should ensure the following:

- Enable active citizen participation for improvement of patient care and welfare in the facility.
- No user fees are charged for national/state government funded programmes that are provided as a service guarantee for people accessing public sector health facilities (e.g., mother and child health services, SUMAN, national programmes for TB, HIV, and malaria, NCD prevention and control programme).
- Confirm that patients below the poverty line, the vulnerable and marginalised do not incur any financial hardship for their treatment and create mechanisms to cover part/full cost of transport, diet and stay of the attendant(s).
- Agree to a structure for the user fees which is minimal and does not create a financial barrier to accessing health care.
- Provision of non-clinical services (e.g., safe drinking water, diet, litter-free premises, clean toilets and linen, security and help desks).
- Essential drugs and diagnostics to be made available. They can also procure Essential drugs/ diagnostics not available at the health facility from RKS funds. However, such local purchases must only be seen as a short-term measure.

- Promote a culture of user-friendly behaviour amongst service providers.
- Operationalise a Grievance Redressal mechanism.
- Create mechanisms for capturing patient feedback, at least at the time of discharge and take timely and appropriate action on such feedback.
- Overall facility maintenance to ensure that the facility conforms/aspires to conform to IPHS norms.
- Facilitate the operationalisation of national and state health programmes as appropriate for that level of facility.
- Proactively seek out participation from charitable and religious organisations, community groups and corporates for cleanliness and upkeep of the facility.
- Mobilise funds from various provisions such as insurance schemes, CSR, donations etc.
- Facilitate contribution from the community in cash, kind (e.g., drugs, equipment, diet) and labour (including free professional services).
- Facilitate in preparation of Comprehensive/Prospective plan of District Hospital as per IPHS norms, RKS is empowered to hire national or state level empanelled architect hospital planner/corporation/PSU.
- As per DH strengthening guidelines, RKS is empowered to hire on need-based/part-time for operationalizing clinical services.

7.7.3.2. Accountability

Health officials in an administrative/management position in the facility must improve effectiveness and efficiency in the system by building mechanisms to strengthen the answerability and accountability of service providers.

Every facility must have a Citizen's charter displayed in a prominent place in a legible and locally appropriate format. This should include information on the range of services offered, timings, entitlements, user charges, rights and responsibilities of users and grievance redressal procedures. A list of the free drugs and diagnostics provided at the facility must also be displayed.

Collective decision-taking mechanism through Rogi Kalyan Samiti and Health officials will be responsible for the execution of decisions taken in the meeting.

Feedback from the community using different methods such as patient feedback (e.g., Mera Aspatal), community/social audits, Jan Sunwai and Jan Sanwad must be encouraged, and timely and appropriate action should be taken on the feedback received.

Responsibility to facilitate the functioning of components of health facilities such as availability of Human resource for health, drugs, diagnostics, and dietary services, adherence to clinical SoPs in the facility is Essential and ensure cleanliness and security within the facility.

A system of annual performance appraisals which is objective, built upon key performance indicators from job descriptions and is linked to promotions, assured career promotions (ACP), incentives and contract renewal (if contractual) should be introduced (or strengthened).

7.7.3.3. Patient centric services

All necessary efforts to ensure that patients and their attendants have a comfortable, respectful, and hassle-free experience at the facility must be ensured. This includes an empathetic and compassionate attitude towards patients and relatives and a professional bedside manner. Respectful care emphasizes thefundamental rights of the patients along with ensuring treatment free of discrimination and delivered with dignity and respect. Based on the feedback and grievances received, orientation/sensitisation workshops can be organised for facility staff to provide respectful care.

Wherever possible, there should be no user fees at the facility. RKS should adhere to the user fee policy of the state. If a user fee is being charged, patients should be provided with a receipt and the annual financial audit should account for the utilization of money received.

7.7.3.3.1 Patient Safety and Infection Control

Some of the patient safety and infection control measures are given below:

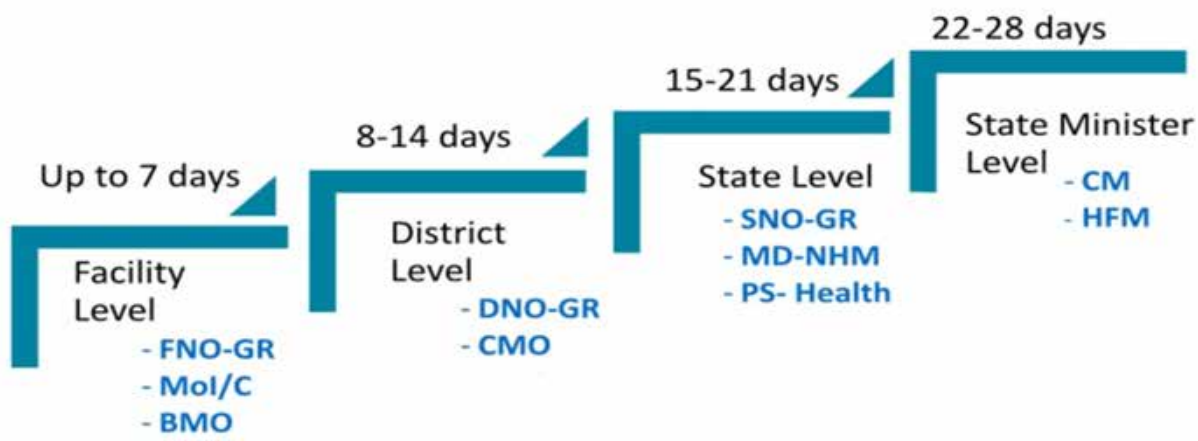
- Handwashing facilities in all OPD clinics, wards, emergency, ICU and OT areas should be installed. Compliance with the correct method of hand hygiene by health care workers should be ensured. Provision of hand rub solution in critical care areas like ICU, nursery, burn ward etc. to ensure hand hygiene by health care workers at the point of care should be in place.
- Safe clinical practices as per standard protocols to prevent health care-associated infections should be instituted.
- The use of safe surgery checklists in the OT to minimise errors should be standard practice.
- There should be a proper written handover system between health care staff for all critical care areas.
- Formation of an infection control team and provision of trained Infection Control nurses should be there. The facility should develop SoP for aseptic procedures, culture surveillance and determination of HAIs.
- Safe injection administration practices as per the prescribed protocol should be followed.
- Safe blood transfusion practices need to be implemented by the hospital administrators.
- Ensuring safe disposal of biomedical waste as per rules should be adhered to.
- For reducing environmental pollution due to mercury, GoI guidelines should be adhered to.
- Guidelines for Airborne Infection Control should be followed.
- Regular training of health care workers in patient safety, infection control and biomedical waste management should be scheduled and held.
- 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 corrective steps to prevent them in future. The committee should also have patient and community representatives as members.
- Hospitals must develop their own antibiotic policy to check the indiscriminate use of antibiotics and reduce the emergence of resistant strains.

7.7.3.4. Grievance Redressal System

Every facility should have a robust grievance redressal mechanism. Apart from any centralized system introduced by the state (e.g., call centre), there should also be a method to lodge local complaints (e.g., complaints box, receipt provided for a complaint letter or an opportunity to meet with the Medical Superintendent). The facility-level GR help desk should operate 24x7 with full-time HR who will be responsible for registering and assisting in resolving the grievances, preventing disputes and maintaining a cordial environment in the facility. Facilitating resolution of grievances should be ensured by the Nodal Officer in real-time i.e., strive to resolve 60-70 % grievances immediately at the local level at the time of reporting.

These should be acted on in a timely manner and feedback provided to the complainant, wherever possible. A grievance redressal help desk at larger facilities (DH, SDH and large CHCs) will help resolve many complaints swiftly in real-time and this will build confidence in the system. In addition, there should be a time limit to resolve registered grievances; if this does not comply with it should automatically be escalated to the next higher level. This will strengthen efficiency and accountability. The escalation flow chart along with time limits and nodal persons is placed below.

Figure: Escalation of grievances from facility to state minister level
with time limits and nodal persons



7.7.3.5. Compliance with statutory norms

All the statutory Acts, rules and regulations must be strictly adhered to. It will be the duty of senior officials to comply with these and they can delegate roles and responsibilities to relevant officials along with a regular monitoring and feedback mechanism. The following is a comprehensive list though not necessarily an exhaustive one:

- No Objection Certificate from the Fire Authority
- Compliance with state by-laws and the National Building Code (NBC) for all infrastructure
- Gas cylinder rule 1981, ISO 7396-1:2016 and Indian Explosive Acts, 1984
- Authorisation under the revised Bio-medical Waste (Management and Handling Rules)
- Seismic Safety Guidelines
- Registration of Births and Deaths Act
- License for Blood Bank or Authorisation for Blood Storage facilities
- Consumer Protection Act
- Drugs and Cosmetics Act
- Indian Medical Council Act and the Code of Medical Ethics
- Indian Nursing Council Act
- Pharmacy Act
- Medical Termination of Pregnancy Act
- Persons with Disability Act
- PC & PNDT Act
- Mental Health Act
- Narcotics and Psychotropic Substances Act
- Authorisation and approval from the Atomic Energy Regulation Board (AERB)
- Boilers Act
- Excise permit to store spirits
- Vehicle Registration Certificates for Ambulances
- Clinical Establishment (Registration and Regulation) Act
- Right to Information Act

ANNEXURES

Logo Of State Government

CITIZENS' CHARTER

Logo Of NHM

Name Of The State ***Name Of The Facility & Type (DH/SDH) *** **Contact No: CS/MS: _____** **CMO:_____**

(This Facility Is KAYAKALP/NQAS/NABH/NABL/LaQshya* Certified)

Mission Statement & Objective:

The NHM envisages achievement of universal access to equitable, affordable & quality healthcare services as per IPHS for all with respect, dignity & without any discrimination.

General Information:

General beds (maternity, pediatric, geriatric, burns, and other special beds)

Critical care beds like HDU, ICU, SNCU, NICU/PICU, Emergency

Staff
* No of Specialists (If any).....
No. of GDMOs .....
No. of Nursing staff .....
No. of Paramedical staff .....
Any Other*.....

Services available:

Services		Days	Timings
OPD Services Including Specialist Services		Mon-Sat (except on public holidays)	8.00am- 2.00pm
Fixed Day Clinics			
NCD Clinic			
Family Planning Clinic			
Cardiology*			
Gastroenterology*/Endoscopy*/			
Adolescent Clinic			
Key Services available during OPD			
Antenatal Care (ANC)			
Immunization			
DEICs			
Critical Care Services- ICU/HDU/SNCU/PICU/NICU		24 x 7	
Emergency Services		24 x 7	
O.T. services	**Surgeries**		
	Orthopedics		
	Eye		
	ENT		
	General Surgery		
	Maternity OT (OBG-OT)	24 x 7	
Maternity Services (LDR, OBS-HDU/ICU)		24 x 7	
Laboratory	Central Lab	Mon-Sat	
	Emergency Lab	24 x 7	
Dialysis		Mon-Sat	
Pharmacy		Mon-Sat	
Blood bank		24 x 7	
Ambulance		24 x 7	
Medical Board			
Handicap Board			
Administrative Office Services		Mon-Sat	00.00-00.00
Medico-Legal and Post-mortem Services			

Available OPD Services:

- General Medicine
- General Surgery
- Obstetrics & Gynecology
- Pediatrics
- Eye
- ENT
- Skin
- Psychiatry
- Orthopedics
- Chest & TB Clinic
- Elderly & Palliative care Clinic
- Deaddiction & Tobacco cessation Clinic
- NCD Clinic
- Adolescent health Clinic
- ICTC / ART Centre/ STI Clinic*
- Dental Clinic
- AYUSH: Homoeopathy/Ayurveda etc.

Available IPD Beds:

- General beds: Male and female
- Surgical beds: Male and female
- Maternity beds
- Children beds
- Geriatric beds
- Private beds
- Burn beds
- Isolation beds
- NRC
- Dialysis Beds

Radiological Services:

- USG and X-ray: 24X7
- CT scan: *routine hours/linkages
- Cardio-diagnostics: ECG: 24X7

Support Services:

- CSSD & Mechanized Laundry
- Dietary services
- Security services
- Mortuary

Other Amenities & Services:

- Stretcher and wheelchair
- Separate queue for senior citizens
- Disabled & elderly-friendly facilities
- Potable water & Washroom facility
- Waiting areas
- Canteen
- Generic Drug store*

Free Entitlements:

- Free drugs as per the Essential Medicines List (EML)
- Free diagnostics as per Free Diagnostic Initiative (FDI) guidelines
- 24x7 Ambulance services & drop back for PW/infants
- Blood transfusion services
- Dietary services
- Services under Pradhan Mantri Jan Aarogya Yojana (PM-JAY) *, Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA), SUMAN, Janani Suraksha Yojana (JSY), Janani Shishu Suraksha Karyakaram (JSSK) & Mission Indradhanush

Financial Benefits:

Schemes	Benefits	
Janani Suraksha Yojana (JSY)		
Compensation for Family Planning procedures ○ Tubectomy ○ NSV ○ IUCD ○ Indemnity Scheme		
National TB Elimination Programme (NTEP)		

#Paid Services: *(If applicable)*

*The user fee for the payable services is displayed in the respective service areas. Do not pay any extra money to anybody.

*National Programs being implemented in the Facility:

- Janani Suraksha Yojana (JSY)
- Janani Shishu Suraksha Karyakaram (JSSK)
- Routine Immunization & Mission Indradhanush
- Integrated Disease Surveillance Programme (IDSP)
- National AYUSH Mission (NAM)
- National Mental Health Program (NMHP)
- National Oral Health Program (NOHP)
- National AIDS Control Programme (NACP)
- National Leprosy Eradication Programme (NLEP)
- National TB Elimination Programme (NTEP)
- National Viral Hepatitis Control Programme (NVHCP)
- National Vector Borne Diseases Control Programme (NPCVBP)
- National Programme for the Health Care for the Elderly (NPHCE)
- National Tobacco Control Programme(NTCP)
- National Programme for Control and Treatment of Occupational Diseases
- National Programme for Prevention and Control of Deafness (NPPCD)
- National Programme for Control of Blindness (NPCB)
- National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke(NPCDCS)
- National Programme for Palliative Care (NPPC)
- National Iodine Deficiency Disorder Control Programme (NIDDCP)
- National Programme for Prevention & Management of Burn Injuries (NPPMBI)
- Rashtriya Kishor Swasthya Karyakram (RKSK)
- Rashtriya Bal Swasthya Karyakram (RBSK)
- Affordable Medicines and Reliable Implants for Treatment (AMRIT)
- Pradhan Mantri National Dialysis Programme
- Surakshit Matritva Aashwasan (SUMAN)

(State specific Programs to be entered)

Patient Rights:

- Right to informed consent prior to specific treatment/tests and digitalization of medical records
- Right to confidentiality and privacy during treatment
- Right to be treated with respect and dignity without any discrimination
- Timely release of dead body commensurate to legal protocols
- Right to emergency care and grievance redressal

Patient Responsibilities:

- Respect dignity of doctors and other hospital staff
- Never resort to violence
- Please refrain from causing any damage to public property
- Please do not cause inconvenience to other patients and staff
- Maintain queues and respect others, particularly the elderly, disabled, women & children
- Please do not spit on the floor/walls/ inside the campus
- Please cooperate to keep the facility clean and tidy. Use the dustbin
- Hospital is a no smoking zone and smoking is a punishable offence
- Please register your experience through Mera Aspataal

Visitor's Policy:

Visiting time: Morning: Evening:
Only one person allowed to visit at a time *(Mention about pass system)
Respect visiting hours.

Complaints And Grievances:

- Any Patient/ Attendant can register their grievance through Grievance Redressal (GR) Helpdesk/ calling toll free number (...)/ online GR web portal (www…)
- Every grievance will be duly acknowledged with an SMS and registration number for status tracking.
- We aim to respond to your complaints within (7) days of its receipt.
- Suggestions/Complaints may also be put in the complaint boxes provided at every department.
- Contact details of the RTI officer are displayed below:

GR Help Desk:

- Toll free number:
- Designated officer: (with Mobile & Email)

Funds:

*RKS detail
*Untied fund detail – Rs. 10,00,000/-

Teaching, Training & Tele-Consultation Services

- ANM/GNM Training Facility
- DNB/ CPS courses- (Mention specialties*)
- CHO/ MLHP training
- Skill lab
- Tele-medicine, Tele-radiology training
- Tele-conferencing – ECHO, ZOOM training

Note: The details of the nodal person can be displayed based on the program requirements. '*'marked points can be edited according to the conditions/services provided in the respective facility.
'@' Indicate amount, as applicable

Note - This is a suggestive draft for DH & SDH. The states can add or delete as per the services available at the facility.

ANNEXURE 2

Service Areas

Service Area	Sub District Hospital	District Hospital					
	100 beds	**50 beds**	**100 beds**	**200 beds**	**300 beds**	**400 beds**	**500 beds**
24x7 Emergency Care	11 (3R+5Y+ 1I+ 2P)	7 (2R+2Y+ 1I+ 2P)	11 (3R+5Y+ 1I+ 2P)	21 (5R+10Y+ 2I+ 4P)	26 (6R+12Y+ 2I+ 6P)	37 (10R+15Y+ 4I+ 8P)	44 (10R+20Y+ 4I+ 10P)
Heat Stroke Room	D	D	D	D	D	D	D
Critical Care							
General HDU(including Isolation)/ICU with designated beds for paediatric cases	5 bed-HDU+2 pedaitrics HDU	5 bed - HDU	5adult + 2 paediatric HDU	6 adult + 2 paediatric HDU & 3 adult + 1 Paediatric ICU	8 adult + 4paediatric HDU & 4 adult + 2 paediatric ICU	10 adult + 4 paediatric HDU & 4 adult + 2 paediatric ICU	10 adult + 6 paediatric HDU & 4 adult + 3 paediatric ICU
Polytrauma Unit	Integrated with emergency	Integrated with emergency	Integrated with emergency	Integrated with emergency	Integrated with emergency	Integrated with emergency with additional 4 polytrauma beds	Integrated with emergency with additional 4 polytrauma beds
Obstetric HDU (including Isolation)/ICU	7 HDU & 2 ICU	2HDU(D)	7 HDU & 2 ICU	8 HDU & 2 ICU	8 HDU & 4 ICU	10 HDU & 6 ICU	12 HDU & 6 ICU
SNCU + NICU	12 (SNCU)	6 (SNCU)	12 (SNCU) + 4 (NICU)	16 (SNCU) + 4 (NICU)	20 (SNCU) + 6 (NICU)	24 (SNCU) + 6 (NICU)	24 (SNCU) + 8 (NICU)
MNCU	12 beds	6 beds	12 beds	30 beds	39 beds	45 beds	48 beds
Dialysis	4+1	4 +1	4 +1	4 +1	8 +2	8 +2	8 +2
NRC	10(D)	6(D)	10(E)	15(E)	20(E)	30(E)	30(E)
LDR Complex							
Labour Delivery Recovery (LDR) Units	3(1MLCU+1 DLU+1 Isolation)	3(1MLCU+1 DLU+1 Isolation)	4(2MLCU+1 DLU+1 Isolation)	6(3MLCU+2 DLU+1 Isolation)	10(5MLCU+4 DLU+1 Isolation)	15(7MLCU+6 DLU+1 Isolation)	15(7MLCU+6 DLU+1 Isolation)
Operative Services							

Service Area	Sub District Hospital	District Hospital					
	100 beds	**50 beds**	**100 beds**	**200 beds**	**300 beds**	**400 beds**	**500 beds**
Pre- Anaesthetic Check up	E	E	E	E	E	E	E
Round the Clock OT							
Emergency OT	E	E (Merged with Emergency and General OT)	E	E	E	E	E
Ob-Gyn OT	E (Merged with General OT)		E (Merged with General OT)	E	E	E	E
Elective OT							
General	-	-	-	E	E	E	E
Eye	E	E	E	E	E	E	E
Orthopaedics	-	-	-	-	E	E	E
Out-Patient Services							
Medicine	E	E	E	E	E	E	E
Surgery	E	E	E	E	E	E	E
Paediatrics	E	E	E	E	E	E	E
Obstetrics and Gynaecology	E	E	E	E	E	E	E
Ophthalmology	E	E	E	E	E	E	E
Orthopaedics	E	E	E	E	E	E	E
ENT	E	E	E	E	E	E	E
Oral/Dental	E	E	E	E	E	E	E
Pathology/Microbiology/ Biochemistry	E	E	E	E	E	E	E
Family Medicine	D	D	D	D	D	D	D
Dermatology	D	D	E	E	E	E	E
Psychiatry	D	D	E	E	E	E	E
Oncology	-	-	-	D	D	D	D
Neonatology	-	-	-	D	D	E	E
Cardiology	-	-	-	D	D	D	D
Gastroenterology	-	-	-	D	D	D	D

Service Area	Sub District Hospital	District Hospital					
	100 beds	**50 beds**	**100 beds**	**200 beds**	**300 beds**	**400 beds**	**500 beds**
Nephrology	-	-	-	D	D	D	D
Urology	-	-	-	D	D	D	D
Geriatric	-	-	-	D	D	D	D
Neurology	-	-	-	-	D	D	D
NCD	E	E	E	E	E	E	E
Counselling	E	E	E	E	E	E	E
Family Welfare Clinic	E	E	E	E	E	E	E
Nutrition	E	E	E	E	E	E	E
AYUSH	D	D	D	D	D	D	D
Health, Wellness Service	E	E	E	E	E	E	E
Immunization Services	E	E	E	E	E	E	E
Physiotherapy	E	E	E	E	E	E	E
Physical Medicine and Rehabilitative Services	D	-	D	D	E	E	E
Integrated services for Hemoglobinopathies & Haemophilia	D	D	D	D	E	E	E
In Patient Services							
Wards	2	2	2	3	5	8	10
Beds including: Surgery, Medicine, ObGyn, Paediatrics, Orthopaedics, Eye, Geriatric/Palliative, Mental	55	33	35	90	150	210	300
Isolation beds				8 beds	8 beds	10 beds	10 beds
Prison Ward/Beds				4 beds	5 beds	5 beds	5 beds
Private Ward/Beds	5 beds	-	5 beds	5 beds	16 beds	20 beds	20 beds
Burn Ward/Beds	6*D	3 Beds	6 Beds	6 Beds	6 Beds	10 Beds	10 Beds
Day Care Beds	4 beds	4 beds	6 beds	8 beds	10 beds	10 beds	15 beds

Service Area	Sub District Hospital	District Hospital					
	100 beds	**50 beds**	**100 beds**	**200 beds**	**300 beds**	**400 beds**	**500 beds**
Care of sick/low birth weight newborn	E	E	E	E	E	E	E
Diagnostics							
Number of Lab tests	111	134	134	134	134	134	134
Radiology							
USG with colour doppler (including for new born)	E	E	E	E	E	E	E
Digital X-Ray	E	E	E	E	E	E	E
Mobile X-Ray	E	E	E	E	E	E	E
Radio-Visio-Graph (RVG) – digital dental X-Ray	E	E	E	E	E	E	E
Orthopantomogram (OPG)	-	-	E	E	E	E	E
CT Scan	-	D	D	E	E	E	E
Mammography	-	-	-	D	E	E	E
C-arm	-	-	-	D	E	E	E
Barium swallow, Barium meal, Barium enema, IVP	-	D	D	E	E	E	E
Electrocardiography (ECG)	E	E	E	E	E	E	E
Echocardiogram	-	-	-	-	D	D	D
Magnetic Resonance Imaging (MRI)	-	D	D	D	D	D	D
Electroencephalography (EEG)	-	-	D	D	D	D	D
Physical Medicine & Rehabiliatation(PMR)							
Nerve Conduction Velocity (NCV)	D	-	D	D	E	E	E
Electromyography (EMG)	D	-	D	D	E	E	E
Visual Evoked Potential (VEP)	D	-	D	D	E	E	E

Service Area	Sub District Hospital	District Hospital					
	100 beds	**50 beds**	**100 beds**	**200 beds**	**300 beds**	**400 beds**	**500 beds**
Support Services							
Blood Bank	Blood Storage Unit	E	E	E	E	E	E
ART Services	E	E	E	E	E	E	E
Medical Record Room (MRD)	E	E	E	E	E	E	E
Registration Counter	E	E	E	E	E	E	E
Pharmacy	E	E	E	E	E	E	E
Store	E	E	E	E	E	E	E
Central Sterile Supply Department (CSSD)	E	E	E	E	E	E	E
Mechanized Laundry	E	E	E	E	E	E	E
Kitchen	E	E	E	E	E	E	E
Dental Lab	D	E	E	E	E	E	E
Medical Gas Pipeline System	E	E	E	E	E	E	E
Effluent Treatment Plant (ETP)	E	E	E	E	E	E	E
Power Sub-Station/ Transformer	E	E	E	E	E	E	E
Overhead Water Tank – two independent water sources. Separate tank for critical care areas – 500 L water per bed per day	58000 L	33000 L	66500 L	124000 L	179500 L	235000 L	287500 L
Special Services							
Comprehensive Lactation Management Centre (CLMC)	-	-	-	E	E	E	E
District Early Intervention Centre (DEIC)	Screening	E	E	E	E	E	E
Nutritional Rehabilitation Centre (NRC)	D	D	E	E	E	E	E

Service Area	Sub District Hospital	District Hospital					
	100 beds	50 beds	100 beds	200 beds	300 beds	400 beds	500 beds
Academic Area							
Teaching Block (Medical, Nursing, Allied Health Professionals)	-	D	E	E	E	E	E
Library	-	D	E	E	E	E	E
Skill Lab	-	E	E	E	E	E	E
Telemedicine	D	D	D	D	D	D	D
Administrative Area							
Administrative Offices/ Areas	E	E	E	E	E	E	E
Birth and Death Registrations	E	E	E	E	E	E	E
Disability Certification Services	D	E	E	E	E	E	E
Server Room	E	E	E	E	E	E	E
Housekeeping Room	E	E	E	E	E	E	E
Staff Room	E	E	E	E	E	E	E
Ambience							
Digital Token System and Computerised Registration	E	E	E	E	E	E	E
Cafeteria	D	D	D	D	D	D	D
ATM	D	D	D	D	D	D	D
Parking	E	E	E	E	E	E	E
Garden	E	E	E	E	E	E	E
GR Help Desk	E	E	E	E	E	E	E
Water Harvesting	E	E	E	E	E	E	E
Residential Area							
Staff Residences	E	E	E	E	E	E	E
Hostel for Trainees	D	D	D	D	D	D	D

Service Area	Sub District Hospital	District Hospital					
	100 beds	**50 beds**	**100 beds**	**200 beds**	**300 beds**	**400 beds**	**500 beds**
Guest House for Patient Attendants	D	D	D	D	D	D	D
Other Services							
Mortuary	-	E	E	E	E	E	E
Ambulance(Linked Services)	E	E	E	E	E	E	E
Medicolegal Services	-	E	E	E	E	E	E

Note:-The services mentioned as desirable are over and above the essential services.

ANNEXURE 3

List of Service and Procedures

Following services mix of procedures in medical and surgical specialties would be available in a District Hospital. The list is only indicative and not an exhaustive one. The diseases as prevalent in the district should be treated appropriately.

Name of Procedure	SDH 100 beds	District Hospitals					
		50 beds	100 beds	200 Beds	300 beds	400 beds	500 beds
Out-Patient Department							
Dressing, Injection, (I/M, subcutaneous & I/V), Nebulisation, Enema, Cast application, NG tube insertion, Immunization, Suture removal, Skin scraping for fungus/AFB, Resuscitation.	E	E	E	E	E	E	E
In-Patient Department							
Dressing, Injection, (I/M, subcutaneous & I/V), Nebulization, Enema, Cast application, NG tube insertion, Immunization, Suture removal, Sitz bath, Catheterization/Suprapubic Catheterisation, bowel wash, blood transfusion, Skin scraping for fungus/AFB, ICD incertion, CVP line insertion, thoracocentesis, abdomen paracentesis, PICC (Perpherally Inserted Central Catheter) line insertion, Lumbar puncture, ET intubation, Stomach wash, Hydrotherapy, Venous cutdown, Resuscitation and Ventilation.	E	E	E	E	E	E	E
Dermatology (Skin) Procedures							
Vitiligo surgery, Scar revision, RFA, Micro needling, excisions, Electro cautery, Intra lessional injection, Chemical cautery, Skin scraping for fungus/AFB, Skin biopsy, Punch biopsy.	D	D	E	E	E	E	E
Medical Procedures							
Pleural Aspiration, Pleural biopsy, Bronchoscopy, Lumbar puncture, Pericardial tapping, Abdominal tapping, Liver biopsy, Liver aspiration, Fibreoptic endoscopy, Peritoneal dialysis, Haemodialysis, Bone marrow biopsy, Pleural/Ascites tap	E	E	E	E	E	E	E
Paediatric & Neonataology Procedures							
Immunization (As per National Immunization Schedule), Vit K for premature babies, Neonatal resuscitation, Antenatal corticosteroid to mother in case of pre term babies, umbilical vein/artery catheterization, phototherapy, Exchange transfusion, ET & TT intubation, ICD insertion, Lumbar puncture, PICC line insertion, CVP line insertion, Arterial catheterization, Bone marrow aspiration, Venous cut down, Venipuncture, NG tube insertion.	E	E	E	E	E	E	E

Name of Procedure	SDH 100 beds	District Hospitals					
		50 beds	100 beds	200 Beds	300 beds	400 beds	500 beds
Surgical Procedures for Paeditric age group							
Minor surgery, I & D abscess, Gland biopsy, Small soft tissue tumour (Benign), Big soft tissue tumour, Exploratory laparotomy, Neonatal Intestinal obstruction/resection/atresia, Branchial cyst/fistula/sinus, Thyroglossal cyst and fistula, Pyloric stenosis (Ramsted's Operation), Gastrostomy, colostomy, Prepuceal dilatation & Meatotomy, reduction paraphimosis, Torsion of testis, Hypospadias single stage (first stage), Orchidopexy (unilateral & bilateral), Umbilical hernia/epigastric hernia repair, Inguinal herniotomy (unilateral & bilateral), Rectal polyp removal, Deep abscess, Sacrococcygeal teratoma	E	E	E	E	E	E	E
Obstetrics & Gynaecology Procedures							
Female sterilization (Mini laparotomy & Laparoscopic ligation), Antenatal, Intranatal, Postnatal checkups, Normal vaginal delivery, Vacuum assisted delivery, Assisted breech delivery, Forceps delivery, Cervical/Perineal tear repair, Mid trimester abortion, Caesarean section, Ectopic pregnancy surgery (unruptured/ruptured), Craniotomy-dead Foetus/Hydrocephalus, Examination Under Anaesthesia (EUA), Dilatation & Curettage (D&C), MTP (Medical Method & Surgical Methods, IUD services (insertion & removal), Contraceptives including emergency contraceptives, Fine Needle Aspiration Cytology (FNAC), PAP smear and biopsy, Colposcopy, Cervical VIA staining, Cervical biopsy, Hysteroscopy, Endometrial aspiration and biopsy, Cervical cautery (Electro/Cryo cautery), Bartholin cyst excision, Laparoscopy diagnostic/operative, Emergency & exploratory laparotomy (Uterine perforation, septic abortion, Twisted Ovarian, Pelvic abscess, Ectopic pregnancy), Hysterotomy, Sling operation, Tuboplasty, Haematocolpos drainage colpotomy, Ovarian cystectomy/oophorectomy, Vaginal hysterectomy, Abdominal hysterectomy.	E	E	E	E	E	E	E
Surgical Procedures							
Appendicectomy, Fissurotomy or fistulectomy, cholesystectomy, haemorrhoidectomy, Circumcision, Hydrocelectomy, Herniorrhaphy, Suprapubic cystostomy, Urethral dilatation, Diagnostic laparoscopy, Craniotomy-dead foetus/hydrocephalus, Forceps delivery, Caesarean section, Non-Scalpel Vasectomy (NSV), FNAC, Superficial & total parotidectomy, Intra-oral removal of submandibular duct calculus,	E	E	E	E	E	E	E

Name of Procedure	SDH 100 beds	District Hospitals					
		50 beds	100 beds	200 Beds	300 beds	400 beds	500 beds
Abscess drainage (including breast & perianal), Wound debridement, Excision branchial cyst or Fistula or Sinus, Excision of lingual thyroid, Hemithyroidectomy (Sub-total thyroidectomy/lobectomy), Cysts and benign tumour of the palate, Excision submucous cysts. **Breast** *Fibroadenoma/Lump Excision, Simple mastectomy, Modified radical mastectomy (multi-disciplinary approach), Sectoral mastectomy/ microdochectomy/Lumpectomy, Wedge biopsy, Mammary fistula excision,* **Hernia** *Inguinal hernia repair, Inguinal hernia repair with mesh, Femoral hernia repair, Epigastric/ventral hernia repair, Recurrent Inguinal hernia repair, Ventral hernia repair with mesh, Operation of strangulated ventral, Inguinal or Incisional hernia, Recurrent Incisional hernia repair, Diaphragmatic hernia repair.* **Abdomen** *Exploratory laparotomy, Gastrostomy or Jejunostomy, Simple closure of perforated ulcer, Ramstedt's Operation, Gastro-Jejunostomy, Vagotomy & drainage procedure, Adhesionolysis or division of bands, Mesenteric cyst, Retroperitoneal tumour excision, Intussusception (Simple Reduction), Burst abdomen repair, Splenectomy* **Pancreas** *Drainage of Pseudo pancreatic cyst (Cystogastrectomy), Retroperitoneal drainage of Abscess,* **Appendix** *Emergency appendicectomy, Interval appendicectomy, Appendicular abscess drainage***,** **Small Intestine** *Resection and anastomosis. Intussusception, Intestinal fistula repair, Multiple resection and anastomosis, Intestinal perforation repair*							
Liver *Open Drainage of liver abscess, Drainage of Subdiaphragmatic Abscess/Peri gastric abscess Hydatid cyst excision.*							

Name of Procedure	SDH 100 beds	District Hospitals					
		50 beds	100 beds	200 Beds	300 beds	400 beds	500 beds
Biliary System *Cholecystectomy (Open and laparoscopic), Choledocholithotomy & choledochoduodenostomy* **Colon, Rectum and Anus** *Right hemicolectomy, Sigmoid & descending colectomy, Haemorrhoidectomy, Sphincterotomy and fissurectomy, Tube caecostomy, Closure of loop colostomy, Rectal prolapse repair, Anal sphincter repair, Thiersch's operation, Volvulus of colon, Resection anastomosis, Imperforate anus with low opening repaire, Pilonidal sinus repaire, Fistula in ano (low level) repair, Fistula in ano (high level) with Stenosis repair, Colostomy, Perianal abscess drainage, Ischiorectal abscess, Ileostomy or colostomy, Sigmoid myotomy.* **Penis, Testes, Scrotum** *Circumcision, Partial amputation of penis, Total amputation of penis, Orchidopexy (unilateral & bilateral), Orchidectomy (unilateral & bilateral), Hydrocele (unilateral & bilateral), Excision of multiple sebaceous cysts of scrotal skin, Reduction of paraphimosis*							
Other Surgical Procedures							
Suturing of large laceration, Suturing of small wounds, Repair torn ear lobule, Small superficial tumour excision, Large superficial tumour excision, Incision and drainage of abscess, Lymph node biopsy, Excision biopsy of superficial lumps, Excision biopsy of large lumps, Injection haemorrhoids/ganglion/keloids, Removal of foreign body (superficial), Removal of foreign body (deep), Excision biopsy of ulcer, Excision of sebaceous cyst, Excision carbuncle, Excision multiple cysts, Excision soft tissue tumour muscle group, Muscle biopsy, Tongue tie, Debridement of wounds, Diabetic foot debridement/management, In-growing toe nail removal. *Burn dressing- all grades, Ear lobules repair one side (bilateral), Simple wound, Complicated wound, Cleft lip, Simple injury fingers, Multiple fingers injury, Congenital deformity repair (Extra digit, Syndactyly, Constriction rings), Reconstruction of hand (Tendon repair), Polio Surgery, Surgery concerning disability with Leprosy, Surgery concerning with TB.*	**E**	**E**	**E**	**E**	**E**	**E**	**E**
Face Scar – *Simple, Cleft palate, Small wound skin graft, Finger injury with skin graft, Crush injury hand, Full thickness graft.*	**D**	**D**	**D**	**E**	**E**	**E**	**E**

Name of Procedure	SDH 100 beds	District Hospitals					
		50 beds	100 beds	200 Beds	300 beds	400 beds	500 beds
Ophthalmology Procedures							
Ophthalmology OPD Procedures *Refraction (using Snellen's Chart), Refraction (using auto refractometer), Syringing and probing, Foreign body removal (Conjunctival), Foreign body removal (Corneal), Epilation, Suture removal, Sub-conjunctival injection, Retrobulbar injection (Alcohol etc.), Tonometry, Biometry/keratometry, Automated perimetry, Pterygium excision, Syringing & probing, I & C of chalazion, Wart excision, Stye/chalazion surgery, Cauterization (thermal), Conjunctival resuturing, Corneal scraping, Lid abscess incision & drainage (I&D), Uncomplicated lid tear, Indirect ophthalmoscopy, Retinoscopy.*	**E**	**E**	**E**	**E**	**E**	**E**	**E**
Ophthalmology IPD Procedures *Examination under General Anaesthesia, Canthotomy, paracentesis, Air injection & resuturing, Enucleation with implant, Enucleation without implant, Perforating corneo-scleral injury repair, Cataract extraction with IOL (including Phacoemulsification), Glaucoma surgery (e.g., Trabeculectomy), Corneal perforation/Iris prolapse surgery, Small lid tumour excision, Conjunctival cyst, Capsulotomy, Anterior chamber wash, Evisceration.*	**E**	**E**	**E**	**E**	**E**	**E**	**E**
ENT Procedures							
ENT OPD Procedures *Foreign body removal (Ear and Nose), Stitching of cut lacerated wounds (CLW's), Dressings, Syringing of ear, Chemical cauterization (Nose & Ear), Eustachian tube function test, Vestibular function test/ Caloric test, Audiogram (Pure tone and Impedance).*	**E**	**E**	**E**	**E**	**E**	**E**	**E**
ENT IPD Procedures							
Minor Procedures *Therapeutic removal of granulations (Nasal, aural, oropharynx), Punch Biopsy (Oral Cavity & oropharynx), Cauterization (Oral, oropharynx, aural & nasal)* **Ear Surgery** *Mastoid abscess I & D, Mastoidectomy, Stapedotomy, Examination under microscope, Myringotomy, Myringoplasty, Tympanoplasty, Ear piercing, Hearing aid analysis and selection,*	**E**	**E**	**E**	**E**	**E**	**E**	**E**

Name of Procedure	SDH 100 beds	District Hospitals					
		50 beds	100 beds	200 Beds	300 beds	400 beds	500 beds
Nose Surgery *Nasal endoscopy & endoscopic sinus surgery, Packing (anterior & posterior nasal), Antral puncture (unilateral & bilateral), Inter nasal antrostomy (unilateral & bilateral), I & D septal abscess (unilateral & bilateral), Sub mucosal resection (SMR), Septoplasty, Fracture reduction nose, Fracture reduction nose with septal correction, Trans antral procedures (Biopsy, excision of cyst and angiofibroma excision), Trans antral biopsy, Rhinoplasty, Septoplasty with reduction of turbinate (Sub-Mucosal Diathermy(SMD))* **Throat Surgery** *Adenoidectomy, Tonsillectomy, Adenoidectomy + Tonsillectomy, Frenuloplasty (Tongue tie excision)* **Endoscopic ENT Procedures** *Direct laryngoscopy, Hypopharyngoscopy, Direct laryngoscopy & biopsy, Bronchoscopy (diagnostic), Bronchoscopic F B removal.* **General ENT Surgery** *Stitching of CLW (Nose & Ear), Preauricular sinus excision, tracheostomy*							
Desirable: Tonsillectomy, Mastoidectomy, Stapedotomy							
Psychiatry Procedures (IPD & OPD)							
Modified Electroconvulsive Therapy (ECT), Narcoanalysis	**D**	**D**	**E**	**E**	**E**	**E**	**E**
Orthopaedics Procedures							
Hip Surgery, Femoral neck nailing with or without plating replacement prosthesis/Upper femoral osteotomy; Innominate osteotomy/open reduction of hip dislocation; DHS/Richard screw plate, Synovial or bone biopsy from Hip, Girdle stone Arthroplasty, Arthroscopy **Fractures** *Open Reduction Internal fixation (ORIF) of femur, Tibia, Humerus, Radius, Ulna, Sternum; Inter-condylar fracture of humerus and femur, Open reduction and Internal fixation bimalleolar fracture, Fracture dislocation of ankle, Montaggia fracture dislocation, Fracture medial/ lateral condyle of humerus, Olecranon fracture, Fracture head of*	**E**	**E**	**E**	**E**	**E**	**E**	**E**

Name of Procedure	SDH 100 beds	District Hospitals					
		50 beds	100 beds	200 Beds	300 beds	400 beds	500 beds
Patellar fracture and fracture of calcaneum or talus, Single forearm bone fracture; External fixation - Pelvis, femur, tibia, humerus, forearm, External fixation of hand & foot bones; Tarsals, metatarsals, Phalanges, Carpals, Metacarpals, Excision head fibula, Lower end of ulna; Drainage of fracture, Interlocking nailing of long bones, Debridement & secondary closure, Percutaneous fixation (small and long bones), **Closed Reduction** *Closed reduction of Cervical bones, Forearm or Arm, Leg, Thigh, Wrist, Ankle, Dislocation Elbow, Shoulder, Hip, Knee; Closed Fixation of hand/ foot bone, Shoulder dislocation, knee dislocation, Acromioclavicular or Sternoclavicular Joint, Clavicle, Ankle Bimalleolar* **Open Reduction and Others** *Open reduction, Ankle trimalleolar Open reduction, Wrist dislocation on intercarpal joints, MP & IP Joints, Knee synovectomy/meniscectomy, Fasciotomy leg/forearm, High tibial osteotomy, Arthrodesis (shoulder, elbow, wrist, hip, knee, ankle), Triple arthrodesis, Arthrodesis – MP & IP Joints, Excision of exostosis-long bones, (single/double), Curettage/ bone grafting of bone tumour of femur/tibia, Humerus & forearm, Surgery tumours of small bone, hand and foot, Debridement & primary closure of compounds fracture of tibia, Femur forearm without fixation, Debridement of hand/foot, Debridement primary closure of compound fractures of tibia, Femur forearm with fixation, Tendon surgery soft tissue release in club foot, Internal fixation of small bone (single, two, more than two), Tendon surgery (repair and lengthening), Surgery of chronic osteomyelitis (Saucerization, sequestrectomy of femur, humerus, tibia), Fibula radius ulna (Clavicle) and wrist, Ankle, hand, foot; Amputation (thigh or arm, leg or forearm, feet or hand, digits), Disarticulation of hip or shoulder (disarticulation of knee elbow/wrist/ankle; fore-quarter or hind-quarter), POP Application (Hip spica, Shoulder spica POP Jacket; A-K/A-E POP; B-K/ B-E POP), Corrective osteotomy of long bones, Excision arthroplasty of elbow & other major joints; Excision arthroplasty of small joints, Surgery of hallus valgus, Bone surgery (Needle biopsy, axial skelton, non-axial), Removal of nail AO plates, Removal forearm nail, Screw,*							

Name of Procedure	SDH 100 beds	District Hospitals					
		50 beds	100 beds	200 Beds	300 beds	400 beds	500 beds
radius, Fracture lower end of radius, Fracture medial malleolus, Wires, Skeletal traction femur, Tibia, Calcaneus, Elbow, Bone grafting (small grafting and long bone), In-growing toenail, Soft tissue biopsy, Skin graft (small, medium and large), Patellectomy, Olecranon fixation, Open ligament repair of elbow, Ankle & wrist, Arthrotomy of hip/ shoulder/elbow, Carpal tunnel release, Dupuytren's contracture, Synovectomy of major joint shoulder/hip/elbow, Repair of ligaments of knee, Closed nailing of long bones, External fixator readjustment/ dynamization, Removal of external fixation, Removal of implant, Excision of soft tissue tumour muscle group *Desirable:-* *Total Hip Replacement (Desirable), Total Knee Replacement (Desirable)*							
Physiotherapy Procedures							
With Electrical Equipment *Computerized tractions (Lumbar & Cervical), Short wave diathermy, Electrical stimulator with TENS, Electrical stimulator, Ultra sonic therapy, Paraffin wax bath, Infra red therapy, Ultraviolet therapy, Electric vibrator, Vibrator belt massage***.** **With Mechanical Gadgets/Excercises** *Mechanical tractions (lumber & cervical), Exercycle, Shoulder Wheel, Shoulder pulley, Supinator pronator bar, Gripper, Vissco weight cuffs, Walking bars, Post polio exercise, Obesity exercises, Cerebral Palsy – Massage, Breathing exercises & Postural drainage.*	**E**	**E**	**E**	**E**	**E**	**E**	**E**
Physical, Medicine and Rehabilitation Procedures							
Electromyography, Nerve conduction studies, Musculo-skeletal ultrasound, Peripheral Joint Injections, Trigger Point Injections, Prosthetics.	**D**	**-**	**D**	**D**	**E**	**E**	**E**
Dental Procedures							
, Dental abscess drainage/dental cleaning/gingivitis treatment, Periodontal surgeries, Minor surgeries, Impaction, Flap, Malocclusion; Dental restoration, Prosthodontia (Prosthetic treatment), Trauma including vehicular accident, Maxillo facial and periodontal surgeries, Neoplasms, Sub mucus fibrosis (SMF), Scaling (crown and root)	**E**	**E**	**E**	**E**	**E**	**E**	**E**

Name of Procedure	SDH 100 beds	District Hospitals					
		50 beds	100 beds	200 Beds	300 beds	400 beds	500 beds
and polishing, Root canal treatment, Dental extractions, dentures (complete or partial), Light Cure Crowning, Subluxation and arthritis of Temporomandibular Joints, Pre-cancerous lesions and Leukoplakias, Intra Oral X-ray/Intra Oral Peri-Apical radiograph (IOPA), Fracture wiring, Apicectomy, Gingivectomy, Removal of cyst							
Oncology Procedures							
Cervical PAP smear, FNAC, Cytological examination of body fluids, Immunohistochemistry, Chemotherapy, regional perfusion chemotherapy, Hyperthermic intrathoracic chemotherapy.	-	-	-	D	D	D	D
Cardiology Procedures and Diagnostic Tests							
Electrocardiography (ECG), Treadmill Test (TMT), Holter monitoring, Thrombolytic therapy, CVP line, DC Cardioversion), Nitro-glycerine (NTG)/Lidocaine Infusion, Echocardiography, Pericardial tapping	-	-	-	D	D	D	D
Special Diagnostic Procedures							
Upper GI Endoscopy (Oesophagus, stomach, duodenum) (Diagnostic and Therapeutic), Sigmoidoscopy and Colonoscopy, Cystoscopy, Bronchoscopy and foreign body removal, Arthroscopy (diagnostic and therapeutic), Laparoscopy (diagnostic and therapeutic), Colposcopy, Hysteroscopy.	-	-	-	D	D	D	D
Nephrology Procedures							
Dialysis, Peritoneal/hemodialysis/Sustained Low Efficiency Daily Dialysis (SLEDD), Fistulogram, AV fistula creation/salvage procedures, Permacath insertions, AV graft creation, Plasmapherasis.	-	-	-	D	D	D	D
Urology Procedures							
Vesico-vaginal fistula repair, Dilatation of stricture urethra under GA, Dilatation of stricture urethra without anaesthesia, Meatotomy, Closure of urethral fistula, Simple nephrostomy, Trocar cystostomy, Nephrolithotomy, Pyelolithotomy, Ureterolithotomy, Cystolithotomy suprapubic, Implantation of ureters, Nephrectomy, Open prostatectomy, Testicular biopsy	-	-	-	D	D	D	D
Neurology Services							
Electroencephalography(EEG), Video EEG, Nerve conduction study, Responsive neurostimulation, EMG, Visual evoked potential, Brainstem auditory evoked response, Videonyotamography.	-	-	-	-	D	D	D

**Disability Certification Services- There are 23 types of disabilities listed (as per Rights of persons with Disability 2016) which may be certified by respective specialists or the facility in-charge may constitute a board for issuing disability certificate.*

Recommended Service Mix (suggested actions) for different illnesses concerning different specialities

Sr. No.	Type of Illnesses	Recommended Services (Suggestive)
Obstetric		
1	Normal ANC	Manage as per standard protocol
2	Medical disorders complicating pregnancy (Heart disease, Diabetes, Bronchial asthma, Hepatitis, Renal disorders, Respiratory disorders, Tuberculosis, Anaemia, RH negative pregnancy)	Investigate, manage and refer if necessary
3	Complications during first trimester pregnancy (Bleeding, Hyperemesis etc.)	Investigate, manage and refer if necessary
4	Complications during second trimester pregnancy (Bleeding, Hyperemesis etc.)	Investigate, manage and refer if necessary
5	Complications during third trimester (APH/Placenta Previa)	Manage and refer if necessary
6	Hypertensive disorders in pregnancy (Severe preeclampsia & Eclampsia)	Investigate, manage and refer if necessary
7	Placenta Accreta/Increta/Percreta	Investigate, manage and refer if necessary
8	Ectopic pregnancy	Manage as per standard protocol
9	Normal delivery (induction of labour)	Manage as per standard protocol
10	Abnormal labour (Mal presentation, Prolonged labour, Pre-term labour, IUGR, Mal position, Cord prolapse PROM, Obstructed labour, Rupture uterus)	Manage as per standard protocol, refer if deemed necessary
11	Post Partum Hemorrhage (PPH)	Manage as per standard protocol
12	Puerperal sepsis	Manage as per standard protocol
13	Septic abortion & Incomplete abortion	Manage as per standard protocol
14	Gestational trophoblastic diseases	Investigate, manage and refer if necessary
15	Intra-uterine death	Investigate, manage and refer if necessary
16	Surgical disorders with pregnancy (Previous LSCS/Fibroid uterus/Ovarian mass)	Investigate, manage and refer if necessary
17	Bleeding disorders in pregnancy	Investigate, manage and refer appropriately
Gynecology		
1	Reproductive tract infections (RTI)/Sexually transmitted infections (STI)	Investigate and manage
2	Dysfunctional uterine bleeding	Investigate and manage
3	Benign disorders (fibroid, prolapse, ovarian masses & Torsion, endometriosis) Initial investigation at PHC/Gr III level	Investigate and manage
4	Breast tumours	Investigate, treat and refer if necessary

Sr. No.	Type of Illnesses	Recommended Services (Suggestive)
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, Cytology & Histopathology. Management and refer as appropriate
6	Infertility	Investigate and treat (both male and female)
7	Prevention of mother to child transmission (MTCTo)	Pretest and post-test and counselling and treatment
8	Medical termination of pregnancy (MTP)/Manual vacuum aspiration (MVA) services	Perform/Treat
9	Tubectomy (mini-lap, laparoscopic)	Perform/Treat
10	Medico-legal cases (rape, sexual assault)	Registration, examination, sample collection, treat, provision of emergency contraception (as per Supreme Court order)
General Medicine		
1	Fever	
	a) Short duration (<1 week)	Investigate and treat
	b) Long duration (>1 week)	Investigate and treat
	c) Typhoid	Investigate and treat
	d) Malaria/Filaria	Investigate and treat
	e) Tuberculosis (Pulmonary & Extrapulmonary)	Investigate and treat
	f) Viral hepatitis	Investigate and treat, refer if required
	g) Leptospirosis/Meningitis and Haemorrhagic fever	Confirm by MAT/CSF analysis and treat
	h) Malignancy	Confirm diagnosis & refer to tertiary care
2	Common respiratory illnesses	
	a) Upper respiratory infections, Chronic cough, Pharyngitis, Tonsillitis, Laryngitis, Epiglottitis,	Investigate & treat
	b) Lower respiratory tract infections, Pneumonia, allergic bronchitis, COPD, ARDS	Investigate & treat
	c) Bronchial asthma, Pleural effusion, Pneumothorax	Investigate & treat
3	Common Cardiac Problems	
	a) Acute chest pain (Ischaemic heart disease/Acute cardiac syndrome)	Investigate & treat (including thrombolysis) and refer, as needed
	b) Acute and chronic hypertension (Giddiness)	Investigate and treat
	c) Acute pulmonary oedema	Investigate and treat
	d) Congestive cardiac failure	Investigate and treat, refer for confirmation (if no ECHO facility)

Sr. No.	Type of Illnesses	Recommended Services (Suggestive)
	e) Acute arrhythmias/Cardiac arrest	Investigate, treat & refer if necessary
	f) Brady arrhythmias	Investigate, manage & refer if necessary
	g) Chronic AF	Investigate, manage & refer if necessary
4	G I Tract	
	a) Non variceal low risk GI bleed	Investigate and treat
	b) Variceal and high-risk GI bleed	Stabilise and refer appropriately
	c) Gall bladder disorder	Investigate and treat
	b) AGE/Dysentery/Diarrhoea	Treat
5	Neurology	
	a) Acute/Chronic headache/Epilepsy/Dementia/ Neuropathy	Investigate, treat & refer if necessary
	b) Vertigo/CVA/TIA/Hemiplegia/Paraplegia	Investigate, treat and refer as needed
6	Haematology	
	a) Anaemia	Basic investigation and treatment
	b) Bleeding disorder	Stabilise, refer to tertiary level (if required)
	c) Malignancy	Investigate, manage and refer, as needed
7	Communicable diseases	
	Cholera, Measles, Mumps, Chickenpox	Treat
8	Psychological disorders	
	Acute psychosis/Obsession/Anxiety/Depression/ Neurosis	Manage
	De-addiction	Treat, if services available. If not, refer to tertiary centre
9	Poisoning	Manage as per standard protocols
10	Diabetes mellitus	Investigate, and treat. Refer complications, as needed
11	Thyroid disorders	Investigate and treat
12	Rheumatologic and auto-immune disorders	Investigate and manage if required refer complicated cases to tertiary centre
Pediatrics		
1	ARI/Bronchitis, Bronchial Asthma	Investigate & manage
2	Diarrhoeal diseases	Investigate and treat
3	Protein energy malnutrition and Vitamin deficiencies	Investigate, diagnose & refer, if needed Supportive treatment in liaison with the specialised centre (with support of dietician)

Sr. No.	Type of Illnesses	Recommended Services (Suggestive)
4	Pyrexia of unknown origin (PUO)	Investigate, treat & refer, if needed
5	Bleeding disorders	Investigate and treat
6	Diseases of bones and joints	Investigate and treat & refer, if needed
7	Childhood malignancies	Investigate, diagnose & refer, if needed Treatment & supportive management in liaison with the specialised centre
8	Liver disorders	Investigate, manage & refer, if needed
9	Paediatric surgical emergencies	Investigate, manage & refer, if needed
10	Poisoning, Sting, Bites	Investigate, manage & refer, if needed
Neonatology		
1	Hypothermia	Manage & refer, if needed
2	Preterm baby	Manage & refer, if needed
3	Birth asphyxia	Manage & refer, if needed
4	Hypoglycemia	Investigate & manage
5	Meconium aspiration syndrome	Manage
6	Convulsions (seizures)	Investigate & manage
7	Neonatal sepsis	Investigate & manage
8	LBW	Investigate & manage
9	Neonatal jaundice	Investigate & manage
10	Congenital malformations	Manage and refer if needed
11	Respiratory distress syndrome (RDS), ARI	Investigate & manage
12	Seriously ill baby	Identify, manage & refer appropriately
13	Feeding problems	Identify and manage
14	Neonatal diarrhoea	Investigate & manage
15	Birth injury	Manage
16	Neonatal meningitis	Manage
17	Renal problems/Congenital heart disease/Surgical emergencies	Investigate, manage and refer appropriately
18	HIV/AIDS	Investigate, manage
19	Hypocalcaemia	Manage
20	Metabolic disorders	Manage
21	Hyaline membrane diseases	Investigate, manage
22	Neonatal malaria	Manage
23	Blood disorders	Manage

Sr. No.	Type of Illnesses	Recommended Services (Suggestive)
24	Developmental delays	Investigate, manage
25	Urinary tract infections (UTI)	Investigate, manage and refer appropriately
26	Failure to rhrive	Manage and appropriately
Dermatology		
1	Infections a) Viral- HIV, Verrucca, Molluscum Contagiosum, Pityriasis rosea, lGV	Manage
	b) Bacteria-Pyoderma, Chancroid, Gonorrhoea, Leprosy, Tuberculosis	Manage
	c) Fungal- Superficial mycosis, Subcutaneous mycetoma	Manage
	d) Parasitic infestation-Scabies/Pediculosis/Larva Migrans	Manage
	e) Spirochaetes - Syphilis	Investigate and Manage
2	Papulo squamous Psoriasis (classical)-uncomplicated/Lichen Planus	Manage
3	Pigmentary disorder Vitiligo	Manage
4	Keratinisation disorder Ichthyosis/Traumatic fissures	Manage
5	Autoimmune Collagen disorders, Vascular conditions, Morphea	Manage if resources available. Refer to tertiary evel, if required.
6	Skin tumours, Seb. keratosis, Soft fibroma, Benign surface, Tumours/Cysts, Appendageal tumours	Manage if resources available. Refer to tertiary level, if required.
7	Miscellaneous a) Acne vulgaris, Miliaria, Alopecia, Nail disorders, Toxin induced	Manage
	b) Leprosy - Resistant/Complications/Reaction Allergy - EMF/SJS/TEN Psoriasis/Collagen vascular/Auto immune disorders	Manage if resources available. Refer to tertiary level, if required
	c) Deep mycosis, STD complications	Manage if resources available. Refer to tertiary level, if required
	d) Genetically tetermined disorders	Manage if resources available. Refer to tertiary level, if required
Respiratory Illnesses		
1	Fever	Investigate and manage
2	Cough withe Expectoration/Blood stained	Investigate and manage

Sr. No.	Type of Illnesses	Recommended Services (Suggestive)
3	Haemoptysis	Investigate and manage
4	Chest Pain	Investigate and manage
5	Wheezing	Investigate and manage
6	Breathlessness	Investigate and manage
Psychiatry		
1	Schizophrenia	Manage and follow-up
2	Affective/Bipolar disorders	Manage and follow-up
3	Obsessive compulsive disorders	Manage and follow-up
4	Anxiety disorders	Manage and follow-up
5	Childhood disorders including mental retardation	Manage and follow-up
6	Somatoform and conversion disorders	Manage and follow-up
7	Alcohol and drug abuse	Manage and follow-up
8	Dementia	Manage and follow-up
Endocrinology		
1	Diabetes	Screen, diagnose and manage
2	DM with HT	Screen, diagnose and manage
3	Gestational diabetes/DM with pregnancy	Investigate and manage
4	Nephropathy/Retinopathy	Investigate and manage
5	Neuropathy with Foot care	Investigate and manage
6	i) Emergencies ii) Hypoglycaemia iii) Ketosis Coma	Investigate and manage
General Surgery		
1	Minor cases Under LA abscess I&D/Suturing, Biopsy/Excision of Lipoma/Ganglion/Lymph Node/Sebaceous Cyst/ Dermoid/Ear lobe Repair/Circumcision	Manage as appropriate
	FNAC, Thyroid, Breast Lumps, Lymph nodes, Swelling	Investigate and manage
2	Elective surgeries Genitourinary tract- Hydrocele, Hernia, Circumcision, Supra pubic cystostomy, NSV/ Vasectomy	Manage as appropriate

Sr. No.	Type of Illnesses	Recommended Services (Suggestive)
	Gastrointestinal disorders - Appendicitis, Anorectal abscesses, Rectal prolapse, Liver abscess, Haemorrhoids, Fistula	Investigate and manage
3	Emergency surgeries Assault injuries, Bowel injuries, Head injuries, Chest injuries, Stab injuries, Multiple injuries, Perforation, Intestinal obstruction, Torsion testes	Investigate, manage & refer as appropriate
4	Benign/Malignant diseases Breast, Oral, GI tract, Genitourinary (Penis, Prostate, Testis)	Manager and refer if required
5	Others including -Thyroid, Varicose veins	Manage as appropriate
6	Burns Burns < 15% >15%	Manage
Medicolegal Services		
1	Assault/Road traffic accidents (RTAs)	Accident Register (AR) Entry/Manage
2	Poisonings	Accident Register (AR) Entry/Manage
3	Sexual assault/Rape	Accident Register (AR) Entry/Manage
4	Post-mortem	Conduct
Ophthalmology Services		
1	Superficial infection	Manage as appropriate
2	Deep infections	Manage as appropriate
3	Refractive error	Manage
4	Glaucoma	Manage
5	Eye problems following systemic disorders	Manage
6	Cataract	Manage
7	Foreign body and injuries	Manage as appropriate
8	Squint and Amblyopia/Corneal Blindness (INF, INJ, Leucoma)/Oculoplasty	Manage as appropriate
9	Corneal transplantation	Manage
10	Malignancy/Surgical retina Disease/Retinoblastoma	Manage as appropriate
11	Paediatric ophthalmology	Manage
Ear, Nose, Throat		
Ear		
1	ASOM/SOM/CSOM	Manage and surgery if needed

Sr. No.	Type of Illnesses	Recommended Services (Suggestive)
2	Otitis Externa/Wax impaction	Manage
3	Polyps	Surgical treatment
4	Mastoiditis	Manage and surgery if needed
5	Unsafe ear	Manage and surgery if needed
6	Giddiness/Loss of balance	Manage
Throat		
1	Tonsillitis/Pharyngitis/Laryngitis	Manage
2	Quinsy	Surgery
3	Malignancy larynx	Investigate (Biopsy) and manage
4	Foreign body oesophagus	Manage (Removal)
5	Foreign body windpipe/Bronchus	Heimlich Manoeuvre/Manage
Nose		
1	Epistaxis	Manage
2	Foreign body	Manage (Removal)
3	Polyps	Manage (Removal)
4	Sinusitis	Manage (surgery if needed)
5	Septal deviation	Manage (surgery if needed)
Orthopedics		
1	Osteomyelitis	Investigate and manage (Surgery if needed)
2	Rickets/Nutritional deficiencies	Manage with physiotherapy
3	Poliomyelitis with residual deformities/JRA/RA	Joint replacement/Rehab for polio
4	RTA/Poly trauma	Manage as appropriate
Urology Services		
Children		
1	Hydronephrosis	Diagnose and refer
2	Urinary tract injuries	Diagnose and refer
3	Posterior urethral valve (PUV)	Diagnose and refer
4	Cystic kidney	Diagnose and refer
5	Urinary Obstruction	Urethral catheterisation/Suprapubic catheterisation (SPC) and refer
6	Undescended testes	Diagnose and refer
7	Hypospadias and epispadias	Diagnose and refer
8	Mega ureter	Diagnose and refer

Sr. No.	Type of Illnesses	Recommended Services (Suggestive)
9	Exstrophy	Diagnose and refer
10	Tumours - Urinary tract	Diagnose and refer
Adults		
	Besides, all the above	
1	Stricture urethra	Manage, if resources available. Refer to tertiary centre for urethroplasty
2	Urinary tract stones (Renal, Ureteral, Bladder, Bladder)	Investigate, manage & refer, if needed
3	Cancer - Urinary and genital tract- (Kidney, Bladder, Prostate, Testis, Penis and Urethra)	Investigate and refer
4	Trauma urinary tract	Manage, refer, if needed
5	Genito urinary TB	Investigate, manage, follow-up, refer, if needed
6	Prostate enlargement and urinary Retention/TURP	Investigate, manage, refer, if needed
Nephrology Services		
1	Uncomplicated UTI	Manage
2	Nephrotic syndrome - Children/Acute Nephritis	Manage, if resources permit. Tertiary referral for biopsy
3	Nephrotic syndrome - Adults	Refer to tertiary, follow-up care
4	Hypertension, Diabetes mellitus	Investigate and manage
5	Asymptomatic urinary abnormalities	Manage
6	Nephrolithiasis	Investigate and manage
7	Acute renal failure/Chronic renal failure	Manage & refer complicated cases
8	Tumours	Refer to tertiary
Dental Surgery		
1	Dental caries, Dental staining	Manage
2	Dental abscess	Manage
3	Periodontitis, Gingivitis	Manage
4	Minor surgeries, Impaction, Flap	Manage, surgical treatment as required
5	Malocclusion	Manage with appliances
6	Prosthodontia (Prosthetic Treatment)	Manage with appliances
7	Dental trauma	Manage (wiring and plating)
8	Maxillofacial surgeries	Manage and refer if necessary
9	Neoplasms	Manage and refer if necessary

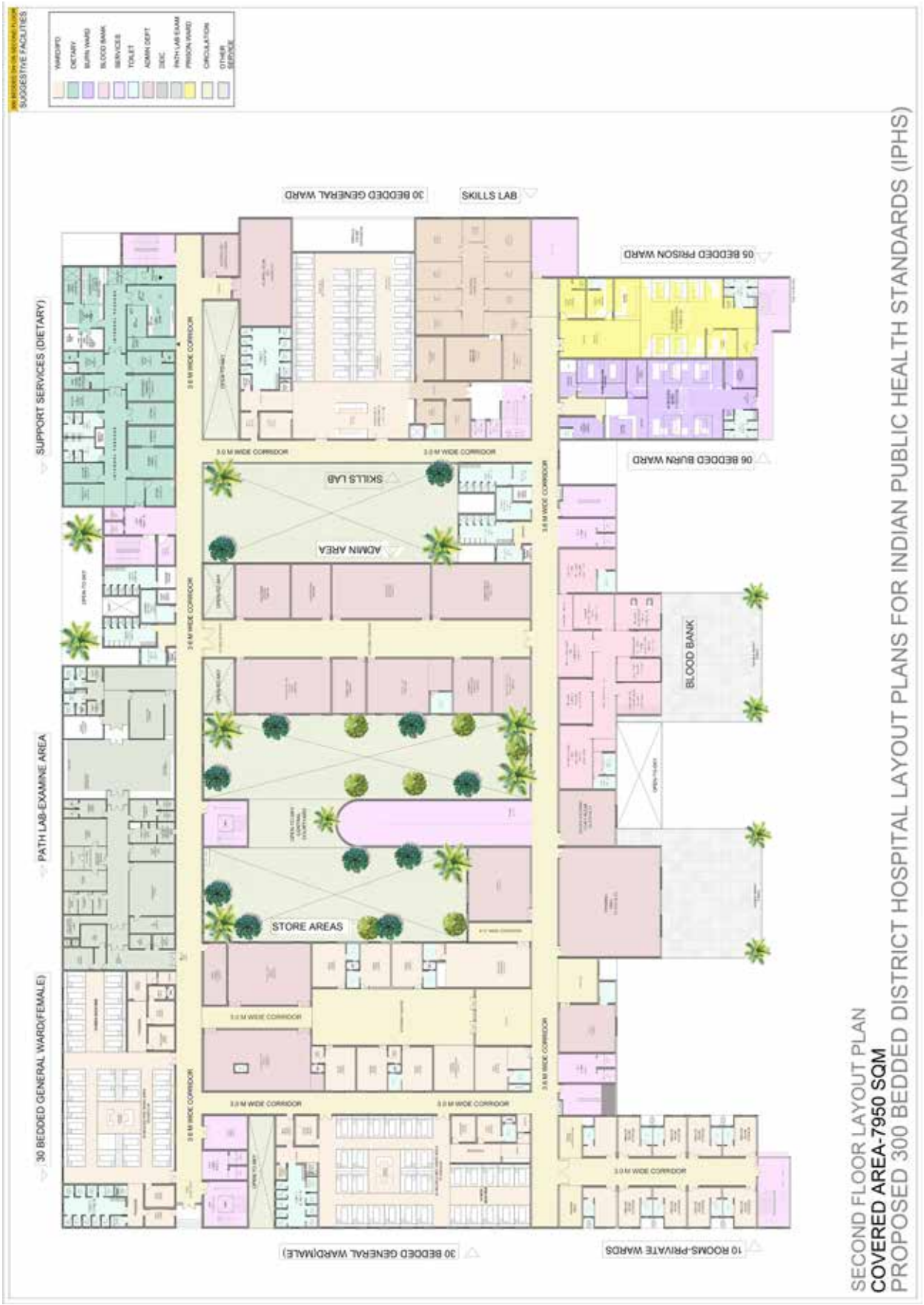
Sr. No.	Type of Illnesses	Recommended Services (Suggestive)
Health Promotion and Counselling		
1	Non-communicable diseases (Hypertension, Diabetes, CHD/Myocardial infarction, COPD, Cancers)	Counselling, Lifestyle modifications, Dietary changes, Exercises, Yoga, Physiotherapy
2	Substance abuse (Tobacco, Alcohol, Drugs, Narcotics)	Counselling, Tobacco/Alcohol Cessation, Lifestyle modifications, Rehabilitation (physical, mental, vocational, occupational), refer to deaddiction centres
3	HIV/AIDs	HIV counselling, treat, refer to ICTC centres
Community Health Services		
1	Communicable & Vaccine preventable diseases	Health promotional activities like ORT corner, immunization outreach services
2	Non-communicable diseases	Epidemiological health investigation, promotion & counselling activities
3	Adolescent & school health	Adolescent health and Ayushman Bharat school health activities
4	Family planning	Counselling services, fixed day services, follow-up of contraceptive users
5	HIV/AIDs	HIV counselling and testing; STI testing; blood safety; ART, training

ANNEXURE 4

Layout Plan (300 Bedded District Hospital, Ground Floor)

(300 Bedded District Hospital, 1st Floor)

(300 Bedded District Hospital, 2nd Floor)




MCH
DISTRICT HOSPITAL
OPD
MAIN ENTRY


OPD
MCH

The Detailed layout plan for SDH/DH with varying bed strength can be accessed through the link provided:
https://nhsrcindia.org/IPHS2022

ANNEXURE 5

Disaster Management & Preparedness

Provisions laid down in the National building code 2016 (4.5.2-subdivision C-1) shall establish the minimum requirements for a reasonable degree of safety from fire emergencies in hospitals, such that the probability of injury and loss of life from the effects of fire are reduced. All health care facilities shall be so designed, constructed, maintained and operated as to minimise the possibility of a fire emergency requiring the evacuation of occupants, as safety of hospital occupants cannot be assured adequately by depending on evacuation alone. Hence measures shall be taken to limit the development and spread of a fire by providing appropriate arrangements within the hospital through adequate staffing & careful development of operative and maintenance procedures consisting of:

(1) Design and construction

(2) Provision of detection, alarm and fire extinguishment

(3) Fire prevention

(4) Planning and training programmes for isolation of fire; and

(5) Transfer of occupants to a place of comparative safety or evacuation of the occupants to achieve ultimate safety

Expected levels of fire safety in hospitals

Hospitals shall provision for two levels of safety within their premises:

(1) ***Comparative Safety:*** This provides protection against heat and smoke within the hospital premises, where removal of the occupants outside the premises is not feasible and/or possible. Comparative safety may be achieved through:

(a) Compartmentation (b) Fire resistant wall integrated with the flooring (c) Fire resistant door of approved rating (d) Corridor, staircase (e) Pressurised shaft (f) Refuge area (g) Independent Ventilation system(h) Fire dampers (i) Automatic sprinkler system(j) Automatic detection system(k) Manual call point(l) First aid(m) Fire fighting appliances (n) Fire alarm system (o) Alternate power supply(p) Public address system (q) Signage (r) Fire exit drills and orders

(2) ***Ultimate Safety:*** This is the complete removal of occupants from the affected area to an assembly point outside the hospital building. Ultimate safety may be achieved through:

(a) Compartmentation (b) Fire resistant door of approved rating (c) Protected lobby, corridor, staircase and dhaft (d) Public address system(e) Signage (f) Fire drills and orders

Open space

(1) Hospitals shall make provision for sufficient open space in and around the hospital building to facilitate the free movement of patients and emergency/fire vehicles.

(2) These open spaces shall be kept free of obstructions and shall be motorable.

(3) Adequate passage way & clearance for fire fighting vehicles to enter the hospital premises shall be provided.

(4) The width of such entrances shall not be less than 4.5 metres with clear headroom not less than 5 metres.

(5) The width of the access road shall be a minimum of 6 metres.

(6) A turning radius of 9 metres shall be provided for fire tender movement.

(7) The covering slab of storage/static water tank shall be able to withstand the total vehicular load of 45 tones equally divided as a four-point load (if the slab forms a part of path/driveway).

(8) The open space around the building shall not be used for parking and/or any other purpose.

(9) The setback area shall be a minimum of 4.5 metres.

(10) The width of the main street on which the hospital building abuts shall not be less than 12 metres & when one end of that street shall join another street, the street shall not be less than 12 metres wide.

(11) The roads shall not be terminated in dead ends.

Instructions for Fire Safety for Hospital Staff Instructions for Personal Safety

All hospital staff should know:

(1) The location of MOEFA push-button fire alarm boxes. They should read the operating instructions.

(2) Location of the fire extinguishers, hose reel, etc. provided on their respective floors.

(3) The nearest exit from their work area.

(4) Their assembly point.

Matters to be reported to the Fire Officer

(1) If any exit door/route is obstructed by loose materials, goods, boxes, etc.

(2) If any staircase door, lift lobby door does not close automatically, or does not close completely.

(3) If any push-button fire alarm point or fire extinguisher is obstructed, damaged or apparently out of order.

Instructions for Fire Incidents

During any fire incident in the hospital premises, staff should:

(1) Break the glass of the nearest fire alarm (if they are the first ones to discover the fire).

(2) Attack the fire with fire extinguishers/hose reel provided on the floor.

Earthquake Safety Provisions

All New hospital buildings or hospital buildings being retrofitted in seismic zone IV and V, and hospital buildings in wind zones with a basic wind speed of 42 m/s or more, shall be equipped with the proper mechanism as per NBC norms.

Safer and functional Hospital: One of the main concerns with regard to the safety of hospitals is that hospital structures (i.e., the buildings) are themselves vulnerable to collapse in the face of extreme forces (such as those experienced during earthquakes). Therefore, to ensure the safety of hospitals and achieve the goal of 'safer and functional hospitals', mitigation measures (as presented in NBC) need to be undertaken in a programmatic manner by the Ministry of Health on an urgent basis.

Post-Earthquake Assessment of Hospital Structures

Hospital buildings shall be inspected by competent licensed engineers after every damaging earthquake to document damages (if any) to Structural elements (SEs) and non-structural elements (NSE)s of the buildings, along with recommendations for detailed study and suitable retrofitting as found necessa

Safe Electricity

1. Two nos. of earthling should be there at each electrical installation. Copperplate earthing should be preferred.

2. Provision of surge protection/suppressor should be there. Surge suppressors are rated according to the size of the voltage spike they can handle, so only units of high enough joules rating to protect the equipment should be used.
3. Load calculation should be proper, accordingly, the distribution, electrical switchgear rating, circuitry, cabling, and electrical installation should be there.
4. The size of cabling and wiring should be about 1.5 times or more than the actual electrical load calculated.
5. Adequate powers back up with another source such as DG, Photovoltaic etc should be there in synchronization with the first source.
6. Some places which are very important, provision of uninterrupted power supply should be there.
7. Phase sequence should be proper for the motorised load.
8. Load monitoring should be there to avoid any overloading.
9. A lot of motoriszed, as well as semiconductor material devices are there, hence provision of power factor improvement should be there.
10. All the connections and joints should be tight with the proper size of thimbling.
11. Balancing of electrical load should be proper and monitored via measuring devices.
12. A suitable place should be selected for electrical installation.
13. Sensitive equipment should be provided with proper rating UPS for extra safety against disturbances such as voltage spikes and noise.
14. The Electrical Switch Room shall be housed in a dedicated room/cupboard located on the ground floor and in association with an external wall and shall have internal access. The room shall be located so that it does not present difficulties for services distribution from adjoining spaces or rooms and it shall be located so as to provide for the economic distribution of services. The main switchboard shall be of metal clad cubicle design to approved standards and regulations. Each switchgear assembly shall have sufficient spare capacity. Electronic surge protection shall be provided on the incoming mains.

ANNEXURE 6

Human Resource for Health at SDH & DH

Administrative Staff at Sub District Hospitals and District Hospitals

Administrative Staff at Sub District Hospitals and District Hospitals															
S.No.	Human Resources for Health	Sub District Hospitals		District Hospitals											
		100 beds		50 beds		100 beds		200 beds		300 beds		400 beds		500 beds	
		E	D	E	D	E	D	E	D	E	D	E	D	E	D
1	**Medical Superintendent** ***(Administrative cum clinical staff)***	1	-	1	-	1	-	1	-	1	-	1	-	1	-
2	**Hospital Manager**	1	-	1	-	1	-	1	-	1	-	1	-	1	-
3	**Assistant Manager**	-	-	-	-	-	-	-	1	-	1	-	1	-	1
4	**Assistant Store Manager**	-	1	-	-	-	1	1	1	2	-	2	1	2	1
5	**Nursing Superintendent** ***(Administrative cum clinical staff)***	-	-	-	-	-	-	-	-	-	-	1	-	1	-
6	**Deputy Nursing Superintendent/ Supervisor** ***(Administrative cum clinical staff)***	-	-	-	-	-	-	-	-	1	-	1	-	2	-
7	**Nursing I/c/Assistant Nursing Superintendent** ***(Administrative cum clinical staff)*** *To be designated out of total strength.*														
7.1	**Ward**	2	-	2	-	2	-	3	-	5	-	8	-	10	-
7.2	**Critical Care Area**	-	-	-	-	-	-	1	-	1	-	2	-	2	-
7.3	**OT**	1	-	1	-	1	-	1	-	1	-	1	-	1	-
7.4	**LDR**	-	-	-	-	-	-	-	-	1	-	1	-	1	-
8	**Bio-medical Engineer**	-	-	1	-	1	-	1	-	1	-	1	-	1	-
9	**Medical Records Officer**	-	-	1	-	1	-	1	-	1	-	2	-	2	-

Administrative Staff at Sub District Hospitals and District Hospitals															
S.No.	Human Resources for Health	Sub District Hospitals		District Hospitals											
		100 beds		50 beds		100 beds		200 beds		300 beds		400 beds		500 beds	
		E	D	E	D	E	D	E	D	E	D	E	D	E	D
10	**Health Information Management Professional/Medical record analyst/Medical Record Assistant**	1	-	1	-	1	-	1	-	1	-	1	-	2	-
11	**Accountant/Finance**	1	-	2	-	3	-	3	-	4	-	5	-	6	-
12	**Data Entry Operators** *(1 for Medical. Superintendent + 1 for HMIS + 1 for diagnostics/Radiology/ Blood bank + 1 for MCH wing + 1 for DEIC/NRC/SNCU + 1 each for 300 OPD registrations per day)*	6	-	8	-	8	-	9	-	9	-	11	-	11	-
13	**CSSD & Laundry supervisor**	-	-	1	-	1	-	1	-	1	-	1	-	1	-
14	**Sanitary Inspector**	1	-	1	-	1	-	1	-	1	-	1	-	1	-
15	**Fire Safety Officer**	-	-	-	-	-	-	1	-	1	-	1	-	1	-

Specialists and Medical Officers at Sub District Hospital & District Hospital

Specialists and Medical Officers at Sub District Hospital & District Hospital															
S. No.	Human Resources for Health	Sub District Hospital		District Hospital											
		100 beds		50 beds		100 beds		200 beds		300 beds		400 beds		500 beds	
		E	D	E	D	E	D	E	D	E	D	E	D	E	D
1.	**Medicine**	2	1	1	-	2	1	2	1	2	2	4	1	5	1
	Medical Officer	1	-	1	-	1	-	2	-	2	-	3	-	3	-
2.	**Surgery**	2	-	1	-	2	1	2	1	2	2	4	1	5	1
	Medical Officer	1	-	1	-	1	-	2	-	2	-	3	-	3	-
3.	**Paediatrics**	2	-	1	1	2	1	3	1	3	1	4	1	5	1
	Medical Officer	1	-	1	-	1	-	1	-	1	-	3	-	3	-

Specialists and Medical Officers at Sub District Hospital & District Hospital														
S. No.	Human Resources for Health	Sub District Hospital		District Hospital										
		100 beds		50 beds		100 beds		200 beds		300 beds		400 beds		500 beds	
		E	D	E	D	E	D	E	D	E	D	E	D	E	D
4.	**OBGY**	2	1	2	2	3	1	4	-	4	1	5	1	6	1
	Medical Officer	3	-	1	-	1	-	1	-	1	-	1	-	1	-
5.	**Anaesthesiology & Critical care**	2	1	2	-	3	1	4	2	5	2	5	2	6	2
	Medical Officer	1		1	-	2	-	4	-	4	-	4	-	4	-
6.	**Ophthalmology**	1	-	1	-	1	1	2	-	2	1	2	1	2	1
	Medical Officer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.	**Orthopaedics**	1	-	1	-	1	1	2	-	2	1	3	1	3	1
	Medical Officer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.	**Radiology**	-	1	-	1	1	-	1	-	1	1	2	-	2	-
	Medical Officer	-	-	-	-	1	-	1	-	1	-	1	-	1	-
9.	**ENT**	1	-	1	-	1	1	1	-	1	1	1	1	1	1
	Medical Officer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.	**Dentistry (MDS)**	1	-	-	-	2	1	2	1	2	1	3	1	3	1
	Medical Officer	1	-	1	-	1	-	2	-	2	-	2	-	2	-
11.	**Family Medicine**	-	1	-	1	-	1	-	1	-	1	-	1	-	1
	Medical Officer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.	**Dermatologist**		1	-	1	1	-	1	-	1	-	1	-	1	-
	Medical Officer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.	**Psychiatrist**	-	1	-	1	1	-	1	-	1	1	1	1	1	1
	Medical Officer	-	-	-	-	-	-	-	-	-	-	1	-	1	-

Specialists and Medical Officers at Sub District Hospital & District Hospital															
S. No.	Human Resources for Health	Sub District Hospital		District Hospital											
		100 beds		50 beds		100 beds		200 beds		300 beds		400 beds		500 beds	
		E	D	E	D	E	D	E	D	E	D	E	D	E	D
14.	**Pathologist***	1	-	1	1	1	-	1	1	1	1	1	1	2	1
	Medical Officer				-	-	-	-	-	-	-	-	-	-	-
15.	**Microbiologist***		-		1	1	-	1	-	1	1	1	1	1	1
	Medical Officer				-	-	-	-	-	-	-	-	-	-	-
16.	**Biochemistry***		-		1	1	-	1	-	1	-	1	-	1	-
	Medical Officer			-	-	-	-	-	-	-	-	-	-	-	-
17.	**Neonatologist**	-	-	-	-	-	-	-	1	-	1	1	-	1	-
	Medical Officer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.	**Oncologist**	-	-	-	-	-	-	-	1	-	1	-	1	-	1
	Medical Officer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19.	**Cardiologist**	-	-	-	-	-	-	-	1	-	1	-	1	-	1
	Medical Officer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.	**Gastroenterologist**	-	-	-	-	-	-	-	1	-	1	-	1	-	1
	Medical Officer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21.	**Nephrologist**	-	-	-	-	-	-	-	1	-	1		1		1
	Medical Officer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.	**Urologist**	-	-	-	-	-	-	-	1	-	1		1		1
	Medical Officer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.	**Emergency Medicine**	-	-	-	1	-	1	-	1	1	-	2	-	2	-
	Medical Officer	3	-	3	-	3	-	3	-	3	-	6	-	6	-
24.	**Geriatrician**	-	-	-	-	-	-	-	1	-	1	-	1	-	1
	Medical Officer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.	**Forensic specialist**	-	-	-	1	1	-	1	-	1	-	1	1	1	1

Specialists and Medical Officers at Sub District Hospital & District Hospital															
S. No.	Human Resources for Health	Sub District Hospital		District Hospital											
		100 beds		50 beds		100 beds		200 beds		300 beds		400 beds		500 beds	
		E	D	E	D	E	D	E	D	E	D	E	D	E	D
	Medical Officer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.	**General HDU & ICU** (Medical officer)	3	-	3	-	3	-	3	-	3	-	6	-	6	-
27.	**PMR specialist**	-	1	-	-	-	1	-	1	1	-	1	-	1	-
	Medical Officer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28.	**Neurologist**	-	-	-	-	-	-	-	-	-	1	-	1	-	1
	Medical Officer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29.	**Obstetric HDU & ICU (EmOC)** (Medical officer)	3	-	3	-	3	-	3	-	3	-	6	-	6	-
30.	**SNCU + NICU + MNCU** (Medical officer)	6	-	3	-	6	-	9	-	9	-	12	-	12	-
31.	**LDR (EmOC)** (Medical officer)	3	-	3	-	3	-	6	-	6	-	6	-	6	-
32.	**Dialysis** (Medical officer)	1	-	1	-	1	-	1	-	1	-	1	-	1	-
33.	**Blood Bank** (Medical officer)	1	-	3	-	3	-	3	-	3	-	3	-	3	-
34.	**AYUSH** (Medical officer)	-	1	-	1	-	1	-	1	-	1	-	1	-	1

**Any one of the specialist (14, 15,16)*

Staff Nurses at Sub District Hospitals and District Hospitals

STAFF NURSES AT SUB DISTRICT HOSPITALS AND DISTRICT HOSPITALS															
Service Area	Nurse: bed ratio	Sub District Hospitals		District Hospitals											
		100***beds	Total Nurses (in 3 shifts)	50*** beds	Nurses (in 3 shifts)	100*** beds	Nurses (in 3 shifts)	200*** beds	Nurses(in 3 shifts)	300*** beds	Nurses (in 3 shifts)	400*** beds	Nurses (in 3 shifts)	500*** beds	Nurses (in 3 shifts)
Surgery	***1:6***	**60 Beds**	**30**	**33**	**18**	**46**	**23**	**113 Beds**	**57**	**185 Beds**	**93**	**255 Beds**	**128**	**345 Beds**	**173**
Medicine				**Beds**		**Beds**									
Obstetrics & Gynecology															
Pediatrics															
Orthopedics															
Eye															
Geriatric/ Palliative															
Psychiatry															
Isolation															
Prison															
Burn															
Private															
General HDU	**1:2 (adult) & 1:3 (paediatric)**	5 adult and 2 paediatric	9	5 adult HDU	6	5 adult and 2 paediatric	9	6 adult and 2 paediatric	12	8 adult and 4 paediatric	15	10 adult and 4 paediatric	18	10 adult and 6 paediatric	21
General ICU and polytrauma	**1:1 (adult ICU and polytrauma) and 1:2 (paediatric)**	-	-	-	-	-	-	3 adult and 1 paediatric	12	4 adult and 2 paediatric	15	4 adult and 2 paediatric and 4 polytrauma	27	4 adult and 3 paediatric and 4 polytrauma	30
Obstetric HDU	**1:2**	7	9	2$	3$	7	9	8	12	8	12	10	15	12	18
Obstetric ICU	**1:1**	2	6	-	-	2	6	2	6	4	12	6	18	6	18
SNCU + NICU	**1:3 (SNCU) and 1:2 (NICU)**	12 (SNCU)	12	6 (SNCU)	6	12 SNCU and 4 NICU	18	16 SNCU and 4 NICU	21	20 SNCU and 6 NICU	27	24 SNCU and 6 NICU	33	24 SNCU and 8 NICU	36
MNCU	**1:6**	**12**	**6**	**6**	**3**	**12**	**6**	**30**	**15**	**39**	**21**	**45**	**24**	**48**	**24**

STAFF NURSES AT SUB DISTRICT HOSPITALS AND DISTRICT HOSPITALS															
Service Area	Nurse: bed ratio	Sub District Hospitals		District Hospitals											
		100***beds	Total Nurses (in 3 shifts)	50*** beds	Nurses (in 3 shifts)	100*** beds	Nurses (in 3 shifts)	200*** beds	Nurses(in 3 shifts)	300*** beds	Nurses (in 3 shifts)	400*** beds	Nurses (in 3 shifts)	500*** beds	Nurses (in 3 shifts)
NRC	1 per shift and 2 per shift from 300 beds onwards	-	3$	-	3$	10	3	15	3	20	6	30	6	30	6
Emergency *(Red+Yellow+ Green+ Isolation+ Pediatric+ triage)* ***(breakup in foot note)****		11	9	7	6	11	9	21	21	26	21	37	24	44	24
LDR	1 for 2 beds per shift + 1 for Neonates for 4 beds per shift	3	9	3	9	4	9	6	15	10	24	15	36	15	36
Dialysis	1:2	5	6	5	6	5	6	5	6	10	15	10	15	10	15
Day Care	1 per shift	4	3	4	3	6	3	8	3	10	3	10	3	15	3
OT *(breakup in foot note)* **	2 per shift per OT + 2 for pre-post OP + 1 I/c	3	13	2	11	3	13	4	22	5	24	5	24	5	24
DEIC	As per guideline	-	-	-	2	-	2	-	2	-	2	-	2	-	2
OPD *(including NCD)*		-	10	-	8	-	10	-	12	-	14	-	16	-	18

STAFF NURSES AT SUB DISTRICT HOSPITALS AND DISTRICT HOSPITALS															
Service Area	Nurse: bed ratio	Sub District Hospitals		District Hospitals											
		100***beds	Total Nurses (in 3 shifts)	50*** beds	Nurses (in 3 shifts)	100*** beds	Nurses (in 3 shifts)	200*** beds	Nurses(in 3 shifts)	300*** beds	Nurses (in 3 shifts)	400*** beds	Nurses (in 3 shifts)	500*** beds	Nurses (in 3 shifts)
Comprehensive Lactation Management Centre		-	-	-	-	-	-	-	**5**	-	**5**	-	**5**	-	**5**

$Desirable

****Number of Staff Nurse in Emergency for three shifts:***

For 100 bedded SDH(No of Beds- 11)= 9 (Triage area 1+ Red & Yellow beds 1+aediatric + Isolation 1)

For 50 bedded DH(No of Beds- 7) = 6 (Triage area 1+ Red, Yellow beds, Paediatric + Isolation 1)

For 100 bedded DH(No of Beds- 11)= 9 (Triage area 1+ Red & Yellow beds 1+Paediatric + Isolation 1)

For 200 bedded DH(No of Beds- 21)= 21 (Triage area 1 + Red 1+ Yellow 2 + Green 1 + Paediatric 1+ Isolation 1)

For 300 bedded DH(No of Beds- 26)= 21 (Triage area 1 + Red 1+ Yellow 2 + Green 1 + Paediatric 1+ Isolation 1)

For 400 bedded DH(No of Beds- 37)= 24 (Triage area 1 + Red 2 + Yellow 2 + Green 1 + Paediatric 1+ Isolation 1)

For 500 bedded DH(No of Beds- 44)= 24 (Triage area 1 + Red 2+ Yellow 2 + Green 1 + Paediatric 1+ Isolation 1)

*****Operation Theatre:***

For 100 bedded SDH= 13 (2 routine + 1 round the clock OT +1 pre and post op. + 1 in-charge)

For 50 bedded DH= 11 (1 routine + 1 round the clock OT +1 pre and post op. + 1 in-charge)

For 100 bedded DH= 13 (2 routine + 1 round the clock OT +1 pre and post op. + 1 in-charge)

For 200 bedded DH= 22 (2 routine + 2 round the clock OT +1 pre and post op. + 1 in-charge)

For 300 bedded DH= 24 (3 routine +2 round the clock OT +1 pre and post op. + 1 in-charge)

For 400 bedded DH= 24 (3 routine + 2 round the clock OT +1 pre and post op. + 1 in-charge)

For 500 bedded DH= 24 (3 routine + 2 round the clock OT +1 pre and post op. + 1 in-charge)

******Area Wise Beds Distribution***

For 100 bedded SDH= 60 Beds in General IPD, 16 Beds in HDU & ICUs, 24 Beds in SNCU & MNCU

For 50 bedded DH= 33 Beds in General IPD, 5 Beds in HDU & ICUs, 6 Beds in SNCU, 6 beds in MNCU

For 100 bedded DH= 46 Beds in General IPD, 7 Beds in HDU & ICUs, 7 Beds in OBGY HDU, 2 Beds in OBGY ICU, 12 Beds in SNCU, 4 Beds in NICU & 12 MNCU& 10 Beds in NRC

For 200 bedded DH= 113 Beds in General IPD, 8 Beds in HDU, 4 Beds in ICUs, 8 Beds in OBGY HDU, 2 Beds in OBGY ICU, 16 Beds in SNCU, 4 Beds in NICU & 30 MNCU& 15 Beds in NRC

For 300 bedded DH= 185 Beds in General IPD, 12 Beds in HDU, 6 Beds in ICUs, 8 Beds in OBGY HDU, 4 Beds in OBGY ICU, 20 Beds in SNCU, Beds in NICU & 39 MNCU& 20 Beds in NRC

For 400 bedded DH= 255 Beds in General IPD, 14 Beds in HDU, 10 Beds ICUs, 10 Beds in OBGY HDU,6 Beds in OBGY ICU, 24 Beds in SNCU, 6 Beds in NICU & 45 MNCU& 30 Beds in NRC

For 500 bedded DH= 345 Beds in General IPD, 16 Beds in HDU, 11 Beds in ICUs, 12 Beds in OBGY HDU, 6 Beds in OBGY ICU, 32 Beds in SNCU & NICU & 48 MNCU& 30 Beds in NRC

ALLIED HEALTH PROFESSIONALS AT SUB DISTRICT HOSPITALS AND DISTRICT HOSPITALS

Allied Health Professionals at Sub District Hospitals and District Hospitals														
S.No.	Allied Health Professionals	Sub District Hospitals		District Hospitals										
		100 beds		50 beds		100 beds		200 beds		300 beds		400 beds		500 beds	
		E	D	E	D	E	D	E	D	E	D	E	D	E	D
1	**Medical Social Worker/ Social Worker/Clinical Social worker**	1	-	1	-	1	-	1	-	2	-	2	1	2	1
2	**Clinical Psychologist**	1	-	1	-	1	-	1	-	1	-	1	1	1	1
3	**Psychiatrist Nurse (NMHP)**	1	-	1	-	1	-	1	-	1	1	1	1	1	1
4	**Community Nurse (NMHP)**	1	-	1	-	1	-	1	-	1	1	1	1	1	1
5	**Medical lab technologists/ Laboratory Technician*** ***(breakup is placed in foot note)***	8	-	8	-	9	-	11	-	14	-	17	-	18	-
6	**EEG Technologist/ EEG technician**	-	-	-	-	-	1	-	1	-	1	-	1	-	1
7	**ECG Technologists/ECG Technician**	1	2	1	-	1	2	3**	-	3**	-	3**	-	3**	-
8	**Laundry Technician**	1	-	1	-	1	-	1	-	2#	-	2#	-	2#	-
9	**Laundry Assistant** *(zone wise upto 200 beds and zone wise for each shift from 300 beds onwards)*	6***	-	3	-	3	-	3	-	6	-	6	-	6	-
10	**CSSD Technician**	-	-	1	-	1	-	1	-	1	-	1	-	1	-
11	**CSSD Assistant**	-	-	2	-	2	-	4	-	4	-	4	-	4	-
12	**Dental Technician**	-	1	1	-	1	-	1	-	1	-	1	1	1	1
13	**Dental Assistant**	1	-	1	-	1	-	1	-	1	-	1	1	1	1
14	**Dental Hygienist**	-	-	-	-	-	1	-	1	1	-	1	-	1	-
15	**Dermatology Technician**	-	-	-	-	1	-	1	-	1	-	1	-	1	-

Allied Health Professionals at Sub District Hospitals and District Hospitals															
S.No.	Allied Health Professionals	Sub District Hospitals		District Hospitals											
		100 beds		50 beds		100 beds		200 beds		300 beds		400 beds		500 beds	
		E	D	E	D	E	D	E	D	E	D	E	D	E	D
16	**Dialysis Therapy Technologists/ Dialysis technician**	3	-	3	-	3	-	3	-	4	-	4	-	4	-
17	**Cytotechnologist/ Cyto-Technician**	-	-	-	-	1	-	1	-	1	-	1	-	1	-
18	**PFT Technician**	-	-	-	-	1	-	1	-	1	-	1	-	1	1
19	**O.T. Technologists O.T. technician****	5	-	4	-	5	-	8	-	9	-	9	-	9	-
20	**TSSU Assistant***** *(one per shift upto 200 beds and one additional for morning shift from 300 beds onwards)*	3	-	3	-	3	-	3	-	4	-	4	-	4	-
21	**Blood Bank technician/ Hemato Technologist**	1	-	1	-	1	-	1	-	1	-	1	1	2	-
22	**(Optometrist/ Ophthalmic Assistant/ Vision Technician)**	1	-	1	-	1	-	1	1	2	-	2	-	2	-
23	**Radiology and Imaging Technologists/Radiology Technician**	1	2	1	2	1	2	1	2	3	1	4	-	5	-
24	**Pharmacist## *(also for oversee drugs and equipment)***	4	-	3	-	4	-	7	-	10	1	13	1	16	1
25	**Dietician**	1	-	-	-	1	-	1	-	1	1	1	1	2	-
26	**Assistant Dietician**	-	-	-	-	-	-	1	1	1	1	2	1	2	1
27	**Physiotherapist** *(two morning and one evening shift for 200 and 300 bedded hospitals and one additional in evening shift for 400 beds onwards)*	2	-	1	-	2	-	3	-	3	1	4	1	5	1

Allied Health Professionals at Sub District Hospitals and District Hospitals															
S.No.	Allied Health Professionals	Sub District Hospitals		District Hospitals											
		100 beds		50 beds		100 beds		200 beds		300 beds		400 beds		500 beds	
		E	D	E	D	E	D	E	D	E	D	E	D	E	D
28	**Counsellor***** *(2 group and 20 interpersonal counselling sessions)*	4	-	4	-	4	-	5	1	5	1	7	1	7	2
29	**Audiologist** *) (including Paediatics)*	-	-	1	-	1	1	2	-	2	-	2	-	2	-

**** Medical lab technologists/Lab technician:***

For 100 bedded SDH= 8 (2 Morning + 1 Evening + 1 Night & 1 for each shift in Blood bank and 1 in OPD for point of care tests)
For 50 bedded DH= 8 (2 Morning + 1 Evening + 1 Night & 1 for each shift in Blood bank and 1 in OPD for point of care tests)
For 100 bedded DH= 9 (3 Morning + 1 Evening + 1 Night & 1 for each shift in Blood bank and 1 in OPD for point of care tests)
For 200 bedded DH= 11 (4 Morning + 2 Evening + 1 Night & 1 for each shift in Blood bank and 1 in OPD for point of care tests)
For 300 bedded DH= 14 (6 Morning + 2 Evening + 2 Night & 1 for each shift in Blood bank and 1 in OPD for point of care tests)
For 400 bedded DH= 17 (8 Morning + 3 Evening + 2 Night & 1 for each shift in Blood bank and 1 in OPD for point of care tests)
For 500 bedded DH= 18 (8 Morning + 3 Evening + 3 Night & 1 for each shift in Blood bank and 1 in OPD for point of care tests)

*** One per each shift*

 # 1Morning and 1Evening shift

****1 for each zone for each shift for two shifts. (Linen from all CHCs and PHCs will be brought to SDH)*

The senior most pharmacist will oversee the management of Store.

******* O.T. Technologists/OT technician :***

For 100 bedded SDH(No of OTs- 3)= 5 (3 Morning + 1 Evening + 1 Night)
For 50 bedded DH (No of OTs- 2)= 4 (2 Morning + 1 Evening + 1 Night)
For 100 bedded DH (No of OTs- 3)= 5 (3 Morning + 1 Evening + 1 Night)
For 200 bedded DH (No of OTs- 4)= 8 (4 Morning + 2 Evening +2 Night)
For 300 bedded DH (No of OTs- 5)= 9 (5 Morning + 2 Evening + 2 Night)
For 400 bedded DH (No of OTs- 5)= 9 (5 Morning + 2 Evening + 2 Night)
For 500 bedded DH (No of OTs-5)= 9 (5 Morning + 2 Evening + 2 Night)

******** Consellor:***

For 100 bedded SDH= 4 (3 OPD +1 IPD)
For 50 bedded DH= 4 (3 OPD +1 IPD)
For 100 bedded DH= 4 (3 OPD +1 IPD)
For 200 bedded DH= 5 (3 OPD +2 IPD)
For 300 bedded DH= 5 (3 OPD +2 IPD)
For 400 bedded DH= 7 (4 OPD +3 IPD)
For 500 bedded DH= 7 (4 OPD +3 IPD)

Support Staff At Sub District Hospitals And District Hospitals

Support Staff at Sub District Hospitals and District Hospitals														
Area wise Cleaning Staff	Sub District Hospitals		District Hospitals											
	100 beds		50 beds		100 beds		200 beds		300 beds		400 beds		500 beds	
	E	D	E	D	E	D	E	D	E	D	E	D	E	D
Operation Theatre	3	-	3	-	3	-	5	-	9	-	9	-	9	-
CSSD & Laundry							1	-	2	-	2	-	2	-
Kitchen Premises							1	-	2	-	2	-	2	-
Kitchen- Utensils	-	-		-	-	-	-	3	-	3	3	-	6	-
LDR *(1 per 7 LDR) or 1 for 2500 sqft.) (1 per shift upto 200 beds and 2 per shift from 300 beds onwards for 3 shifts)*	3	-		-	3	-	3	-	3	-	6	-	6	-

Support Staff at Sub District Hospitals and District Hospitals														
Area wise Cleaning Staff	Sub District Hospitals		District Hospitals											
	100 beds		50 beds		100 beds		200 beds		300 beds		400 beds		500 beds	
	E	D	E	D	E	D	E	D	E	D	E	D	E	D
HDU/ICU *(1 for 10 beds) – 4000 sq. ft. (1 per shift upto 100 beds, 2 per shift upto 400 beds and 3 per shift for 500 beds for three shifts)*	3	-	3	-	3	-	3	-	3	-	3	-	9	-
Obstetric HDU/ICU *(1 for 10 beds) – 4000 sq. ft. (1 per shift upto 100 beds (except 50 bedded DH) and 2 per shift from 300 beds onwards for 3 shifts)*											3	-	6	-
SNCU 1 per shift							3	-	3	-	3	-	3	-
MNCU 1 per shift									3	-	3	-	3	-
Floor *(for each floor- including OPD, wards, admin, academic, DEIC, NRC, toilets, staircase and other common areas – 1 for every 6000 sq. ft.)*	6	-	3	-	6	-	9	-	12	-	15	-	18	-
Mortuary	-	-	-	-	-	-	1	-	1	-	1	-	1	-
Lab	2	-	1	-	2	-	2	-	2	-	4	-	4	-
Burn Ward *(one per shift)*	-	-	-	-	-	-	-	-	3	-	3	-	3	-

Support Staff at Sub District Hospitals and District Hospitals														
Area wise Cleaning Staff	**Sub District Hospitals**		**District Hospitals**											
	100 beds		**50 beds**		**100 beds**		**200 beds**		**300 beds**		**400 beds**		**500 beds**	
	E	**D**	**E**	**D**	**E**	**D**	**E**	**D**	**E**	**D**	**E**	**D**	**E**	**D**
Outer premises including parking, drainage, manifold, power sub-station, garden) *(2 shifts)*	2	-	2	-	2	-	4	-	4	-	6	-	6	-
Drug warehouse (if co-located)							1	-	1	-	1	-	1	-
Emergency *(one per shift)*	3	-	3	-	3	-	3	-	3	-	3	-	6	-
Other Staff														
PRO/Receptionist	-	-	-	-	-	-	1	-	1	-	2	-	2	-
GR Help Desk Facilitator	-	-	-	-	-	3	3	-	3	-	3	-	3	-
Dresser for plaster/ procedure room *(1 for each shift for emergency and one for OPD for SDH and DH upto 300 beds ; 1 for each shift and 1 additional in morning shift for emergency + 1 for OPD with one additional in OPD from 400 beds onwards)*	4	-	4	-	4	-	4	-	4	-	6	-	6	-

Note:

1. The number of HR indicated as desirable is over and above the HR indicated as essential.

2. All the HR indicated under support staff is to be only hired in house if the related services are not outsourced.

3. Meaning thereby for outsourced services the HR is to be provided by the outsourcing agency.

ANNEXURE 7

Roles and Responsibilities of Staff at SDH & DH

General Physician

- Providing quality OPD and IPD services.
- Prescribing and administeromg medication, therapy, and other specialised medical care to treat or prevent illness, disease, or injury.
- Managing all emergencies.
- Managing patients in the High Dependency Unit (HDU) and Intensive Care Unit (ICU).
- Managing complicated medical problems in the fields of diabetes, endocrinology, rheumatology, pulmonology, clinical haematology, infectious diseases, HIV/AIDS.
- Managing lifestyle diseases including Hypertension, Diabetes, Bronchial asthma, Obesity etc. and treat chronic ailments of immune disorders like Arthritis and other multisystem diseases, metabolic diseases, haematological or blood-related aberrations.
- Following SoPs/clinical protocols, evidence-based practices, rational prescription of medication while treating the patient.
- Being responsible for all the special cases referred to her/him; providing curative prescription/ procedures/surgeries; based on need, emergency and availability of resources.
- Referring the patient to other specialists/practitioners when necessary.
- Attending and treating medico-legal cases and referral.
- Keeping up to date with recent medical developments, new drugs, treatments and medications, including complementary medicine.
- Maintaining highest standards of ethical practices by adhering to the code of medical ethics.
- Following the Acts, Rules, Regulations made by the Central/State Governments or local administrative bodies or any other relevant act relating to the protection and promotion of public health.
- Providing teaching/training/capacity building to doctors and other health care staff, as and when required.
- Supervising/participating/monitoring community outreach programmes and in National Health Programmes.
- Ensuring attendance and availability at the Hospital/Health Centre, during prescribed working hours, as well as during emergency duty hours, as ordered.
- Ensuring availability to the hospital over the residential landline/mobile, whenever necessary.
- Monitoring patient progress or response to treatments and to keep records of the same as directed by the Superintendent/Officer-In-Charge of the Hospital/Health Centre.
- Ensuring sick patients under her/his care are properly treated and cared for in every way.
- Resolving observed deficiency (if any) in the patient care immediately or report it in writing, to the officers-in-charge.
- Ensuring privacy and confidentiality of the patient care and dignity.
- Implementing orders of the Superintendent/Officer-in-charge, on all matters connected with the patient and manage the Hospital/Health Centre.
- Undertaking any additional responsibility, as assigned by the authority.

Obstetrics & Gynaecology Specialist

- Providing quality OPD, IPD and OT services related to Obstetrics & Gynecology.
- Managing round the clock situation related to normal and complicated deliveries.
- Providing ultrasonography services, in case the specialist, is trained in ultrasound.
- Counselling and providing family planning services and performing family planning operations (conventional and laparoscopic).
- Managing common neonatal problems.
- Providing services regarding RTI/STI and infertility.
- Performing duties regarding MTP/MVA services and provision of safe abortion services.
- Conducting Maternal Death Review (MDR) both in the institution as well as by home visits.
- Managing Medico-Legal Cases (Rape, Sexual Assault).
- Managing patients in Obstetrics and Gynecology (Hybrid-HDU&ICU unit).
- Following SoPs/clinical protocols, evidence-based practice, rational prescription of medication while treating the patient.
- Collecting, recording and maintaining patient's information, such as medical history, reports, and examination results; from patients, family members, or other medical professionals.
- Providing consulting services to other physicians.
- Being responsible for all special cases referred to her/him; providing curative prescription/ procedures/surgeries; based on need, emergency and availability of resources.
- Referring the patient to another specialist/practitioner when necessary.
- Keeping updated with recent medical developments, new drugs, treatments and medications, including complementary medicine.
- Maintaining highest standards of ethical practices by adhering to the code of medical ethics.
- Following the Acts, Rules, Regulations made by the Central/State Governments or local administrative bodies or any other relevant act relating to the protection and promotion of public health.
- Providing teaching/training/capacity building to doctors and other health care staff, as and when required.
- Participating in community outreach programmes (e.g. anaemia prevention, pulse polio, save the girl child, adolescent and school health, etc.) throughout the year.
- Ensuring his/her attendance and availability at the Hospital/Health Centre, during prescribed working hours, as well as during emergency duty hours, as ordered.
- Ensuring availability to the hospital over the residential landline/mobile, whenever necessary.
- Monitoring patient's progress or response to treatment and keep records of the same as directed by the Superintendent/Officer-in-charge of the Hospital/Health Centre.
- Ensuring sick patients under her/his care are properly treated and cared for in every way.
- Ensuring privacy and confidentiality of patients and providing dignified care.
- Implementing orders of the Superintendent/Officer-In-Charge, on all matters connected with the patient and management of the Hospital/Health Centre.
- Undertaking any additional responsibility, as assigned by the authority.

Paediatrician

- Providing paediatric OPD and IPD services.
- Attending to all paediatric emergencies.
- Examining infants, adolescents, and young adults to evaluate their mental and physical growth and development. Also, planning and executing medical care programmes for this.
- Attending all high-risk deliveries, cesareans and attend to all neonatal emergencies.
- Providing round the clock management of pediatric Indoor Patient Department, Sick New Born Care unit (SNCU)/Newborn Stabilisation Unit (NBSU)/Paediatric Intensive Care Unit (PICU) and Nutritional Rehabilitation Centre (NRC)/CMTC in the district.
- Performing the review of Child Death FBMDR facility.
- Following SoPs/clinical protocols, evidence-based practice, rational prescription of medication while treating the patient.
- Collecting, recording and maintaining patient's information, such as medical history, reports, and examination results; from patients, family members, or other medical professionals.
- Providing consulting services to other physicians.
- Being responsible for all the special cases referred to her/him; providing curative prescription/ procedures/surgeries; based on need, emergency and availability of resources.
- Referring the patient to another specialist/practitioners when necessary.
- Attending and treating medico-legal cases and referrals.
- Keeping updated with recent medical developments, new drugs, treatments and medications, including complementary medicine.
- Maintaining highest standards of ethical practices by adhering to the code of medical ethics.
- Following Acts, Rules, Regulations made by the Central/State Governments or local administrative bodies or any other relevant act relating to protection and promotion of public health.
- Providing teaching/training/capacity building to doctors and other health care staff, as and when required.
- Monitoring paediatric patient progress or response to treatments and to keep records of the same as directed by the Superintendent/Officer-In-Charge of the Hospital/Health Centre.
- Ensuring sick patients under her/his care are properly treated and cared for in every way.
- Ensuring privacy and confidentiality of patients and provide dignified care.
- Implementing orders of the Superintendent/Officer-In-Charge, on all matters connected with the patient and management of the Hospital/Health Centre.
- Handling any additional responsibility, as assigned by the authority.

General Surgeon

- Providing quality OPD and IPD services and also managing all kinds of surgical emergencies.
- Managing cases of poisoning, burns.
- Performing surgery (elective and emergency) on patients to treat injuries, diseases, or deformities.
- Working with other physicians and surgeons to decide on treatments and procedures before, during, and after surgery.
- Managing patients in high dependency units and ICU, particularly when there is non-availability of *'General Medicine specialist'.*

- Following SoPs/clinical protocols, evidence-based practices, rational prescription of medication while treating the patient.
- Maintaining highest standards of ethical practices by adhering to the code of medical ethics.
- Collecting, recording, and maintaining patient's information, such as medical history, reports, and examination results; from patients, family members, or other medical professionals.
- Being responsible for all special cases referred to her/him; providing curative prescription/ procedures/surgeries; based on need, emergency and availability of resources.
- Referring patient to another specialist/practitioner when necessary.
- Attending and treating all medico-legal cases without an unnecessary referral.
- Keeping updated with recent medical developments, new drugs, treatments and medications, including complementary medicine.
- Following the Acts, Rules, Regulations made by the Central/State Governments or local administrative bodies or any other relevant act relating to the protection and promotion of public health
- Providing teaching/training/capacity building to doctors and other health care staff, as and when required.
- Ensuring his/her attendance and availability at the Hospital/Health Centre, during prescribed working hours, as well as during emergency duty hours, as ordered.
- Monitoring patient progress or response to treatments and keeping records of the same as directed by the Superintendent/Officer-In-Charge of the Hospital/Health Centre.
- Ensuring sick patients under her/his care are properly treated and cared for in every way.
- Ensuring privacy and confidentiality of patients.
- Implementing orders of the Superintendent/Officer-In-Charge, on all matters connected with the patient and management of the Hospital/Health Centre.
- Assuming any additional responsibility, as assigned by the authority.

Anaesthetist

- Providing quality OPD (pre-anaesthetic checkup clinic and pain clinic), OT sessions and IPD services.
- Performing bedside pre-anaesthetic checkup for patients who cannot move or be shifted from their beds.
- Providing services as an intensivist, in management of critical cases.
- Ensuring clinical management of acute pain services and participation in pain medicine units where applicable.
- Providing acute resuscitation services for all emergencies.
- Managing patients in ICU, particularly when there is non-availability of a General Medicine specialist.
- Managing anaesthesia in remote locations, as and when required, like surgical camps, surgeries conducted at SDH/CHC, etc.
- Following SoPs/clinical protocols, evidence-based practices, rational prescription of medication while treating the patient.
- Making him/her responsible for all the special cases referred; provide curative prescription/ procedures/surgeries; based on need, emergency and availability of resources.
- Referring the patient to other specialists/practitioners when necessary.
- Attending and treating all medico-legal cases without an unnecessary referral.

- Keeping updated with recent medical developments, new drugs, treatments and medications, including complementary medicine.
- Maintaining highest standards of ethical practices by adhering to the code of medical ethics.
- Following Acts, Rules, Regulations made by the Central/State Governments or local administrative bodies or any other relevant acts relating to the protection and promotion of public health.
- Providing teaching/training/capacity building to doctors and other health care staff, as and when required.
- Monitoring patient progress or response to treatments and to keep records of the same as directed by the Superintendent/Officer-In-Charge of the Hospital/Health Centre.
- Ensuring sick patients under her/his care are properly treated and cared for in every way.
- Ensuring privacy and confidentiality of the patients.
- Implementing orders of the Superintendent/Officer-In-Charge, on all matters connected with the patient and managing the Hospital/Health Centre.
- As Incharge of OT being responsible for running OT as defined in the GoI guidelines and supervising its functioning.
- Undertaking any additional responsibility, as assigned by the authority.

Medical Officer

- Organising and performing duties necessary for the routine outpatient services and make suitable arrangements for treatment of emergency cases which come outside the normal OPD hours.
- Making arrangements and providing guidance for rendering health care services at the community level and at the CHC through the Health Assistants, Health Workers and others.
- Screening cases needing specialised medical attention, referring them to referral institutions and cooperating/coordinating with other institutions to provide medical care services in his/her area.
- Ensuring all members of his/her Health Team are fully conversant with the various National Health & Family Welfare Programmes including NHM to be implemented in the area allotted to each health functionary.
- Preparing operational plans and ensuring effective implementation of the same to achieve laid down targets under different National Health and Family Welfare Programmes.
- Ensuring effective implementantion of all National Health Programmes including RCH, Universal Immunization Programme (UIP), National Vector Borne Disease Control Programme (NVBDC), National Programme for Control of Blindness, Non-Communicable Diseases (NCD) Programmes, National Mental Health Programme, Control of Communicable Diseases, Leprosy, Tuberculosis, Sexually Transmitted Diseases (STI) and Ayushman Bharat Scheme.
- Supervising the work, scrutinising the programmes of staff and suggesting changes if necessary to suit the priority of work undertaken by the staff working under him/her.
- Taking actions that are timely with respect to Right to Information (RTI), court cases and expeditious implementation of orders of the courts.
- Discharging all financial duties entrusted to him/her.
- Monitoring and guiding activities of hospitals/PHC/CHC committees, patient welfares societies of hospitals, village health & sanitation committees.
- Attending all calls from in-patients, while 'on-call duty'.
- Ensuring intersectoral/inter-departmental coordination; involvement of community leaders, various social welfare agencies and people for effective provision of patient centric healthcare.

- Being involved in 'performance audit' of staff as per guidelines of 'Performance Audit'.
- Facilitating, coordinating, supervising, monitoring and implementing provisions of all health sector Acts and Rules
- As a member of the health care team, demonstrating an exemplary attitude towards patients and staff, thereby, performing duties with respect, dignity, privacy, and modesty.
- Performing any other duties which a MO is expected to in view of his position and any other which are assigned as and when required.

Nursing Superitendent

Administrative

- Being overall in-charge of nursing services in a hospitalworking under the direction of Medical Superintendent (MS) of the hospital.
- Implementing hospital policies amongst various nursing units.
- Assisting MS in recruiting nursing staff & preparing budgets for nursing services.
- Ensuring nursing duty roster is prepared along with non-rotational posting in critical care areas.
- Participating as a member in various condemnation boards for linen, equipment and other hospital stores.
- Investigating all complaints regarding nursing care and personnel, and taking suitable corrective action and redressal of grievances.
- Evaluating confidential reports of subordinate staff and recommending for promotion, higher studies etc.
- Receiving evening and night reports from nursing supervisors.
- Recognising & appreciating champions and their good work.
- Assisting M.S in preparing MoU between hospitals & nursing teaching institute.
- Ensure restriction of entry during non-visiting hours.
- Maintaining confidential report and records of nursing personnel.
- Checking whether duty rosters are displayed in different departments and monitoring if they are updated daily as per duty roster schedule
- Maintaining decorum among nursing personnel particularly for dress, courtesy & behaviour, timeliness and keeping cool during crisis.
- Observing whether indents are based on consumption or not.
- Checking whether relevant records are being maintained by nurses on duty.
- Reporting on requirements of different wards on seepage, infrastructural damages, pest control etc.
- Support MS/HM in undertaking pest control measures.

Clinical/Patient care

- Supervising nursing care given to patients in various departments by taking regular rounds.
- Accompanying MS while making hospital rounds.
- Undertaking frequent checks to ensure standards of care are maintained and patients are nursed in a clean, orderly and safe environment.
- Periodically interacting with clinical heads to discuss problems in patient care.

- Checking whether room-wise protocols are displayed in each department along with performance indicators, equipment maintenance schedule and cleaning schedule.
- Checking with In-Charge nurses of different departments whether they have adequate medicines, equipment and consumables for the day.
- Monitoring whether critical equipment is in functional state or not.
- Monitoring and recording critical indicators of the hospital like – bed occupancy, death rate, midnight head count etc.
- Monitoring that the handing-over and taking-over protocols are followed in critical departments like LR, SNCU, O.T etc.
- Checking if hospital wastes are segregated and disposed as per guidelines of BMWM.
- Ensuring nursing staff attends on priority to emergency patients, vulnerable, poor, rape victims and challenged people.
- Collecting patient satisfaction records from the departments and assessing overall ward performance. Chalking out the issue and communicating them to top management for improvement.
- Assisting MS in ensuring quality assurance.

Educational/teaching and training

- Arranging orientation programmes for new nursing staff.
- Ensuring an induction orientation/training for nursing students.
- Providing guidance and counselling to nursing staff.
- Ensuring clinical experience facilities for student nurses in various clinical areas of the hospital.
- Planning and implementing staff capacity development and training programmes, CNE etc.
- Organising educational programmes for graduate/post graduate students from different hospitals.
- Initiating and encouraging research in nursing services.
- Planning for initiating nursing programmes in the district hospitals that are being developed as knowledge hubs.
- Ensuring practice of clinical nursing protocols in various clinical areas.
- Liaisoning/coordinating with affiliated teaching institutions for appropriate posting to meet learning objectives.

Staff Nurse

- Assessing needs of the patients in the ward and making a nursing care plan for all patients after consulting with the ward sister.
- Giving direct patient care and allotting responsibility to her/him by the ward sister.
- Providing comfort to the patient and maintaining his/her safety (universal safety precaution).
- Carrying out procedures of admission, discharge and transfer of the ward patient.
- Taking care that discharged patient goes home with proper understanding of follow-up procedures and details of diet, medication, exercise, etc.
- Being responsible for taking history of the patient.
- Preparing and assisting in the diagnostic procedure in the ward.
- Providing minor dressing in an emergency.

- Sterilising all articles and maintaining all equipment, gadgets, electrical connections, light, fan etc.
- Administering drugs by injection upon written order of the doctor.
- Learning the handling of special gadgets and equipment.
- Distributing diet, milk, etc.
- Being responsible for observation of the patient's condition, taking prompt action and reporting to the concerned MO.
- Offering health education to patients and their family members under care.
- Making records of all procedures of patients and keeping them up to date.
- Taking care that case papers are not allowed to be handled by anyone except the doctor-in-charge of the patient, specifically for medico-legal cases.
- Providing assistance and instructions to patients and their relatives.
- Receiving reports and giving them to the patients as well as informing the doctor.
- Ensuring the privacy of patients.
- Respecting the cultural and religious differences of patients.

If posted in OTs/will be responsible for the following

- Maintaining the aseptic environment of the OT.
- Carrying out the instruction of O.T. In-Charge when necessary and acting as the O.T. sister in her/his absence.
- Assisting the Surgeon and Anaesthetic in the OT.
- Counting all instruments and mops before closing the wounds.
- Monitoring the condition and taking care of the patient during the operation and postoperatively in the recovery room.

Medical lab technologist/Lab Technician

- Receiving and processing samples.
- Drawing blood samplesfor testing (primarily by performing vein punctures).
- Labelling specimens/vials accurately and distributing them to the appropriate departments/ processing centres at the recommended transportation condition.
- Preparing samples/slides for testing using various types of laboratory equipment.
- Conductiong all the necessary laboratory investigations including routine microscopy.
- Giving instructions to the patient regarding sample collection.
- Being friendly, courteous and sympathetic while working with patients.
- Writing, printing and issuing the laboratory reports to the patients.
- Ensuring patient confidentiality is maintained at all times.
- Being responsible for the upkeep and routine maintenance of instruments in the laboratory and updating instrument maintenance records.
- Cleaning/sterilizing and maintaining the work area and all lab equipment, accessories and supplies.
- Making timely indents for chemical, reagents & equipment repairs.
- Preparing chemical reagents, stains, solutions and biological media according to formulae; and accurately labelling all reagents and other stock in the laboratory.

- Taking care of all quality assurance and quality control norms in the laboratory, including EQAS, IQAS.
- Following all safety protocols and SoPs to maintain hygiene and preventing infection.
- Maintaining data of all lab procedures and records of supplies, stocks and investigations.
- Submitting weekly/monthly reports of the laboratory work.
- Keeping himself/herself informed about new laboratory techniques.
- Participating in the development of new medical laboratory procedures and techniques.
- Participating in training, workshops and continuing education programmes.
- Keeping himself/herself updated regarding various guidelines on hospital infection control and management of spills (mercury, chemicals, body fluids).
- Being responsible for implementation of biomedical waste management as per guidelines.
- Maintaining containers and specimens that may be involved in court cases, in case such a situation arises.
- Acting as an auditee during an internal audit of the lab.
- Taking up other responsibilities as assigned by the competent authority.

Hospital Manager

Administrative/Managerial

- Planning, organising direct, control and coordinating day-to-day activities of the hospital.
- Planning and implementing strategic changes to improve service delivery.
- Coordinating with different line departments of the district as well as District Administration and State level officials. Also coordinating with development partners for technical support like training, monitoring, documentation and strengthening of Hospital Management System. Identifying areas for CSR support and helping MS of hospital in mobilising funds from CSR as per approved activities.
- Adapting or placing a system of regular patient feedback, analysing it and initiating corrective actions.
- Adapting or placing a system for reporting of grievances and its timely redressal.
- Supporting MS in monitoring and implementing all Acts and Regulations.
- Facilitating doctors and other staff with all requisite logistics required for quality patient care.
- Monitoring compliance to Biomedical Waste Management Rules and facilitating maintenance of records of waste generation.
- Monitoring stock-outs, indenting and forecasting, logistics arrangement of central and sub stores. Ensuring drugs and consumables are not kept for more than a week at patient service areas like LR, OT, SNCU, wards etc. and ensuring adherence to handing over taking over protocols in all critical areas.
- Supporting in procurement of equipment and supplies, and organising stores.
- Facilitating the process of Quality certification (like NQAS/LAQSHYA/KAYAKALP/NABH) of health facilities under the Quality Assurance Programme at SHSB.
- Supporting implementation of computerisation of hospital functions and encouraging innovative problem-solving techniques.
- Facilitating the process of developing a hospital plan in which prospective plans are duly updated on annual basis.

- Facilitating construction of new building and monitoring plumbing, electrical and infrastructural repair as per need.
- Facilitating the process of removing junk.
- Ensuring availability of patient friendly services & facilities.
- Undertaking steps to maintain good public relations, ensuring that the facility maintains a positive image & updating the citizen charter and placing it properly.
- Keeping up with the ever-changing medical technology, government regulations, financing options and health insurance benefits.

Supervision

- Taking daily rounds to monitor infection control, supply of drugs and consumables and cleanliness specially in all critical areas (OT, LR, Emergency, SNCU, Kitchen, Lab, CSSD and mechanised laundry) along with MS and NS of the hospital. Maintaining a register for observations made during the rounds for further reference in review meetings.
- Ensuring adherence to Duty Roster by all staff members and supervising supportive services (security, parking, housekeeping, dietary, laundry etc.) as per their ToR.
- Ensuring availability and adherence to Room-wise ToR and technical protocols.
- Ensuring periodic swab testing of all critical areas.
- Facilitating Training Needs Assessment of all service providers and organising training programme with support of experts.
- Sharing/updating service providers of the hospital on latest guidelines issued by government.

Documentation & Reporting

- Preparing and keeping records for Hospital Profile comprising of information of land, infrastructure, movable, non-movable assets, equipment, HR, room-wise services provided by the institution and updating performance on annual basis.
- Facilitating implementation of hospital based HMIS system in the hospital in physical or digital mode.

District Programme Manager (DPM)

- Assisting the Chairperson of the District Health Society (GB & EC)/CMHO in planning and implementation of all Public Health programmes in the district.
- Assisting CMHO in preparing agenda, agenda notes, proceedings of the DHS and other meetings and following up action on decision taken.
- Leading the district team in development of District Health Action Plan.
- Coordinating and dealing with all correspondence related to NHM at District level.
- Disseminating all guidelines in respect of all programmes among all functionaries at all levels within the district.
- Circulating a copy of all necessary reports/documents/minutes of meetings to all related officers within the district.
- Creating and maintaining district resource databases for the health sector.
- Ensuring distribution of/communication of Resource Envelope (along with physical and financial targets) (through District Accountant Manager) to all health facilities in the District.

- Assessing training load and needs in consultation with the blocks/talukas; preparing training plans and organising district level trainings.
- Monitoring and following up of health activities at all levels within the district.
- Ensuring all necessary reports of the district are prepared timely in the prescribed format.
- Ensuring all data/reports of the district are regularly entered in different e-portals.
- Analysing all data/reports of the district, and taking corrective measures for improving outputs of the district.
- Submitting reports to the State Programme Management Unit as and when required.
- Identifying the cause of any unreasonable delay in the achievement of milestones, or in the release of funds, and supporting the district team in implementing the corrective action/solution to the problem.
- Monitoring implementation of IEC/BCC activities in the districts.
- Ensuring that the meetings of all RKSs/VHSCs in his/her District are organised in time.
- Ensuring timely renewal of HR contracts for employees working under NHM.
- Preparing advance monthly work plan, including a tentative travel plan in consultation with CMHO.
- Making supportive supervision visits within the district and submitting field visit report to CMHO.
- Coordinating collection and distribution of NHM supplies/logistics to all health institutions in the District. Also maintaining record related to these supplies.
- Developing strategies or plans to improve quality of service provision to the people.
- Keeping watch on the vacant position under District Health Mission, and inform appropriate authority to fill the vacant positions. When required, facilitating the recruitment process.
- Coordinating with development partners (aid agencies, UNICEF, WHO etc. & other NGOs) in the field and ensuring convergence of programme activities.
- Liaising with other consultants/Managers/Officers/Staff of the NHM programme at all levels.
- Performing any other role/duties that may be assigned by the competent authority.

District Accounts Manager (DAM)

- Being responsible for the overall financial management of NHM funds released to the district.
- Being responsible for the development of Annual Financial Plan and Budget for their District.
- Demonstrating accountability for maintaining books of accounts and managing other finance-related aspects for the district Programme Management Unit.
- Ensuring implementation and maintenance of PFMS in the district.
- Ensuring disbursement of funds to all health facilities of the district as per the guidelines.
- Maintaining all necessary books of accounts, in accordance with prescribed guidelines.
- Collecting, compiling, analysing and submitting financial monitoring reports (FMR).
- Preparing and submitting monthly/quarterly/annual statement of expenditure (SoE) in prescribed formats.
- Ensuring timely issue and submission of UCs for the utilised funds.
- Managing petty cash account of district and monitoring of it for all the health facilities of the district (if any).
- Ensuring that reconciliation is done for all accounts under the district.

- Ensuring that salary and incentives are paid timely to all employees working under DHM.
- Ensuring timely deduction of TDS and submission of tax returns is completed as per provisions.
- Adhering to the system for periodic internal audit and establishing the accounting system.
- Ensuring timely conduct of external audit for the facilities under the district.
- Being responsible for implementation, maintenance and updating of computerised financial system/PFMS.
- Managing the accounts of the Society, including grants received from State Society as well as funds mobilsed from donors and or user fees/membership fees etc.
- Supervisinge accounts of BPMUs/TPMUs and at facilities including periodic inspection of accounts and funds management at BPMUs/TPMUs and all facilities getting funds from NHM.
- Ensuring adherence to laid down accounting standards as may be adopted by the Governing Body of the District Health Society.
- Preparing an advance monthly work plan, including a tentative travel plan in consultation with DPM/CMHO.
- Liaising with other consultants/Managers/Officers/Staff of the NHM programme at all levels.
- Performing any other role/duties that may be assigned by the State Programme Management Unit and District Health Societ

District Community Mobiliser (DCM)

- Preparing a de-centralised annual plan regarding ASHA programme, VHSNC, VHND, MAS and other related community processes activities (related to health) in the district.
- Ensuring selection of ASHAs & ASHA Facilitator as per norms (Population & Area).
- Identifying inactive ASHAs and coordinating with appropriate authorities for initiating further steps.
- Keeping ASHA database of the district updated.
- Ensuring regular training (capacity building) of ASHAs, ASHA Facilitators, VHSC members, Block/ Taluka Community Mobilisers.
- Undertaking regular field visits in the district and providing supportive supervision.
- Ensuring progress of activities conducted by ASHAs and ASHA Facilitators.
- Ensuring timely payment of Performance Incentive to ASHAs & ASHA Facilitators.
- Ensuring establishment and operationalisation of the grievances redressal mechanism for ASHA/ ASHA Facilitator and making sure grievances are addressed in timely manner.
- Ensuring formation of VHSNC, MAS and RKS, and also that its meetings held regularly.
- Facilitating and supervising functioning of Block Community Mobilisers.
- Ensuring intersectoral coordination with other Government Departments within the district. (e.g. WCD, ICDS, PR Water and Sanitary, Education etc.)
- Taking for resolution of problems faced by ASHAs and ASHA Facilitators while undertaking their functions.
- Ensuring and monitoring that all ASHAs and ASHA Facilitators have drug kits (and other necessary supplies) with them.
- Organising district level *ASHA Sammelan* for recognition of their excellent work and contribution to NHM/Community.
- Establishing a support system for enhancing coordination between DPMU and ARC.

- Being responsible for NGO coordination to ensure district-level support for ongoing community processes.
- Facilitating community mobilisation process in the district.
- Liaising with other consultants/Managers/Officers/Staff of the NHM programme at all levels for programme management.
- Performing any other role/duties that may be assigned by the State Programme Management Unit and District Health Society.
- Attending Block/District level programmes and planning meetings.

District Data Manager (DDM)

- Preparing and maintaining all databases for the district.
- Ensuring data entry and analysing data of MIS systems/all health related web portals in the District.
- Analysing physical progress reports and recommending measures for improving programme performance in the district.
- Preparing feedback on the progress reports received from all the facilities under the district and disseminating to concerned authorities.
- Monitoring data quality (timely, completely, correctly) in preparation of periodic and annual reports.
- Sharing with the CMHI and Hospital In-Charge the physical progress of various programmes and organising review meetings.
- Following up with blocks/talukas for regular submission of necessary data.
- Ensuring training of all district health personnel on safe data storage practices/data management practices.
- Monitoring the recording/reporting system/maintenance of registers by health workers through field visits and submitting a visit report with appropriate suggestions/actions for improvement.
- Providing technical and managerial support to State/District-level Programme Managers and grassroots functionaries on monitoring and evaluation.
- Providing expert technical inputs in the monitoring and evaluation of NHM/health programmes.
- Assisting CMHO and DPM in all matters relating to monitoring & evaluation of health programmes.
- Supervisinge functioning of M & E assistant and Data Entry Operator working in the District.
- Assisting DPM in preparation of monthly reports, development of DHAP and routine monitoring.
- Organising maintenance of IT hardware and software for the entire district.
- Ensuring that problems of e-connectivity, get solved by an appropriate person.
- Liaising with other consultants/Managers/Officers/Staff of the NHM programme at all levels.
- Performing any other role/duties that may be assigned by the competent authority.

Data Entry Operator (District level DEO)

- Preparing/compiling physical reports for the district.
- Ensuring accurate, complete and timely data entry in MIS systems/all health related web portals in the District.
- Doing the first level follow up with blocks/talukas for regular entry of necessary data.
- Maintaining all databases for the district and keeping it updated.
- Verifying e-data with physical reports of the district.

- Supporting data entry operators working under DHM for doing data entry to various health portals.
- Ensuring confidentiality of data related to DHM.
- Assisting DDM and DPM in preparation of all reports, developing DHAP and doing routine monitoring.
- Liaising with other consultants/Managers/Officers/Staff of the NHM programme at all levels.
- Performing any other role/duties that may be assigned by the competent authority.

ANNEXURE 8

List of Essential Medicines Recommended for Sub District Hospital & District Hospital

List of Essential Medicines Recommended for Sub District Hospital

Essential Medicines Recommended for Sub District Hospital (SDH)	
S. No.	**Medicine Name**
Anaesthetic Agents	
1	Halothane gas for inhalation *(Protect from light and store at temperature not exceeding 25°C)*
2	Isoflurane gas for inhalation
3	Ketamine Injection 10 mg/ml[1] Ketamine Injection 50 mg/ml
4	Nitrous oxide gas for inhalation (*Store under pressure in metal cylinders of the type conforming to the appropriate safety regulations and at temperature not exceeding 37°C)*
5	Oxygen gas for inhalation
6	Propofol Injection 10 mg/ml[2] (*Should not be allowed to freeze*)
7	Sevoflurane Injection
8	Promethazine* Injection 25 mg/ml, 50mg/ml [3]
9	Pentazocine Injection 30 mg/ml [4] (*Protect from light & moisture*)
10	Thiopentane Injection 0.5 gm/1gm [2]
11	Bupivacaine Injection 0.5 mg/ml (sensorcain)
12	Lignocaine* Injection 2% Lignocaine Injection 4%w/v, 5%w/v, Lignocaine Jelly, Lignocaine Ointment 2%-5% Lignocaine Spray 10%
13	Lignocaine (A) + Adrenaline (B) Injection 1% (A) + 1:200000 (5 mcg/ml) (B) Injection 2% (A) + 1:200000 (5 mcg/ml) (B)
14	Atropine* Injection 0.6mg/ml, 1mg/ml (*Protect from light)*
15	Glycopyrolate Injection 0.2 mg/ml
16	Midazolam* Injection 1 mg/ml,[2,4] Midazolam Tablet 250 mg, Midazolam Tablet 500 mg
Non-opioid Analgesic, Anti-pyretic and Nonsteroidal Anti-inflammatory Medicines	
17	Diclofenac Tablet 50 mg, Diclofenac Injection 25 mg/ml, Diclofenac Injection 25 mg/3 ml

Essential Medicines Recommended for Sub District Hospital (SDH)	
S. No.	**Medicine Name**
18	Ibuprofen* Tablet 200 mg, Ibuprofen Tablet 400 mg, Ibuprofen Syrup 100 mg/5 ml
19	Paracetamol* Tablet 500 mg, Paracetamol Injection 150 mg/ml, Paracetamol Syrup 125 mg/5ml
20	Naproxen Tablet 250 mg, Naproxen Tablet 500 mg
21	Duloxetine Tablet 10 mg, 30 mg, 60 mg
22	Tapentadol Tablet 25 mg, 100 mg
23	Gabapentin Tablet 100 mg, 400 mg
24	Pregabalin Tablet 25 mg,150 mg Pregabalin Syrup 50 mg/ml
25	Nortriptyline Tablet 10 mg, 50 mg
Anti-allergic and Medicines used in Anaphylaxis	
26	Adrenaline Injection 1 mg/ml (1:1000) (*Protect from light, preferably in containers filled with nitrogen*)
27	Cetirizine Tablet 5 mg, Cetirizine Tablet 10 mg Cetirizine Oral liquid 5 mg/5 ml
28	Chlorpheniramine Tablet 4 mg[3] Chlorpheniramine Oral liquid 2 mg/5 ml
29	Dexamethasone* Tablet 0.5 mg, Dexamethasone Injection 4 mg/ml (*Protect from light at a temperature not exceeding 30^{0}C)*
30	Hydroxyzine Syrup 10 mg/5 ml, Hydroxyzine Tablet 25 mg
31	Hydrocortisone* Powder for Injection 100 mg, Hydrocortisone Injection 200 mg Hydrocortisone Cream/Gel/Ointment 0.5%/1%
32	Pheniramine Maleate Injection 22.75 mg/ml[3]
Antidote and other Substances used in Poisoning	
33	Activated Charcoal (*Protect from moisture)*
34	Calcium Gluconate* Injection 100 mg/ml, Calcium Gluconate Injection 1 gm, IV-10 ml amp
35	Desferrioxamine Injection 500 mg (*Protect from light in refrigerator (2-8^{0}C). Do not freeze*)
36	N-acetylcysteine Sachet 200 mg, N-acetylcysteine Tablet 600 mg/Dispersible
37	Neostigmine* Injection 0.5 mg/ml

Essential Medicines Recommended for Sub District Hospital (SDH)	
S. No.	**Medicine Name**
38	Snake Venom Antiserum Injection a) Soluble/Liquid Polyvalent b) Lyophilised Polyvalent
Anti-Convulsant/Anti-Epileptic Medicines	
39	Carbamazepine* Tablet 100 mg Carbamazepine Oral Liquid 100 mg/5 ml Carbamazepine CR Tablet 200 mg
40	Levetiracetam Tablet 250 mg, 500 mg
41	Lorazepam Tablet 1 mg[5]
42	Magnesium sulphate Injection 500 mg/ml Magnesium Sulphate Injection IP 50% w/v
43	Phenytoin ER Tablet 300 mg Phenytoin Tablet 500 mg Phenytoin Tablet 300 mg
44	Sodium Valproate Tablet 100 mg Sodium Valproate Tablet 500 mg Sodium Valproate Oral Liquid 200 mg/5 ml
Anti-infective Medicines	
45	Albendazole Tablet 400 mg Albendazole Oral liquid 200 mg/5 ml
46	Diethylcarbamazine Tablet 100 mg (*Protect from moisture)*
47	Ivermectin Tablet 600 mg
48	Amoxicillin* Capsule 250 mg Amoxicillin Tablet 500 mg Amoxicillin Suspension 125 mg/5 ml Amoxicillin Oral liquid 250 mg/5 ml (*Capsule, oral suspension: Store protected from moisture and light at a temperature not exceeding 30^{0}C*)
49	Ampicillin Capsule 500 mg, Ampicillin Injection 500 mg/ml
50	Amoxicillin* (500 mg) + Clavulanic acid (125 mg) Tablet Amoxicillin (875 mg) + Clavulanic acid (125 mg) Tablet Amoxicillin (500 mg) + Clavulanic acid (100 mg) Injection Amoxicillin (1 gm) + Clavulanic acid (200 mg) Injection Amoxicillin (125 mg) + Clavulanic acid (31.25 mg/5 ml) Dry Syrup
51	Tablet Penicillin V (Phenoxymethyl Penicillin) 250 mg
52	Benzylpenicillin Injection 10 lacks unit, Benzathine Benzylpenicillin Injection 12 lacks unit

Essential Medicines Recommended for Sub District Hospital (SDH)	
S. No.	**Medicine Name**
53	Cefazolin Powder for Injection 500 mg, Cefazolin Powder for Injection 1 gm (*The constituted solution should be stored protected from light and used within 24 hours when stored at a temperature not exceeding 30^{0}C or within 4 days when stored between 2 to 8^{0}C)*
54	Cefixime Tablet 200 mg[4] Cefixime Oral liquid 50 mg/5 ml
55	Cefotaxime Injection 1 g/vial[4] Powder for injection 250 mg
56	Ceftazidime Powder for Injection 250 mg,[4] Ceftazidime Powder for Injection 1 g (*Store in sterile containers sealed, so as to exclude micro-organisms protected from moisture at a temperature not exceeding 30^{0}C)*
57	Ceftriaxone Powder for Injection 250 mg,[4] Ceftriaxone Powder for Injection 500 mg, Ceftriaxone Powder for Injection 1 g
58	Cloxacillin Capsule 250 mg, Cloxacillin Oral Liquid 125 mg/5 ml, Cloxacillin Injection 500 mg/vial
59	Azithromycin Tablet 250 mg, Azithromycin Tablet 500 mg, Azithromycin Oral liquid 200 mg/5 ml
60	Norfloxacin Dispersible Tablet 100 mg Norfloxacin Tablet 400 mg
61	Ciprofloxacin Tablet 250 mg, Ciprofloxacin Tablet 500 mg, Ciprofloxacin Oral liquid 250 mg/5 ml, Ciprofloxacin I.V 200 mg/100 ml
62	Clarithromycin Tablet 500 mg
63	Co-trimoxazole* (*Protect from light and moisture*) [Sulphamethoxazol e (A) +Trimethoprim (B)] (*Suspension should not be allowed to freeze)* Tablet 400 mg (A) + 80 mg (B) Tablet 800 mg (A) + 160 mg (B) Oral liquid 200 mg (A) + 40 mg (B)/5 ml
64	Doxycycline* Capsule 100 mg, Doxycycline Dry Syrup 50 mg/5 ml

Essential Medicines Recommended for Sub District Hospital (SDH)	
S. No.	**Medicine Name**
65	Metronidazole* Tablet 200 mg, 400 mg, (*Protect from light and moisture*) Metronidazole Injection 5 mg/ml, 500 mg/100 ml, (*Store injection in a single dose container*) Metronidazole Oral liquid 200 mg/5 ml
66	Nitrofurantoin Tablet 100 mg, Nitrofurantoin Oral liquid 25 mg/5 ml
67	Amikacin Injection 100 mg,[2] Amikacin Injection 500 mg
68	Clofazimine Tablet 50 mg[4] Clofazimine Capsule 100 mg Clofazimine Capsule 200 mg
69	Delamanid Tablet 50 mg
70	Dapsone Tablet 25 mg Dapsone Tablet 100 mg
71	Rifampicin* Tablet 75 mg [4] Rifampicin Capsule 150 mg Rifampicin Capsule 300 mg Rifampicin Capsule 450 mg Rifampicin Oral Liquid 100 mg/5ml
72	Capreomycin Injection 1 gm[4] Capreomycin Injection 750 mg Capreomycin Injection 500 mg
73	Cycloserine Capsule 125 mg[4] Cycloserine Capsule 250 mg
74	Ethambutol Tablet 100 mg[4] Ethambutol Tablet 200 mg Ethambutol Tablet 600 mg
75	Ethionamide Tablet 125 mg[4] Ethionamide Tablet 250 mg
76	Isoniazid Tablet 50 mg[4] Isoniazid Tablet 75 mg Isoniazid Tablet 100 mg Isoniazid Tablet 300 mg Isoniazid oral liquid 100 mg/5 ml
77	Levofloxacin Tablet 250 mg[4] Levofloxacin Tablet 500 mg Levofloxacin Tablet 750 mg
78	Linezolid Tablet 600 mg
79	Moxifloxacin Tablet 400 mg[4]

Essential Medicines Recommended for Sub District Hospital (SDH)	
S. No.	**Medicine Name**
80	Pyrazinamide Tablet 150 mg[4] Pyrazinamide Tablet 400 mg Pyrazinamide Tablet 500 mg Pyrazinamide Tablet 750 mg Pyrazinamide Oral liquid 250 mg/5 ml
81	Rifabutin* Capsule 150 mg[4]
82	Streptomycin Powder for Injection 750 mg[2] Streptomycin Powder for Injection 1 g Streptomycin Powder for Injection 500 g
83	Bedaquiline Tablet 100 mg
84	Clotrimazole Tablet 100 mg, Clotrimazole Pessary 100 mg *(Do not crush pessaries)*
85	Fluconazole Tablet 150 mg (*Store in an airtight container)*
86	Itraconazole Tablet/Capsule 100 mg
87	Acyclovir Tablet 200 mg, (*Store tablets protected from light)* Acyclovir Injection 250 mg (*For infusion: Protect from moisture in a sterile tamper evident container sealed so as to exclude micro-organisms and store at temperature not exceeding 30^{0}C)*
88	Entecavir Tablet 0.5 mg Entecavir Tablet 1 mg
89	Diloxanide Furoate Tablet 500 mg
90	Tinidazole Tablet 300 mg, 500 mg
91	Miltefosine Capsule 10 mg, Miltefosine Capsule 50 mg (*Store in a cool place, protect from light and moisture)*
92	Chloroquine Tablet 150 mg, Chloroquine Oral liquid 50 mg/5 ml
93	Primaquine Tablet 2.5 mg, Primaquine Tablet 7.5 mg, Primaquine Tablet 15 mg *(Protect from moisture)*
94	Quinine Tablet 300 mg, Quinine Injection 300 mg/ml (*Protect from light)*
Anti-COVID Medicines	
95	Favipiravir Tablet 200 mg, 400 mg
96	Remdesivir Injection 100 mg/20 ml
Anti-Migraine Medicines	

Essential Medicines Recommended for Sub District Hospital (SDH)	
S. No.	**Medicine Name**
97	Flunarizine Tablet 5 mg, Flunarizine Tablet 10 mg
98	Propranolol Tablet 5 mg, 40 mg
Anti-Neoplastic Medicines	
99	All-trans Retinoic Acid Capsule 10 mg
100	Arsenic Trioxide Injection 1 mg/ml
101	Calcium Folinate Tablet 15 mg Calcium Folinate Injection 3 mg/ml
102	Capecitabine Tablet 500 mg
103	Carboplatin Injection 10 mg/ml
104	Chlorambucil Tablet 2 mg/5 mg[3] Chlorambucil Powder for Injection 500 mg
Hormones and Anti-hormonal Medicines used in Cancer Therapy	
105	Prednisolone* Tablet 5 mg Prednisolone Tablet 10 mg Prednisolone Oral Liquid 5 mg/5 ml Prednisolone Oral Liquid 15 mg/5 ml (*Protect from light and store at temperature not exceeding 30^{0}C)*
Pain and Palliative Care Medicines	
106	Allopurinol* Tablet 100 mg 300 mg
107	Acetylsalicylic Acid (Aspirin)* Tablet 25 mg Acetylsalicylic Acid Tablet 50 mg Acetylsalicylic Acid Tablet 75 mg Acetylsalicylic Acid Tablet 150 mg, 300 mg
108	Diazepam* Injection 5 mg/ml[5] Diazepam Injection 5 mg/ml (*Injection: Store in single dose or multi-dose container protected from light*) Diazepam Tablet 5 mg Diazepam Injection 10 mg/2 ml
109	Fluoxetine* Capsule 20 mg
110	Haloperidol* Tablet 1.5 mg Haloperidol Tablet 5 mg Haloperidol Injection 5 mg/ml
111	Loperamide Tablet 2 mg
112	Metoclopramide Tablet 10 mg Metoclopramide Oral Liquid 5 mg/5 ml
113	Ondansetron Tablet 4 mg Ondansetron Oral Liquid 2 mg/5 ml Ondansetron Injection 2 mg/ml

Essential Medicines Recommended for Sub District Hospital (SDH)	
S. No.	**Medicine Name**
114	Tramadol* Capsule 50 mg[4]
	Tramadol Injection 50 mg/ml
115	Hyoscine Butyl- Bromide Tablet 500 mg
	Hyoscine Butyl- Bromide Injection 20 mg/ml
Opioid Analgesic Medicines	
116	Morphine* Tablet 10 mg[5]
117	Codeine Tablet 15 mg [5]
	Codeine Oral Solution 15 mg/5 ml
118	Fentanyl Injection 50 mcg/ml[5]
119	Methadone Tablet 5 mg, 40 mg[5]
	Methadone Oral Solution 5 mg/ml
	Methadone Injection 10 mg/ml
Anti-Parkinsonism Medicines	
120	Levodopa (A) + Carbidopa (B)
	Tablet 100 mg (A) + 10 mg (B)
	CR Tablet 100 mg (A) + 25 mg (B)
	CR Tablet 200 mg (A) + 50 mg (B)
	Tablet 250 mg (A) + 25 mg (B)
121	Trihexyphenidyl (Benzhexol) Tablet 2 mg
Medicines Affecting Blood	
122	Clonidine Tablet 100 mcg
123	Ferrous Salts Equivalent to 60 mg of Elemental Iron
	Ferrous Salts Oral Liquid Equivalent to 25 mg
	of Elemental Iron/ml
124	Ferrous Salt (A) + Folic Acid (B)
	Tablet 45 mg Elemental Iron (A) + 400 mcg (B)
	Tablet 100 mg Elemental Iron (A)+ 500 mcg (B)
	Oral liqiud 20 mg Elemental Iron(A) + 100 mcg (B)/ml
	Tablet 100 mg Elemental Iron (A)+ 500 mcg (B) as Enteric coated
125	Folic Acid* Tablet 5 mg
	Folic Acid Tablet 0.4 mg
126	Iron Sucrose Injection 20 mg/ml
	(*Protect from light and store at temperature not exceeding 30^{0}C)*
127	Phytomenadione (Vitamin K1) Tablet 10 mg,
	Phytomenadione (Vitamin K1) Inj 10 mg/ml
	(*Protect from light)*
128	Menadione Injection (Vitamin K3) 10 mg/ml
	(*Protect from light)*
129	Heparin Sodium Injection 1000 IU[2]
130	Tranexamic Acid Tablet 500 mg

Essential Medicines Recommended for Sub District Hospital (SDH)	
S. No.	**Medicine Name**
131	Warfarin Tablet 1 mg[2]
	Warfarin Tablet 2 mg
	Warfarin Tablet 3 mg
	Warfarin Tablet 5 mg
Cardiovascular Medicines	
132	Clopidogrel Tablet 75 mg
133	Diltiazem Tablet 60 mg
	Diltiazem SR Tablet 90 mg
134	Glyceryl Trinitrate Sublingual Tablet 0.5 mg
	(*Glyceryl trinitrate tablets are unstable)*
	Glyceryl trinitrate Injection 125 mg/5 ml
	(*Protect from light and moisture in glass container of not more than 100 tablets and store at temperature not exceeding 30°C)*
135	Isosorbide-5- mononitrate Tablet 10 mg
	Isosorbide-5- mononitrate SR Tablet 30 mg
136	Isosorbide dinitrate Tablet 5 mg
	Isosorbide dinitrate Tablet 10 mg
137	Atenolol Tablet 50 mg, 100 mg
138	Metoprolol Tablet 25 mg
	Metoprolol Tablet 50 mg
139	Amiodarone Tablet 100 mg
	Amiodarone Injection 50 mg/ml
140	Amlodipine Tablet 2.5 mg
	Amlodipine Tablet 5 mg
	Amlodipine Tablet 10 mg
	(*Protect from moisture)*
141	Hydrochlorothiazide* Tablet 12.5 mg
	Hydrochlorothiazide Tablet 25 mg
	Hydrochlorothiazide Tablet 50 mg
142	Labetalol Injection 5 mg/ml
	Labetalol Tablet 100 mg
	Labetalol Injection 20 mg/2 ml
143	Methyldopa Tablet 250 mg
	Methyldopa Tablet 500 mg
144	Enalapril Tablet 2.5 mg
	Enalapril Tablet 5 mg
	Enalapril Tablet 10 mg
145	Captopril Tablet 25 mg
146	Lisinopril Tablet 5 mg

Essential Medicines Recommended for Sub District Hospital (SDH)	
S. No.	**Medicine Name**
147	Verapamil Tablet 40 mg, 120 mg Verapamil Injection 5 mg/2 ml
148	Ramipril Tablet 2.5 mg/5 mg
149	Telmisartan Tablet 40 mg
150	Digoxin Tablet 0.25 mg Digoxin Tablet 250 mg
151	Dobutamine Injection 50 mg/ml
152	Dopamine Injection 40/ml (*Store in an airtight container protect from light*)
153	Protamine Injection 50 mg/5 ml (Injection: Protect from light in a single dose container)
154	Noradrenaline Injection 2 mg/ml (Store in single dose containers. Store at room temperature (25^{0}C). Store in tight, light resistant containers as it is readily oxidized. Do not use if discoloured (e.g. pink, dark yellow, brown) or if there is a precipitate)
155	Enoxaparin LMWH Injection
156	Clofibrate Tablet 500 mg
157	Streptokinase Injection 15 lac/vial Streptokinase Injection 7.5 lac/vial (*Store in a sealed container protected from light in refrigerator 2 to 8^{0}C). The container should be sterile and sealed so as to exclude micro-organisms)*
158	Fenofibrate Tablet 40 mg, 160 mg
159	Atorvastatin Tablet 10 mg (*Protect from moisture and store at temperature not exceeding 30^{0}C)* Atorvastatin Tablet 40mg
Medicines used in Dementia	
160	Donepezil Tablet 5 mg (*Protect from moisture and store at temperature not exceeding 25^{0}C)*
Dermatological Medicines (Topical)	
161	Clotrimazole Cream 1% Clotrimazole Oral Lotion or Mouth Paint: 15 ml
162	Framycetin Cream 0.5% (*Store protected from light and moisture at a temperature not exceeding 30^{0}C. If the material is sterile, the container should be tamper-evident and sealed so as to exclude micro-organisms)*
163	Fusidic Acid Cream 5 mg/10 gm preparation 2% or 20 mg per gram Fusidic Acid Cream 2%: 5 mg/10 mg Preparation
164.	Silver Sulphadiazine 2 to 4 %
165	Miconazole Ointment or Cream 2% 15 gm preparation (*Protect from light and moisture and store at temperature not exceeding 30^{0}C. If it is packed in aluminates; the inner surface of tubes should be coated with suitable lacquer)*

Essential Medicines Recommended for Sub District Hospital (SDH)	
S. No.	**Medicine Name**
166	Betamethasone Cream 0.05% Betamethasone Cream 0.1% Betamethasone Injection 12 mg Betamethasone Injection 4 mg/ml
167	Calamine Lotion
168	Benzoyl Peroxide Gel 2.5%
169	Coal Tar Solution 5%
170	Salicylic Acid Ointment 6%
171	Gamma Benzene Hexa Chloride Lotion 100 ml (*Protect from light)*
172	Permethrin lotion 1% Permethrin Cream 5%
173	Glycerin Oral Liquid
174	Petrolium Jelly 100%
Diagnostic Agents	
175	Lignocaine Eye Drops 4% (*Store in cool place*)
176	Tropicamide Eye drop 1% (*Store in a refrigerator (8 to 15^{0}C). It should not be allowed to freeze.)*
Dialysis Solution	
177	Haemodialysis Fluid
Disinfectants and Antiseptics	
178	Cetrimide Solution 20% (Concentrate for dilution)
179	Chlorhexidine Solution 5% (Concentrate for dilution)
180	Ethyl alcohol (Denatured) (*Store in a tightly closed container at a temperature not exceeding 30^0. Away from fire and protected from* moisture)
181	Hydrogen Peroxide Solution 6%
182	Povidone Iodine Solution 4% to 10% Povidone Iodine Solution 10% (equivalent to 1% available iodine)
183	Bleaching Powder containing not less than 30% w/w of available Chlorine (as per I.P) (*Protect from moisture in a tightly closed container)*
Diuretic Medicines	
184	Furosemide Tablet 40 mg Furosemide Injection 10 mg/ml
185	Indapamide Tablet 1.5 mg
186	Chlorthalidone Tablet 12.5 mg[3]
187	Mephentermine Injection 15 mg/ml

Essential Medicines Recommended for Sub District Hospital (SDH)	
S. No.	**Medicine Name**
188	Mannitol Injection 10%, Mannitol Injection 20% (*Store at temperatures between 20^0 and 30^{0}C. Exposure to lower temperatures may cause the deposition* of crystals.)
189	Spironolactone Tablet 25 mg Spironolactone Tablet 50 mg
190	Methyl Cellulose Tablet, powder
Dental Restorative Materials and Medicines	
191	Zinc Oxide Eugenol
192	Silver Amalgam
193	Glass Ionomer Cement (GIC)
194	Calcium Hydroxide
195	Sodium Hypochloride
196	Gutta Percha (GP)
197	Light Cure Composite
198	Ketorolac 10 mg tablet
199	Gum Paint (Tannic Acid)
200	Povidine-Iodine Germicide Gargle 20% w/v
201	Tooth Paste (Potassium Nitrate)
Ear, Nose and Throat (ENT) Medicines	
202	Ciprofloxacin Drops 0.3% Ciprofloxacin Eye/Ear Drops *(Protect from light)*
203	Clotrimazole Drops 1%
204	Xylometazoline* Nasal Drops 0.05 %, 0.1% Xylometazoline Nasal Drops: Paediatric (0.05) Adult (0.1%)
205	Ofloxacin Tablet 200 mg Ofloxacin Tablet 400 mg
206	Normal Saline Nasal Drops: Sodium Chloride Drops 0.05% w/v
207	Wax Solvent Ear Drops: Benzocaine, Paradichlorobenzene, Turpentine oil
208	Boro-spirit Ear Drop S-0.183 gm Boric Acid in 2.08 ml of Alcohol
209	Combo Ear Drops-Chloramphenicol 5% w/v + Clotrimazole 1% + Lignocaine Hydrochloride 2%
210	Liquid Paraffin-Menthol Drops: Menthol 10 gm +Eucalyptus 2 ml+ Camphor 10 mg+ Liquid Paraffin to 100 ml
Gastrointestinal Medicines	
211	Omeprazole* Capsule 20 mg
212	Ranitidine* Tablet 150 mg Ranitidine Injection 25 mg/ml
213	Sucralfate Tablet 10 mg Sucralfate Oral Liquid 1 mg/ml
214	Metoclopramide Injection 5 mg/ml

Essential Medicines Recommended for Sub District Hospital (SDH)	
S. No.	**Medicine Name**
215	Domperidone Tablet 10 mg Domperidone Oral Suspension 1 mg/ml 30 ml Bottle or 5ml Drops containing 10 mg/ml
216	Dicyclomine Tablet 10 mg Dicyclomine Injection 10 mg/ml Dicyclomine Tablet 500 mg (*Injection: Protect from light, in single dose or multiple dose containers. Tablets: Protect from light.)*
217	Hyoscine Butyl- Bromide Tablet 500 mg Hyoscine Butyl- Bromide Injection 20 mg/ml
218	Drotaverine Tablet 500 mg
219	Bisacodyl Tablet 5 mg Bisacodyl Suppository 5 mg
220	Zinc Sulphate Tablet 10 mg Zinc Sulphate Dispersible Tablet USP eq. to Elemental Zinc 20 mg
221	Lactulose Oral liquid* 10 g/15 ml
222	Ispaghula- Granules, Husk, Powder (*Protect from light and moisture)*
223	Senna Tablet, Granules, Powder (*Protect from light and moisture)*
Hormones, other Endocrine Medicines and Contraceptives	
224	Human Chorionic Gonadotropin Injection 1000 IU Human Chorionic Gonadotropin Injection 5000 IU
225	Methylprednisolone Tablet 8 mg, 32 mg Methylprednisolone Injection 40 mg/ml Methylprednisolone Injection 500 mg
226	Ethinylestradiol (A) + Levonorgestrel (B) Tablet 0.03 mg (A) + 0.15 mg (B) Tablet 0.03 mg (A) + 0.15 mg (B) with Ferrous Fumarate
227	IUCD 380A IUCD 375
228	Male Condom
229	Tubal Ring
230	Ormeloxifene Tablet 30 mg
231	Ethinylestradiol Tablet 0.01 mg Ethinylestradiol Tablet 0.05 mg
232	Levonorgestrel Tablet 1.5 mg Levonorgestrel Tablet 0.75 mg
233	Glimepiride Tablet 1 mg Glimepiride Tablet 2 mg
234	Gliclazide Tablet 40 mg

Essential Medicines Recommended for Sub District Hospital (SDH)	
S. No.	**Medicine Name**
235	Insulin (Soluble) Injection 40 IU/ml [2,3] Insulin Lente Basal Injection Insulin Rapid Injection Insulin Mixtard
236	Metformin Tablet 500 mg[3] Metformin Controlled released 750 mg
237	Premix Insulin 30:70 Injection[2,3] (Regular: NPH) Premix Insulin 30:70 Injection 40 IU/ml
238	Glibenclamide Tablet 2.5 mg[3] Glibenclamide Tablet 5 mg
239	Medroxyprogesterone Tablet 5 mg, 10 mg Medroxyprogesterone Acetate Injection 150 mg
240	Carbimazole Tablet 5 mg Carbimazole Tablet 10 mg
241	Levothyroxine Tablet 50, 100 mcg (*Protect from light and moisture)*
Immunological/Vaccines	
242	Anti-rabies Immunoglobulin[7]
243	Anti-tetanus Immunoglobulin[7]
244	Diphtheria Antitoxin[7]
245	Hepatitis B Immunoglobulin[7]
246	Snake Venom Antiserum[7] a) Soluble/Liquid Polyvalent b) Lyophilised Polyvalent
247	Rabies Vaccine[7]
248	As per Current Immunization Programme Guidelines (*Stored as per manufacturer's instructions*)
Muscle Relaxants and Cholinesterase Inhibitors	
249	Vecuronium Powder for Injection 4 mg Vecuronium Powder for Injection 10 mg
Ophthalmological Medicines	
250	Acyclovir Ointment 3%
251	Ciprofloxacin Drops 0.3 %
252	Gentamicin Drops 0.3% Gentamicin Injection 40 mg/ml
253	Povidone iodine Drops 0.6% Povidone iodine Drops 5%
254	Prednisolone Drops 0.1%, Prednisolone Drops 1%
255	Acetazolamide Tablet 250 mg

Essential Medicines Recommended for Sub District Hospital (SDH)	
S. No.	**Medicine Name**
256	Pilocarpine Drops 2%, Pilocarpine Drops 4%
257	Timolol Drops 0.5%
258	Atropine Ointment 1%
259	Homatropine Drops 2%
260	Tropicamide Drops 1% *(Store in a refrigerator (8 to 15^{0}C). It should not be allowed to freeze)*
261	Carboxymethylcellulose Drops 0.5%
Oxytocic and Anti-oxytocic Medicines	
262	Methylergometrine Injection 0.2 mg/ml
263	Mifepristone Tablet 200 mg
264	Misoprostol Tablet 100 mcg Misoprostol Tablet 200 mcg (oral/vaginal)
265	Combi-pack with Mifepristone + Misoprostol (1 tablet of Mifepristone 200 mg and 4 tablets of Misoprostol 200 mcg)
266	Oxytocin Injection 5 IU/ml Oxytocin Injection 10 IU/ml
267	Nifedipine Tablet 10 mg Nifedipine Soft Gelatin Capsule 5 mg
Psychotherapeutic Medicines	
268	Chlorpromazine Tablet 100 mg
269	Diphenylhydantoin Tablet 100 mg[3]
270	Fluphenazine Depot Injection 25 mg/ml
271	Risperidone* Tablet 2mg
272	Phenobarbitone Tablet 30 mg[3,5] Phenobarbitone Tablet 60 mg Phenobarbitone oral liquid 20 mg/5 ml
273	Olanzapine* Tablet 5 mg
274	Escitalopram Tab 5 mg
275	Imipramine Tablet 25 mg Imipramine Tablet 75 mg
276	Lithium Tablet 300 mg
277	Clonazepam Tablet 0.5 mg Clonazepam Tab 0.25 mg
Medicines Acting on the Respiratory Tract	
278	Budesonide Inhalation (MDI/DPI) 100 mcg/dose Budesonide Inhalation (MDI/DPI) 200 mcg/dose Budesonide Respirator Solution for use in Nebuliser 0.5 mg/ml Budesonide Respirator Solution for use in Nebuliser 1 mg/ml

Essential Medicines Recommended for Sub District Hospital (SDH)	
S. No.	**Medicine Name**
279	Combination of LABA+ICS (Formoterol, Salmeterol/Fluticasone) MDI, DPI *(Protect from light and moisture and store at temperature not exceeding 30°C)*
280	Budesonide Nebulisation Solution
281	Ipravent/Levoline Nebulisation Solution
282	Budesonide (A)+ Formoterol (B) Inhalation (MDI/DPI) 100 mcg (A)+ 6 mcg (B) Inhalation (MDI/DPI) 200 mcg (A)+ 6 mcg (B) Inhalation (MDI/DPI) 400 mcg (A)+ 6 mcg (B)
283	Etofyllin B Plus (A), Anhydrous Theophylline IP (B) Combination injection 84.7 mg/ml (A) + 25.3 mg/ml (B)
284	Ipratropium Inhalation (MDI/DPI) 20 mcg/dose Ipratropium Respirator Solution for use in Nebuliser 250 mcg/ml
285	Levosalbutamol 50 mcg/dose
286	Salbutamol Tablet 2 mg Salbutamol Tablet 4 mg Salbutamol Oral Liquid 2 mg/5 ml Salbutamol Inhalation (MDI/DPI) 100 mcg/dose Salbutamol Respirator Solution for use in Nebuliser 5 mg/ml
287	Formoterol Inhaled Bronchodilator
288	Salmeterol Inhaled Bronchodilator
289	Tablet Theophylline (*Protect from moisture)*
290	Deriphyllin Tablet SR
291	Montelukast Tablet 5 mg Montelukast Tablet 10 mg Montelukast syrup
Solutions Correcting Water, Electrolyte Disturbance and Acid-base Disturbance	
292	Dextrose IV Injection 5% w/v, 500 ml
293	Glucose Injection 5% Glucose Injection 10% Glucose Injection 25% Glucose Injection 50%
294	Glucose (A) + Sodium chloride (B) Injection 5% (A) + 0.9% (B)
295	Hydroxyethyl Starch 6% IP (6% Saline solution for infusion)
296	Oral Rehydration* Salts Oral Rehydration Powder 27.5 gm WHO Formula
297	Ringer Lactate Injection (as per IP)
298	Sodium Bicarbonate Injection (as per IP)[2]
299	Sodium Chloride Injection 0.9%[2]

Essential Medicines Recommended for Sub District Hospital (SDH)	
S. No.	**Medicine Name**
300	Sterile Water for Injection IP-05 ml
Vitamins and Minerals	
301	Ascorbic Acid (Vitamin C) Tablet 100 mg[7] Ascorbic Acid (Vitamin C) Tablet 500 mg
302	Calcium Carbonate Tablet 250 mg Calcium Carbonate Tablet 500 mg
303	Calcium with Vitamin D Tablets USP Syrup Calcium with Phosphate in the ratio 2:1 with Vitamin D Tablet Calcium Carbonate 650 mg equivalent to elemental calcium 250 mg and Cholecalciferol USP 125 mg
304	Cholecalciferol Tablet 60,000 IU[7]
305	Nicotinamide Tablet 50 mg[7]
306	Multivitamin Tab/Cap
307	Pyridoxine Tablet 25 mg [7] Pyridoxine Tablet 40 mg Pyridoxine Tablet 50 mg Pyridoxine Tablet 100 mg
308	Riboflavin Tablet 5 mg[7]
309	Thiamine Tablet 100 mg[7] Thiamine Injection 100 mg/ml
310	Vitamin A Oral liquid 100000 IU/ml[7]
Dressing	
311	Dressing Bandage and Gauze with Band-Aid

Note: Above list is suggestive only. This needs to be updated periodically as per newer evidences and guidelines.

Remarks[x]*: This is not all inclusive and users are advised to refer standard text books, guidelines and manufacturer's instructions- regarding storage*

Schedule X[1] **:** *Prescription shall be in duplicate; one copy of which shall be retained by the licensee for a period of two years*

High Alert Medicine[2] *: Drugs that bear a heightened risk of causing significant patient harm when they are used in error*

Schedule G[3] *: Observe caution since it is dangerous to take this preparation except under medical supervision*

Schedule H1[4]*: Separate H1 Register shall be maintained with name of prescriber, patient and medicine along with recording of dispensed quantity (***Annexure I***).*

NDPS[5]**:** *Narcotic Drugs and Psychotropic Substances*

Controlled medicine under NDPS[6] *: Shall store and dispense against respective Form No.3D, 3E and 3H. It shall also be preserved for a minimum period of two years from the date of last entry:*

1. **Form No. 3D:** Maintain day to day accounts in respect of all transactions of essential narcotic drugs in the sub-storage room of wards/departments/sub- departments.
2. **Form No. 3E**:Maintain record of each patient, to whom essential narcotic drugs are being dispensed.
3. **Form No. 3H**: Maintain record of essential narcotic drugs at the main drug storage room.

Schedule P[7]: Life period of drugs.

***** *Medicines are categorised under different therapeutic categories.*

List of Essential Medicine Recommended for District Hospital

Essential Medicines Recommended for District Hospital (DH)	
S. No.	**Medicine Name**
Anesthetic Agents	
1.	Halothane Gas for Inhalation (*Protect from light and store at temperature not exceeding 25°C)*
2.	Isoflurane Gas for Inhalation
3.	Ketamine Injection 10 mg/ml [1] Ketamine Injection 50 mg/ml
4.	Nitrous Oxide Gas for Inhalation (*Store under pressure in metal cylinders of the type conforming to the appropriate safety regulations and at temperature not exceeding 37^{0}C)*
5.	Oxygen Gas for Inhalation
6.	Propofal Injection 10 mg/ml [2] (*Should not be allowed to freeze)*
7.	Sevoflurane Injection
8.	Promethazine* Injection 25 mg/ml, 50 mg/ml [3]
9.	Pentazocine Injection 30mg/ml [4] (*Protect from light & moisture*)
10.	Thiopentane Injection 0.5 gm/1 gm [2]
11.	Bupivacaine Injection 0.5 mg/ml (sensorcain)
12.	Lignocaine* Injection 2% Lignocaine Injection 4%w/v, 5%w/v Lignocaine Jelly Lignocaine Ointment 2%-5% Lignocaine Spray 10%
13.	Lignocaine (A) + Adrenaline (B) Injection 1% (A) + 1:200000 (5 mcg/ml) (B) Injection 2% (A) + 1:200000 (5 mcg/ml) (B)
14.	Atropine* Injection 0.6 mg/ml, 1 mg/ml (*Protect from light*)
15.	Glycopyrolate Injection 0.2 mg/ml
16.	Midazolam* Injection 1 mg/ml [2,4] Midazolam Tablet 250 mg Midazolam Tablet 500 mg
Non-opioid Analgesic, Anti-Pyretic and Nonsteroidal Anti-Inflammatory Medicines	
17.	Diclofenac Tablet 50 mg Diclofenac Injection 25 mg/ml Diclofenac Injection 25 mg/3 ml

Essential Medicines Recommended for District Hospital (DH)	
S. No.	**Medicine Name**
18.	Ibuprofen* Tablet 200 mg Ibuprofen Tablet 400 mg Ibuprofen Syrup 100 mg/5 ml
19.	Paracetamol* Tablet 500 mg Paracetamol Tablet 650 mg Paracetamol Injection 150 mg/ml Paracetamol Suppository 80 mg Paracetamol Syrup 125 mg/5 ml
20.	Colchicine Tablet 0.5 mg (*Protect from light*)
21.	Azathioprine* Tablet 50 mg [2]
22.	Hydroxychloroquine Tablet 200 mg Hydroxychloroquine Tablet 400 mg
23.	Methotrexate* Tablet 2.5 mg[2] (*Tablet: Protect from light and moisture*) Methotrexate Tablet 7.5 mg Methotrexate Injection 50 mg/ml (*Injection: Protect from light*)
24.	Sulfasalazine Tablet 500 mg
25.	Naproxen Tablet 250 mg Naproxen Tablet 500 mg
26.	Duloxetine Tablet 10 mg, 30 mg, 60 mg
27.	Tapentadol Tablet 25 mg, 100 mg
28.	Gabapentin Tablet 100 mg, 400 mg
29.	Pregabalin Tablet 25 mg,150 mg Pregabalin syrup 50 mg/ml
30.	Nortriptyline Tablet 10 mg, 50 mg
Anti-Allergic and Medicines used in Anaphylaxis	
31.	Adrenaline Injection 1 mg/ml (1:1000) (*Protect from light, preferably in containers filled with nitrogen)*
32.	Cetirizine Tablet 5 mg Cetirizine Tablet 10 mg Cetirizine Oral Liquid 5 mg/5 ml
33.	Chlorpheniramine Tablet 4 mg [3] Chlorpheniramine Oral Liquid 2 mg/5 ml
34.	Dexamethasone* Tablet 0.5 mg Dexamethasone Injection 4 mg/ml (*Protect from light and store at temperature not exceeding 30^{o}C)*

Essential Medicines Recommended for District Hospital (DH)	
S. No.	**Medicine Name**
35.	Hydroxyzine Syrup 10 mg/5 ml Hydroxyzine Tablet 25 mg
36.	Hydrocortisone* Powder for Injection 100 mg Hydrocortisone Injection 200 mg Hydrocortisone Cream/Gel/Ointment 0.5%/1%
37.	Pheniramine Maleate Injection 22.75 mg/ml[3]
Antidote and other Substances used in Poisoning	
38.	Activated Charcoal (*Protect from moisture*)
39.	Calcium Gluconate* Injection 100 mg/ml Calcium Gluconate Injection 1 gm, IV-10 ml amp
40.	Desferrioxamine Injection 500 mg (*Protect from light and store in refrigerator (2-8^{0}C). Do not freeze*)
41.	N-acetylcysteine Injection 200 mg/ml N-acetylcysteine Sachet 200 mg N-acetylcysteine Tablet 600 mg/Dispersible
42.	Naloxone Injection 0.4 mg/ml [5]
43.	Neostigmine* Injection 0.5 mg/ml
44.	Snake Venom Antiserum Injection a) Soluble/Liquid Polyvalent b) Lyophilized Polyvalent
Anti-Convulsant/Anti-Epileptic Medicines	
45.	Carbamazepine* Tablet 100 mg, 200 mg Carbamazepine Oral Liquid 100 mg/5 ml Carbamazepine CR Tablet 200 mg, 400 mg
46.	Levetiracetam Tablet 250 mg, 500 mg
47.	Lorazepam Tablet 1 mg [5] Lorazepam Injection 1 mg/ml Lorazepam Injection 2 mg/ml
48.	Magnesium Sulphate Injection 500 mg/ml Magnesium Sulphate Injection IP 50% w/v
49.	Phenytoin Tablet 50 mg/100 mg, 300 mg Phenytoin Oral Liquid 30 mg/5 ml Phenytoin Oral Liquid 125 mg/5 ml Phenytoin Injection 25 mg/ml, 50 mg/ml Phenytoin ER Tablet 300 mg
50.	Sodium Valproate Tablet 100 mg Sodium Valproate Tablet 500 mg Sodium Valproate Oral Liquid 200 mg/5 ml

Essential Medicines Recommended for District Hospital (DH)	
S. No.	**Medicine Name**
Anti-Infective Medicines	
51.	Albendazole Tablet 400 mg Albendazole Oral Liquid 200 mg/5 ml
52.	Diethylcarbamazine Tablet 100 mg Diethylcarbamazine Oral Liquid 120 mg/5 ml (*Protect from moisture*)
53.	Ivermectin Tablet 600 mg
54.	Amoxicillin Capsule 250 mg Amoxicillin Tablet 500 mg Amoxicillin Suspension 125 mg/5 ml Amoxicillin Oral Liquid 250 mg/5 ml (*Capsule, oral suspension: Store protected from moisture and light at a temperature not exceeding 30^{0}C*)
55.	Ampicillin Capsule 500 mg Ampicillin Injection 500 mg/ml
56.	Amoxicillin (500 mg) + Clavulanic Acid (125 mg) Tablet Amoxicillin (875 mg) + Clavulanic Acid (125 mg) Tablet Amoxicillin (500 mg) + Clavulanic Acid (100 mg) Injection Amoxicillin (1 gm) + Clavulanic Acid (200 mg) Injection Amoxicillin (125 mg) + Clavulanic Acid (31.25 mg/5 ml) Dry Syrup
57.	Tablet Penicillin V (Phenoxymethyl Penicillin) 250 mg
58.	Benzylpenicillin Injection 10 lakh unit Benzathine Benzylpenicillin Injection 12 lakh unit
59.	Cefazolin Powder for Injection 500 mg Cefazolin Powder for Injection 1 gm (*The constituted solution should be stored protected from light and used within 24 hours when stored at a temperature not exceeding 30^{0}C or within 4 days when stored between 2 to 8^{0}C*)
60.	Cefixime Tablet 200 mg [4] Cefixime Oral Liquid 50 mg/5 ml
61.	Cefotaxime Injection 1 g/vial Powder for Injection 250 mg
62.	Ceftazidime Powder for Injection 250 mg[4] Ceftazidime Powder for Injection 1g (*Store in sterile containers sealed, so as to exclude micro-organisms protected from moisture at a temperature not exceeding 30^{0}C)*
63.	Ceftriaxone Powder for Injection 250 mg[4] Ceftriaxone Powder for Injection 500 mg Ceftriaxone Powder for Injection 1 g
64.	Cloxacillin Capsule 250 mg Cloxacillin Oral Liquid 125 mg/5 ml Cloxacillin Injection 500 mg/vial

Essential Medicines Recommended for District Hospital (DH)	
S. No.	**Medicine Name**
65	Piperacillin (A) + Tazobactam (B) Powder for Injection 1 g (A) + 125 mg (B) Powder for Injection 2 g (A) + 250 mg (B) Powder for Injection 4 g (A) + 500 mg (B) (*Store below 25^{0}C)*
66.	Azithromycin Tablet 250 mg Azithromycin Tablet 500 mg Azithromycin Oral Liquid 200 mg/5 ml
67.	Norfloxacin Dispersible Tablet 100 mg Norfloxacin Tablet 400 mg
68.	Ciprofloxacin Tablet 250 mg Ciprofloxacin Tablet 500 mg Ciprofloxacin Oral Liquid 250 mg/5 ml Ciprofloxacin I.V 200 mg/100 ml
69.	Clarithromycin Tablet 250 mg Clarithromycin Tablet 500 mg Clarithromycin Oral Liquid 125 mg/5 ml
70.	Co-trimoxazole* (*Protect from light and moisture)* [Sulphamethoxazol e (A) +Trimethoprim (B)] Tablet 400 mg (A) + 80 mg (B) Tablet 800 mg (A) + 160 mg (B) Oral liquid 200 mg (A) + 40 mg (B)/5 ml (*Suspension should not be allowed to freeze*)
71.	Doxycycline Capsule 100 mg Doxycycline Dry Syrup 50 mg/5 ml
72.	Metronidazole* Tablet 200 mg, 400 mg (*Store protected from light and moisture)* Metronidazole Injection 5 mg/ml, 500 mg/100 ml Metronidazole Oral Liquid 200 mg/5 ml (*Store injection in a single dose container*)
73.	Nitrofurantoin Tablet 100 mg Nitrofurantoin Oral Liquid 25 mg/5 ml
74.	Vancomycin Powder for Injection 250 mg Vancomycin Powder for Injection 500 mg Vancomycin Powder for Injection 1 g (*Store in an air tight container protected from light*)
75.	Amikacin Injection 100 mg[2] Amikacin Injection 500 mg

Essential Medicines Recommended for District Hospital (DH)	
S. No.	**Medicine Name**
76.	Clofazimine Tablet 50 mg [4] Clofazimine Capsule 100 mg Clofazimine Capsule 200 mg
77.	Delamanid Tablet 50 mg
78.	Dapsone Tablet 25 mg Dapsone Tablet 100 mg
79.	Rifampicin* Tablet 75 mg[4] Rifampicin Capsule 150 mg Rifampicin Capsule 300 mg Rifampicin Capsule 450 mg Rifampicin Oral Liquid 100 mg/5 ml
80.	Capreomycin Injection 1 gm[4] Capreomycin Injection 750 mg Capreomycin Injection 500 mg
81.	Cycloserine Capsule 125 mg[4] Cycloserine Capsule 250 mg
82.	Ethambutol Tablet 100 mg[4] Ethambutol Tablet 200 mg Ethambutol Tablet 600 mg
83.	Ethionamide Tablet 125 mg[4] Ethionamide Tablet 250 mg
84.	Isoniazid Tablet 50 mg[4] Isoniazid Tablet 75 mg Isoniazid Tablet 100 mg Isoniazid Tablet 300 mg Isoniazid Oral Liquid 100 mg/5 ml
85.	Kanamycin Powder for Injection 500 mg[2] Kanamycin Powder for Injection 750 mg Kanamycin Powder for Injection 1 g
86.	Levofloxacin Tablet 250 m g[4] Levofloxacin Tablet 500 mg, Levofloxacin Tablet 750 mg
87.	Linezolid Tablet 600 mg
88.	Moxifloxacin Tablet 500 mg[4] Moxifloxacin Tablet 400 mg
89.	Sodium Aminosalicylate Granules 10 gm[4] Sodium Aminosalicylate Granules 9.2 gm

Essential Medicines Recommended for District Hospital (DH)	
S. No.	**Medicine Name**
90.	Pyrazinamide Tablet 150 mg[4] Pyrazinamide Tablet 400 mg Pyrazinamide Tablet 500 mg Pyrazinamide Tablet 750 mg Pyrazinamide Oral Liquid 250 mg/5 ml
91.	Rifabutin* Capsule 150 mg[4] Rifabutin Injection 500 mg
92.	Streptomycin Powder for Injection 750 mg[2] Streptomycin Powder for Injection 1 gm Streptomycin Powder for Injection 500 gm
93.	Bedaquiline Tablet 100 mg
94.	Amphotericin B* Injection 50 mg[2] a) Amphotericin B (conventional) b) Amphotericin B (Lipid)
95.	Clotrimazole Tablet 100 mg Clotrimazole Pessary 100 mg (*Do not crush pessaries*)
96.	Fluconazole Tablet 150 mg (Store in an airtight container)
97.	Itraconazole Tablet/Capsule 100 mg
98.	Acyclovir Tablet 200 mg (*Store tablets protected from light*) (*Acyclovir Injection 250 mg For infusion: Store protected from moisture in a sterile tamper evident container sealed so as to exclude micro-organisms at a temperature not exceeding 30^{0}C)*
99.	Ganciclovir Capsule 200 mg
100.	Abacavir Tablet 300 mg
101.	Lamivudine (A) + Zidovudine (B) Tablet 150 mg (A) + 300 mg (B) (Store protected from moisture)
102.	Tenofovir (A) + Lamivudine (B) + Efavirenz (C) Tablet 300 mg (A) + 300 mg (B) + 600 mg (C)
103.	Zidovudine Tablet 300 mg Zidovudine Oral liquid 50 mg/5 ml
104.	Zidovudine (A) + Lamivudine (B) + Nevirapine(C) Tablet 300 mg (A) + 150 mg (B) + 200 mg (C)
105.	Efavirenz Tablet 50 mg Efavirenz Tablet 200 mg Efavirenz Tablet 600 mg
106.	Nevirapine Dispersible Tablet 50 mg Nevirapine Dispersible Tablet 200 mg (*Protect from light and moisture and store at temperature not exceeding 30^{0}C)*

Essential Medicines Recommended for District Hospital (DH)	
S. No.	**Medicine Name**
107.	Lopinavir (A) + Ritonavir (B) (*Tablet: Protect from moisture and store at temperature not exceeding 30^{0}C)* Capsule Lopinavir 133 mg + Ritiovir 33 mg Tablet Lopinavir 200 mg +Ritinovir 50 mg (*Capsule: Store protected from moisture in refrigerator (2 to 8^{0}C))*
108.	Ritonavir Tablet 100 mg
109.	Entecavir Tablet 0.5 mg Entecavir Tablet 1 mg
110.	Sofosbuvir Tablet 400 mg
111.	Tenofovir Tablet 300 mg Tenovir Aalafenamide Fumarate Tablet 25 mg Tenofovir Disoproxil* Fumarate Tablet 300 mg
112.	Sofosbuvir 400 mg + Velpatasvir 400 mg Tablet
113.	Diloxanide Furoate Tablet 500 mg
14.	Tinidazole Tablet 300 mg, 500 mg
115.	Miltefosine Capsule 10 mg Miltefosine Capsule 50 mg (*Store in a cool place, protected from light and moisture*)
116.	Tablet Artemether (A) + Lumefantrine (B) Tablet 20 mg (A) + 120 mg (B) Tablet 80 mg (A) + 480 mg (B) Oral liquid 80 mg (A) + 480 mg (B)/5 ml
117.	Artesunate Powder for Injection 60 mg Artesunate Powder for Injection 120 mg
118.	Artesunate (A) + Sulphadoxine- Pyrimethamine (B) combi pack (A+B) 1 Tablet 25 mg (A) + 1 Tablet (250 mg + 12.5 mg)(B) 1 Tablet 150 mg (A) + 2 Tablet (500 mg + 25 mg) (B) 1 Tablet 200 mg (A) + 2 Tablet (750 mg + 37.5 mg) (B)
119.	Chloroquine Tablet 150 mg Chloroquine Oral Liquid 50 mg/5 ml
120.	Clindamycin Capsule 150 mg Clindamycin Capsule 300 mg (*Protect from moisture)*
121.	Primaquine Tablet 2.5 mg Primaquine Tablet 7.5 mg Primaquine Tablet 15 mg (*Protect from moisture*)

Essential Medicines Recommended for District Hospital (DH)	
S. No.	**Medicine Name**
122.	Quinine Tablet 300 mg, Quinine Injection 300 mg/ml (Protected from light)
Anti- covid medicines	
123.	Favipiravir Tablet 200 mg, 400 mg
124.	Remdesivir Injection 100 mg/20 ml
Anti-Migraine Medicines	
125.	Sumatriptan Tablet 25 mg
126.	Flunarizine Tablet 5 mg Flunarizine Tablet 10 mg
127.	Propranolol Tablet 5 mg, 10 mg, 40 mg
Anti-Neoplastic Medicines	
128.	5-Fluorouracil Injection 250 mg/5 ml (*Protect from light in a single dose container and store at temperature not exceeding 30^{0}C) (Injection should not be allowed to freeze)*
129.	Actinomycin D Injection 0.5 mg (5 mcg)
130.	All-Trans Retinoic Acid Capsule 10 mg
131.	Arsenic Trioxide Injection 1 mg/ml
132.	Bleomycin Powder for Injection 15 units[3]
133.	Calcium Folinate Tablet 15 mg Calcium Folinate Injection 3 mg/ml
134.	Capecitabine Tablet 500 mg
135.	Carboplatin Injection 10 mg/ml
136.	Chlorambucil Tablet 2 mg/5 mg[3] Chlorambucil Powder for Injection 500 mg
137.	Cyclophosphamide Powder for Injection 500 mg [3] (*Store in refrigerator (2 to 8^{0}C). Avoid long exposure to temperature above 30^{0}C)*
138.	Docetaxel Powder for Injection 20 mg
139.	Etoposide Capsule 50 mg[2] Etoposide Capsule 100 mg (*Capsules should not be stored in refrigerator*)
140.	Imatinib Tablet 100 mg Imatinib Tablet 400 mg
141.	Paclitaxel Injection 30 mg/5 ml Paclitaxel Injection 100 mg/16.7 ml
142.	Trastuzumab Injection 440 mg/50 ml
Hormones and Anti-Hormonal Medicines used in Cancer Therapy	
143.	Bicalutamide Tablet 50 mg
144.	Prednisolone* Tablet 5 mg Prednisolone Tablet 10 mg Prednisolone Oral Liquid 5 mg/5 ml Prednisolone Oral Liquid 15 mg/5 ml (*Protect from light and store at temperature not exceeding 30^{0}C)*
145.	Letrozole Tablet 2.5 mg

Essential Medicines Recommended for District Hospital (DH)	
S. No.	**Medicine Name**
146.	Tamoxifen Tablet 10 mg[3] Tamoxifen Tablet 20 mg
Immunosuppressive Medicines	
147.	Mycophenolate Mofetil Tablet 250 mg
148.	Cyclosporine Capsule 10 mg, 25 mg, 50 mg, 100 mg, Oral Liquid 100 mg/ml Injection 50 mg/ml
149.	Tacrolimus Capsule 0.5 mg, 1 mg, 2 mg
Pain and Palliative Care Medicines	
150.	Allopurinol* Tablet 100 mg, 300 mg
151.	Acetylsalicylic Acid (Aspirin)* Tablet 25 mg Acetylsalicylic Acid Tablet 50 mg Acetylsalicylic Acid Tablet 75 mg Acetylsalicylic Acid Tablet 150 mg, 300 mg
152.	Amitriptyline* Tablet 10 mg/25 mg
153.	Diazepam* Injection 5 mg/ml[5] *(Injection: Store in single dose or multi dose container protected from light)* Diazepam Oral Liquid 2 mg/5 ml Diazepam Suppository 5 mg Diazepam Injection 5 mg/ml Diazepam Tablet 5 mg, Diazepam Injection 10 mg/2 ml
154.	Filgrastim Injection 300mcg
155.	Fluoxetine* Capsule 20 mg
156.	Haloperidol* Tablet 1.5 mg Haloperidol Tablet 5 mg Haloperidol Injection 5 mg/ml
157.	Loperamide Tablet 2 mg
158.	Metoclopramide Tablet 10 mg, Metoclopramide Oral Liquid 5 mg/5 ml Metoclopramide Injection 5 mg/m
159.	Ondansetron Tablet 4 mg Ondansetron Oral Liquid 2 mg/5 ml Ondansetron Injection 2 mg/ml
160.	Buprenorphine Tablet (sub-lingual) 0.4 mg[5]
161.	Disulfiram Tablet 250 mg
162.	Naltrexone Tablet 50 mg
163.	Tramadol* Capsule 50 mg[4] Tramadol Injection 50 mg/ml
164.	Zoledronic Acid Powder for Injection 4 mg
165.	Hyoscine Butyl- Bromide Tablet 500 mg Hyoscine Butyl- Bromide Injection 20 mg/ml

Essential Medicines Recommended for District Hospital (DH)	
S. No.	**Medicine Name**
Opioid Analgesic Medicines	
166.	Morphine* Injection 10 mg/ml[6] Morphine Injection 15 mg/ml Morphine Tablet 10 mg Morphine Injection 10 mg/ml Morphine Tablet 10 mg Morphine Tablet 20 mg Morphine Tablet SR/30 mg
167.	Codeine Tablet 15 mg Codeine Oral Solution 15 mg/5 ml[6]
168.	Fentanyl Injection 50mcg/ml[6]
169.	Methadone Tablet 5 mg, 40 mg[6] Methadone Oral solution 5 mg/ml Methadone Injection 10 mg/ml
Anti-Parkinsonism Medicines	
170.	Levodopa (A) + Carbidopa (B) Tablet 100 mg (A) + 10 mg (B) CR Tablet 100 mg (A) + 25 mg (B) CR Tablet 200 mg (A) + 50 mg (B) Tablet 250 mg (A) + 25 mg (B)
171.	Trihexyphenidyl (Benzhexol) Tablet 2 mg
Medicines Affecting Blood	
172.	Clonidine Tablet 100mcg
173.	Erythropoietin Injection 2000 IU/ml Erythropoietin Injection 10000 IU/ml (*Store in an air tight container at a temperature below - 20^{0}C. Avoid repeated freezing and thawing)*
174.	Ferrous Salts equivalent to 60 mg of Elemental Iron Ferrous Salts Oral Liquid equivalent to 25 mg of Elemental Iron/ml
175.	Ferrous Salt (A) + Folic Acid (B) Tablet 45 mg Elemental Iron (A) + 400 mcg (B) Tablet 100 mg Elemental Iron (A)+ 500 mcg (B) Oral Liqiud 20 mg Elemental Iron(A) + 100 mcg (B)/ml Tablet 100 mg Elemental Iron (A)+ 500 mcg (B) as Enteric Coated
176.	Folic Acid* Tablet 5 mg Folic Acid Tablet 0.4 mg Folic Acid 5 mg Injection 1 mg/ml
177.	Hydroxyurea Capsule 500 mg[3]
178.	Iron Sucrose Injection 20 mg/ml (*Protect from light and store at temperature not exceeding 30^{0}C)*

Essential Medicines Recommended for District Hospital (DH)	
S. No.	**Medicine Name**
179.	Phytomenadione (Vitamin K1) Tablet 10 mg Phytomenadione (Vitamin K1) Inj 10 mg/ml (*Protect from light*)
180.	Menadione Injection (Vitamin K3) 10 mg/ml (*Protect from light)*
181.	Heparin Sodium Injection 1000 IU[2]
182.	Tranexamic Acid Tablet 500 mg
183.	Warfarin Tablet 1 mg[2] Warfarin Tablet 2 mg Warfarin Tablet 3 mg Warfarin Tablet 5 mg
Cardiovascular Medicines	
184.	Clopidogrel Tablet 75 mg
185.	Diltiazem Tablet 60 mg Diltiazem SR Tablet 90 mg Diltiazem Injection 5 mg/ml
186.	Glyceryl Trinitrate Sublingual Tablet 0.5 mg (*Glyceryl trinitrate tablets are unstable)* Glyceryl trinitrate Injection 125 mg/5 ml (*Protect from light and moisture in glass container of not more than 100 tablets and store at temperature not exceeding 30^{0}C)*
187.	Isosorbide-5- mononitrate Tablet 10 mg, Isosorbide-5- mononitrate SR Tablet 30 mg
188.	Isosorbide Dinitrate Tablet 5 mg Isosorbide Dinitrate Tablet 10 mg
189.	Atenolol Tablet 50 mg, 100 mg
910.	Metoprolol Tablet 25 mg Metoprolol Tablet 50 mg Metoprolol Tablet 100 mg Metoprolol SR Tablet 25 mg Metoprolol SR Tablet 50 mg
191.	Amiodarone Tablet 100 mg Amiodarone Injection 50 mg/ml
192.	A mlodipine Tablet 2.5 mg A mlodipine Tablet 5 mg A mlodipine Tablet 10 mg (*Protect from moisture*)
193.	Hydrochlorothiazid* Tablet 12.5 mg Hydrochlorothiazid Tablet 25 mg Hydrochlorothiazide Tablet 50 mg

Essential Medicines Recommended for District Hospital (DH)	
S. No.	**Medicine Name**
194.	Labetalol Injection 5 mg/ml Labetalol Tablet 100 mg Labetalol Injection 20 mg/2 ml
195.	Methyldopa Tablet 250 mg Methyldopa Tablet 500 mg
196.	Enalapril Tablet 2.5 mg Enalapril Tablet 5 mg Enalapril Tablet 10 mg
197.	Captopril Tablet 25 mg
198.	Lisinopril Tablet 5 mg
199.	Verapamil Tablet 40 mg, 120 mg Verapamil Injection 5 mg/2 ml
200.	Ramipril Tablet 2.5 mg/5 mg
201.	Telmisartan Tablet 40 mg
202.	Digoxin Tablet 0.25 mg Digoxin Tablet 250 mg
203.	Dobutamine Injection 50 mg/ml
204.	Dopamine Injection 40 mg/ml (*Store in an airtight container protected from light*)
205.	Protamine Injection 50 mg/5 ml (*Injection: Protect from light in a single dose container*)
206.	Noradrenaline Injection 2 mg/ml (*Store in single dose containers. Store at room temperature (25^{o}C). Store in tight, light resistant containers as it is readily oxidized. Do not use if discolored (e.g. pink, dark yellow, brown) or if there is a precipitate*)
207.	Enoxaparin LMWH Injection
208.	Clofibrate Tablet 500 mg
209.	Streptokinase Injection 15 lac/Vial Sterptokinase Injection 7.5 lac/Vial (*Store in a sealed container protected from light in refrigerator (2 to 8^{o}C). The container should be sterile and sealed so as to exclude micro-organisms)*
210.	Finofibrate Tablet 40 mg, 160 mg
211.	Atorvastatin Tablet 10 mg Atorvastatin Tablet 40 mg (*Protected from moisture and store at temperature not exceeding 30^{o}C)*
212.	Esmolol Injection 10 mg/ml
213.	Sodium nitroprusside Injection 10 mg/ml (*Protect from light*)
214.	Alteplase Powder for Injection 20 mg Alteplase Powder for Injection 50 mg (*Protect from heat, light and moisture and store at room temperature (<30°C). Use reconstituted solution within 8 hours)*

Essential Medicines Recommended for District Hospital (DH)	
S. No.	**Medicine Name**
Medicines used in Dementia	
215.	Donepezil Tablet 5 mg (*Protect from moisture and at temperature not exceeding 25^{0}C)*
Dermatological medicines (Topical)	
216.	Clotrimazole cream 1% Clotrimazole Oral Lotion or Mouth Paint: 15 ml
217.	Framycetin cream 0.5% (*Protect from light and moisture and store at temperature not exceeding 30^{0}C. If the material is sterile, the container should be tamper-evident and sealed so as to exclude micro-organisms*)
218.	Fusidic Acid Cream 5 mg/10 gm preparation 2% or 20 mg per gram Fusidic Acid Cream 2%: 5 mg/10 mg preparation
219.	Silver Sulphadiazine 2 to 4%
220.	Miconazole Ointment or Cream 2% 15 gm preparation (*Protected from light and moisture and store at temperature not exceeding 30^{0}C. If it is packed in aluminates; the inner surface of tubes should be coated with suitable lacquer*)
221.	Betamethasone Cream 0.05% Betamethasone Cream 0.1% Betamethasone Injection 12 mg Betamethasone Injection 4 mg/ml
222.	Calamine Lotion
223.	Benzoyl Peroxide Gel 2.5% Benzoyl Peroxide Gel 5%
224.	Coal Tar Solution 5%
225.	Salicylic Acid Ointment 6%
226.	Gamma Benzene Hexa Chloride Lotion 100 ml (*Protect from light)*
227.	Permethrin Lotion 1% Permethrin Cream 5%
228.	Glycerin Oral Liquid
229.	Petrolium Jelly 100%
Diagnostic Agents	
230.	Lignocaine Eye Drops 4% (*Store in cool place)*
231.	Tropicamide Eye Drops 1% (*Store in a refrigerator (8 to 15^{0}C). It should not be allowed to freeze*)
Dialysis Solution	
232.	Haemodialysis Fluid
233.	Intraperitoneal Dialysis Solution*
Disinfectants and Antiseptics	
234.	Cetrimide Solution 20% (*concentrate for dilution*)
235.	Chlorhexidine Solution 5% (*concentrate for dilution*)

Essential Medicines Recommended for District Hospital (DH)	
S. No.	**Medicine Name**
236.	Ethyl Alcohol (*denatured*) (*Store in a tightly closed container at a temperature not exceeding 30°C)(Away from fire and protected from moisture*)
237.	Hydrogen Peroxide Solution 6%
238.	Povidone Iodine Solution 4% to 10% Povidone Iodine Solution 10% (*equivalent to 1% available iodine*)
239.	Bleaching Powder containing not less than 30% w/w of available chlorine (as per I.P) (*Protect from moisture in a tightly closed container*)
Diuretic Medicines	
240.	Furosemide Tablet 40 mg Furosemide Injection 10 mg/ml
241.	Indapamide Tablet 1.5 mg
242.	Chlorthalidone Tablet 12.5 mg[3]
243.	Mephentermine Injection 15 mg/ml
244.	Mannitol Injection 10% (*Store at temperatures between 20° and 30°C)* Mannitol Injection 20% (*Exposure to lower temperatures may cause the deposition of crystals)*
245.	Spironolactone Tablet 25 mg Spironolactone Tablet 50 mg
246.	Methyl Cellulose Tablet, Powder
Dental Restorative Materials and Medicines	
247.	Zinc Oxide Eugenol
248.	Silver Amalgam
249.	Glass Ionomer Cement (GIC)
250.	Calcium Hydroxide
251.	Sodium Hypochloride
252.	Gutta Percha (GP)
253.	Light Cure Composite
254.	Ketorolac 10 mg tablet
255.	Gum Paint (Tannic Acid)
256.	Povidine-iodine Germicide Gargle 20% w/v
257.	Tooth Paste (Potassium Nitrate)
Ear, Nose and Throat (ENT) Medicines	
258.	Ciprofloxacin Drops 0.3% Ciprofloxacin Eye/Ear Drops (*Protect from light*)
259.	Clotrimazole Drops 1%
260.	Xylometazoline* Nasal Drops 0.05 %, 0.1% Xylometazoline Nasal Drops: Paediatric (0.05), Adult (0.1%)
261.	Ofloxacin Tablet 200 mg Ofloxacin Tablet 400 mg
262.	Normal Saline Nasal Drops: Sodium Chloride Drops 0.05% w/v

Essential Medicines Recommended for District Hospital (DH)	
S. No.	**Medicine Name**
263.	Wax Solvent Ear Drops: Benzocaine, Paradichlorobenzene, Turpentine Oil
264.	Boro-Spirit Ear Drops-0.183 gm Boric Acid in 2.08 ml of Alcohol
265.	Combo Ear Drops-Chloramphenicol 5% w/v + Clotrimazole 1% +Lignocaine Hydrochloride 2%
266.	Liquid Paraffin-Menthol Drops: Menthol 10 gm +Eucalyptus 2 ml+ Camphor 10 mg+ liquid paraffin to 100 ml
Gastrointestinal Medicines	
267.	Omeprazole Capsule 20 mg
268.	Ranitidine Tablet 150 mg Ranitidine Injection 25 mg/ml
269.	Sucralfate Tablet 10 mg Sucralfate Oral Liquid 1 mg/ml
270.	Metoclopramide Injection 5 mg/ml
271.	Domperidone Tablet 10 mg Domperidone Oral Suspension 1 mg/ml; 30 ml bottle or 5 ml drops containing 10 mg/ml
272.	Dicyclomine Tablet 10 mg (*Tablets: Protect from light)* Dicyclomine Injection 10 mg/ml, (*Injection: Protect from light, in single dose or multiple dose containers)* Dicyclomine Tablet 500 mg
273.	Hyoscine Butyl- Bromide Tablet 500 mg Hyoscine Butyl- Bromide Injection 20 mg/ml
274.	Drotaverine Tablet 500 mg
275.	Bisacodyl Tablet 5 mg Bisacodyl Suppository 5 mg
276.	Zinc Sulphate Tablet 10 mg Zinc Sulphate Dispersible Tablet USP eq. to Elemental Zinc 20 mg
277.	Lactulose Oral Liquid* 10g/15 ml
278.	Ispaghula- Granules, Husk, Powder (*Protect from light and moisture*)
279.	Senna Tablet, Granules, Powder (*Protect from light and moisture)*
Hormones, other Endocrine Medicines and Contraceptives	
280.	Human Chorionic Gonadotropin Injection 1000 IU Human Chorionic Gonadotropin Injection 5000 IU
281.	Methylprednisolone Tablet 8 mg, 32 mg Methylprednisolone Injection 40 mg/ml Methylprednisolone Injection 500 mg
282.	Ethinylestradiol (A) + Levonorgestrel (B) Tablet 0.03 mg (A) + 0.15 mg (B) Tablet 0.03 mg (A) + 0.15 mg (B) with Ferrous Fumarate
283.	IUCD 380A IUCD 375

Essential Medicines Recommended for District Hospital (DH)	
S. No.	**Medicine Name**
284.	Male Condom
285.	Tubal Ring
286.	Ormeloxifene Tablet 30 mg
287.	Ethinylestradiol Tablet 0.01 mg Ethinylestradiol Tablet 0.05 mg
288.	Levonorgestrel Tablet 1.5 mg Levonorgestrel Tablet 0.75 mg
289.	Glimepiride Tablet 1 mg Glimepiride Tablet 2 mg
290.	Gliclazide Tablet 40 mg
291.	Insulin (Soluble) Injection 40 IU/ml[2,3] Insulin Lente Basal Injection Insulin Rapid Injection Insulin Mixtard
292.	Metformin Tablet 500 mg[3] Metformin Controlled released 750 mg
293.	Premix Insulin 30:70 Injection (Regular: NPH)[2] Premix Insulin 30:70 Injection 40 IU/ml[3]
294.	Glibenclamide Tablet 2.5 mg[3] Glibenclamide Tablet 5 mg
295.	Medroxyprogesterone Tablet 5 mg, 10 mg Medroxyprogesterone acetate Injection 150 mg
296.	Carbimazole Tablet 5 mg Carbimazole Tablet 10 mg
297.	Levothyroxine Tablet 50,100mcg (*Protect from light and moisture)*
Immunological/Vaccines	
298.	Anti-Rabies Immunoglobulin[7]
299.	Anti-Tetanus Immunoglobulin[7]
300.	Anti-D Immunoglobulin[7]
301.	Diphtheria Antitoxin[7]
302.	Hepatitis B Immunoglobulin[7]
303.	Snake Venom Antiserum[7] a) Soluble/Liquid Polyvalent b) Lyophilised Polyvalent
304.	Rabies Vaccine[7]
305.	As per Current Immunization Programme Guidelines (*Stored as per manufacturer's instructions*)
Muscle Relaxants and Cholinesterase Inhibitors	
306.	Atracurium Injection 10 mg/ml (*protect from light in single dose containers*)

Essential Medicines Recommended for District Hospital (DH)	
S. No.	**Medicine Name**
307.	Succinylcholine Injection 50 mg/ml
308.	Vecuronium Powder for Injection 4 mg Vecuronium Powder for Injection 10 mg
Medicines for Neonatal Care	
309.	Caffeine Oral Liquid 20 mg/ml Caffeine Injection 20 mg/ml
Ophthalmological Medicines	
310.	Acyclovir Ointment 3%
311.	Ciprofloxacin Drops 0.3%
312.	Gentamicin Drops 0.3% Gentamicin Injection 40 mg/ml
313.	Povidone iodine Drops 0.6% Povidone iodine Drops 5%
314.	Prednisolone Drops 0.1% Prednisolone Drops 1%
315.	Acetazolamide Tablet 250 mg
316.	Pilocarpine Drops 2% Pilocarpine Drops 4%
317.	Timolol Drop 0.5%
318.	Atropine Ointment 1%
319.	Homatropine Drops 2%
320.	Tropicamide Drops 1% *(Store in a refrigerator (8 to 15^{0}C). It should not be allowed to freeze)*
321.	Carboxymethylcellulose Drops 0.5%
Oxytocic and Anti-Oxytocic Medicines	
322.	Methylergometrine Injection 0.2 mg/ml
323.	Mifepristone Tablet 200 mg
324.	Misoprostol Tablet 100mcg Misoprostol Tablet 200mcg (oral/vaginal)
325.	Combi-pack with Mifepristone + Misoprostol (1 tablet of Mifepristone 200 mg and 4 tablets of Misoprostol 200mcg)
326.	Oxytocin Injection 5 IU/ml Oxytocin Injection 10 IU/ml
27.	Nifedipine Tablet 10 mg Nifedipine Soft Gelatin Capsule 5 mg
Psychotherapeutic Medicines	
328.	Chlorpromazine Tablet 100 mg
329.	Clozapine Tablet 25 mg Clozapine Tablet 100 mg
330.	Diphenylhydantoin Tablet 100 mg[3]
331.	Fluphenazine Depot Injection 25 mg/ml

Essential Medicines Recommended for District Hospital (DH)	
S. No.	**Medicine Name**
332.	Risperidone* Tablet 2 mg Risperidone Injection
333.	Phenobarbitone Tablet 30 mg[1] Phenobarbitone Tablet 60 mg[5] Phenobarbitone Oral Liquid 20 mg/5 ml
334.	Olanzapine* Tablet 5 mg Olanzapine Injection 10 mg
335.	Escitalopram Tablet 10 mg Escitalopram Tab 5 mg
336.	Imipramine Tablet 25 mg Imipramine Tablet 75 mg
337.	Lithium Tablet 300 mg
338.	Clonazepam Tablet 0.5 mg Clonazepam Tablet 0.25 mg
339.	Zolpidem Tablet 10 mg[4]
Medicines Acting on the Respiratory Rract	
340.	Budesonide Inhalation (MDI/DPI) 100 mcg/dose Budesonide Inhalation (MDI/DPI) 200 mcg/dose Budesonide Respirator solution for use in nebuliser 0.5 mg/ml Budesonide Respirator solution for use in nebuliser 1 mg/ml
341.	Combination of LABA+ICS (Formoterol, Salmeterolol/Fluticasone) MDI, DPI (*Protect from light, moisture and store at temperature not exceeding 30^{0}C*)
342.	Budesonide Nebulisation Solution
343.	Ipravent/Levoline Nebulisation Solution
344.	Budesonide (A)+ Formoterol (B) Inhalation (MDI/DPI) 100 mcg (A)+ 6 mcg (B) Inhalation (MDI/DPI) 200 mcg (A)+ 6 mcg (B) Inhalation (MDI/DPI) 400 mcg (A)+ 6 mcg (B)
345.	Etofyllin B Plus (A), Anhydrous Theophylline IP (B) combination injection 84.7 mg/ml (A) + 25.3 mg/ml (B)
346.	Ipratropium Inhalation (MDI/DPI) 20 mcg/dose Ipratropium Respirator solution for use in nebuliszer 250 mcg/ml
347.	Levosalbutamol 50mcg/dose
348.	Salbutamol Tablet 2 mg Salbutamol Tablet 4 mg Salbutamol Oral liquid 2 mg/5 ml Salbutamol Inhalation (MDI/DPI) 100 mcg/dose, Salbutamol Respirator solution for use in nebuliser 5 mg/ml
349.	Formoterol Inhaled Bronchodilator
350.	Salmeterol Inhaled Bronchodilator

Essential Medicines Recommended for District Hospital (DH)	
S. No.	**Medicine Name**
351.	Tablet Theophylline (*Store protected from moisture*)
352.	Tiotropium Inhalation (MDI) 9 mcg/dose Tiotropium Inhalation (DPI) 18 mcg/dose
353.	Deriphyllin Tablet SR
354.	Montelukast Tablet 5 mg Montelukast Tablet 10 mg Montelukast syrup
Solutions Correcting Water, Electrolyte Disturbances and Acid-Base Disturbances	
355.	Dextrose IV Injection 5% w/v, 500 ml
356.	Glucose Injection 5% Glucose Injection 10% Glucose Injection 25% Glucose Injection 50%
357.	Glucose (A) + Sodium Chloride (B) Injection 5% (A) + 0.9% (B)
358.	Hydroxyethyl Starch 6%IP (6% Saline solution for infusion)
359.	Oral Rehydration* Salts Oral Rehydration Powder 27.5 gm WHO Formula
360.	Potassium Chloride Injection 150 mg/ml[2] Potassium Chloride Oral Liquid 500 mg/5 ml
361.	Ringer Lactate Injection (as per IP)
362.	Sodium Bicarbonate Injection (as per IP)[2]
363.	Sodium Chloride Injection 0.9%[2]
364.	Sterile Water for Injection IP-05 ml
Vitamins and Minerals	
365.	Ascorbic Acid (Vitamin C) Tablet 100 mg[7] Ascorbic Acid (Vitamin C) Tablet 500 mg
366.	Calcium Carbonate Tablet 250 mg Calcium Carbonate Tablet 500 mg
367.	Calcium with Vitamin D Tablets USP Syrup Calcium with Phosphate in the ratio 2:1 with Vitamin D Tablet Calcium Carbonate 650 mg equivalent to Elemental Calcium 250 mg and Cholecalciferol USP 125 mg
368.	Cholecalciferol Tablet 1000 IU[7] Cholecalciferol Tablet 60,000 IU Cholecalciferol Oral Liquid 400 IU/ml Cholecalciferol Granules 60,000 IU in Sachet Cholecalciferol Injection of 6,00,000 IU Vitamin D3 60,000 Granules in 1 gm Sachet

Essential Medicines Recommended for District Hospital (DH)	
S. No.	**Medicine Name**
369.	Nicotinamide Tablet 50 mg[7]
370.	Multivitamin Tab/Cap
371.	Pyridoxine Tablet 25 mg[7] Pyridoxine Tablet 40 mg Pyridoxine Tablet 50 mg Pyridoxine Tablet 100 mg
372.	Riboflavin Tablet 5 mg[7]
373.	Thiamine Tablet 100 mg[7] Thiamine Injection 100 mg/ml
374.	Vitamin A Oral liquid 100000 IU/ml[7]
Dressing	
375	Dressing Bandage and Gauze with Band-Aid

*Note: Above list is suggestive only. This needs to be updated periodically as per newer evidences and guidelines***.**

Remarks[x]*: This is not all inclusive, users are advised to refer standard text books, guidelines and manufacturer's instructions- regarding storage.*

Schedule X[1]*: Prescription shall be in duplicate, one copy of which shall be retained by the licensee for a period of two years.*

High Alert Medicine[2]**:** *Drugs that bear a heightened risk of causing significant patient harm when they are used in error.*

Schedule G[3]*: Caution: it is dangerous to take this preparation except under medical supervision.*

Schedule H1[4]*: Separate H1 Register shall be maintained with name of prescriber, patient name, medicine name and dispensed quantity.*

NDPS[5]**:** *Narcotic Drugs and Psychotropic Substances.*

Controlled medicine under NDPS[6]*: Shall store and dispense against respective Form No. 3D, 3E and 3H. It shall also be preserved for a minimum period of two years from the date of last entry: -*

1. **Form No. 3D**: Shall maintain day to day accounts in respect of all transactions of essential narcotic drugs in the sub-storage room of wards/departments/sub- departments.
2. **Form No. 3E:** Shall maintain record of each patient, whom essential narcotic drugs are being dispensed.
3. **Form No. 3H:** Shall maintain record of essential narcotic drugs at the main drug storage room.

Schedule P[7]*: Life period of drugs.*

***** *- Medicines are categorised under different therapeutic categories*

ANNEXURE 9

List of diagnostic tests at (SDH & DH)

1. List of diagnostic tests at SDH

Sr. No.	Diagnostic test	Product/Equipment Required
1.	**Essential** Hemoglobin, Total leucocyte count, Differential leucocyte count, Platelet count, Complete blood count, Erythrocyte sedimentation rate, Blood group, and Rh typing, Blood cross-matching, Peripheral blood film, Reticulocyte count, Absolute eosinophil count, Bleeding time and clotting time, Fibrinogen degradation products (FDP), D-Dimer, Coombs test direct with titre, Coombs test indirect with titre, Sickling Test for screening of Sickle cell anaemia, Sickle cell test rapid for screening of Sickle cell anaemia, NESTROFT Test for screening of Thalassemia*, DCIP test for screening HbE hemoglobinopathy*, Screening test for G6PD enzyme deficiency a) MP slide method and b) Malaria rapid test, Test for Filariasis* Prothrombin Time (PT) and INR Activated partial thromboplastin time Human chorionic gonadotropin (HCG) (Urine test for pregnancy), Urine test for ph, specific gravity, leucocyte esterase, glucose, bilirubin, urobilinogen, ketone, protein, nitrite, Urine microscopy, Stool for ova and cyst, Stool for occult blood, Semen analysis, CSF analysis (Glucose, CSF protein, ADA, cell count), Fluid analysis (Cell count, biochemistry including Glucose, protein, LDH and cytology), Biochemistry, Blood sugar, Glucose tolerance test (GTT), S. Bilirubin (T), S. Bilirubin direct and indirect, Serum creatinine, Blood urea, SGPT/Alanine Aminotransferase (ALT), SGOT/Aspartate Aminotransferase (AST), S. Alkaline Phosphatase, S. Total Protein, S. Albumin & AG ratio, S. Globulin, S. Total Cholesterol, S. Triglycerides, S.VLDL, S.HDL, S.LDL, S.GGT, S.Uric Acid, S.Amylase, S.Iron, S.Total Iron binding capacity, S.LDH, Glycosylated hemoglobin (HbA1C), CRP(including newborn) (Quantitative) S. Sodium, S. Potassium, S. Calcium, S. Ionized Calcium, S. Chloride, S. Magnesium, S. Lithium, Arterial blood gas test, 24-hours urinary protein, Urine for microalbumin and creatinine, Test for drug overdose, Immunoassays and Serology, test for Dengue & Chikungunya, RPR/VDRL test for syphilis, HIV test (Antibodies 1 and 2), Hepatitis B surface antigen test, HCV Antibody test (Anti HCV), Typhoid test (IgM), rK39 for Kala Azar*, Japanese Encephalitis IgM *, Scrub typhus test*, test for Leptospirosis*, test for Chikungunya, IgM for Hepatitis A, IgM for Hepatitis E, Troponin – I, Wet mount and Gram stain for RTI/STD, KOH Mount for fungal microscopy, Sputum, pus, etc. for AFB, Slit skin smear for leprosy, Gram staining for clinical specimen, Throat swab (Albert stain) for Diphtheria, Stool for hanging drop for Vibrio cholera, Culture of a stool specimen for Vibrio cholera and other common bacterial enteropathogens, Organism identification and antimicrobial sensitivity for all above cultures, Cytology, Pap smear, TB – Mantoux, Visual Inspection Acetic Acid (VIA)	**Essential** Hemoglobinometer, Manual with reading using ESR analyser, Blood group kit (manual), Manual with microscopy, Rapid, manual, b) Rapid card tests for combined P. Falciparum and P. vivax. Microscopy/Filaria Strip test, Automated coagulation analyser, Electrophoresis machine/ HPLC machine, Rapid card test, Multiparameter urine strip (dipstick), Microscopy, Manual Kit, Microscopy (with Neubauer chamber and slide), Hematology analyser, Microscopy a) Glucometer only for screening b) Fully automated Biochemistry analyser essentially for confirmatory test, Turbidometer, Electrolyte Analyser (Indirect ion selective electrode), Fully automated biochemistry analyser.

Sr. No.	Diagnostic test	Product/Equipment Required
2.	**Desirable** S. Lithium, test for a drug overdose, S.TSH (including for newborn screening), S.TSH (including for newborn screening), S. Free T3, S. Free T4, Ferritin, S. PSA, Blood/body fluid culture, Fungal culture, Urine culture, Other cultures (pus, throat swab, etc.), Histopathology, Molecular test for TB	**Desirable** PCR, Nucleic Acid Amplification Test (NAAT), Microscopy, Manual, Automated for blood cultures; Automated desired for other cultures, Automated/Manual, Chemiluminescence Immunoassay, Chemiluminescence immunoassay * if number of tests are more than 100, in-house facility may be planned, ELISA, ELISA/Rapid, Card test, Flame Photometry

Note: *The Diagnostic tests and equipment mentioned under desirable are over and above the tests and equipment mentioned as essential.*

2. List of diagnostic tests at District hospitals (DH)

Sr. No.	Diagnostic Test	Product/Equipment Required
1.	Hematology: Hemoglobin, Total leucocyte count, Differential leucocyte count, Platelet count, Complete blood count, Erythrocyte sedimentation rate, Blood group, and Rh typing, Blood cross-matching, Peripheral blood film, Reticulocyte count, Absolute eosinophil count, Bleeding time and clotting time, Fibrinogen degradation products (FDP), D-Dimer, Coombs test direct with titre, Coombs test indirect with titre, Sickling test for screening of Sickle cell anaemia, Sickle cell test rapid for screening of Sickle cell anaemia, NESTROFT test for screening of Thalassemia*, DCIP test for screening HbE hemoglobinopathy*, Screening test for G6PD enzyme deficiency, a) MP slide method and b) Malaria rapid test, test for Filariasis* Prothrombin Time (PT) and INR Activated partial thromboplastin time Human chorionic gonadotropin (HCG) (Urine test for pregnancy), Urine test for ph, specific gravity, leucocyte esterase, glucose, bilirubin, urobilinogen, ketone, protein, nitrite, Urine Microscopy, Stool for ova and cyst, Stool for Occult Blood, Semen analysis, CSF analysis (Glucose, CSF protein, ADA, cell count), Fluid analysis (Cell count, biochemistry including Glucose, Protein, LDH and Cytology), Biochemistry, Blood sugar, Glucose Tolerance test (GTT), S. Bilirubin (T), S. Bilirubin direct and indirect, Serum creatinine, Blood Urea, SGPT/Alanine Aminotransferase (ALT), SGOT/Aspartate Aminotransferase (AST), S. Alkaline Phosphatase, S.Total Protein, S. Albumin & AG ratio, S.Globulin, S.Total Cholesterol, S. Triglycerides, S.VLDL, S.HDL, S. LDL, S. GGT, S. Uric acid, S. Amylase, S. Iron, S. Total Iron binding capacity, S.LDH, Glycosylated hemoglobin (HbA1C), CRP(including newborn) (Quantitative) S. Sodium, S. Potassium, S. Calcium, S. Ionized Calcium, S. Chloride, S. Magnesium, S. Lithium, Arterial blood gas test, 24-hours urinary protein, Urine for microalbumin and creatinine, Immunoassays and Serology, Test for Dengue & Chikungunya, RPR/VDRL test for syphilis, Haemoglobin electrophoresis/HPLC, HIV test (Antibodies 1 and 2), Hepatitis B surface antigen test, HCV Antibody Test (Anti HCV), Typhoid test (IgM), rK39 for Kala Azar*, Japanese Encephalitis IgM *, Scrub typhus Test*, Test for Leptospirosis*, Test for Chikungunya, IgM for Hepatitis A, IgM for Hepatitis E, Troponin – I, Wet mount and Gram stain for RTI/STD, KOH Mount for fungal microscopy, Sputum, pus, etc. for AFB, Slit skin smear for leprosy, Gram staining for clinical specimen, Throat swab (Albert stain) for Diphtheria, Stool for hanging drop for Vibrio Cholera, Culture of a stool specimen for Vibrio cholera and other common	Hemoglobinometer, Manual with reading using ESR analyzer., Blood group kit (manual), Manual with microscopy, Rapid, Manual, b) Rapid card tests for combined P. Falciparum and P. vivax. Microscopy/Filaria Strip test, Automated coagulation analyzer, Electrophoresis machine/HPLC machine, Rapid card test, Multiparameter urine strip (dipstick), Microscopy, Manual Kit, Microscopy (with Neubauer chamber and slide), Hematology analyzer, Microscopy a) Glucometer only for screening b) Fully automated Biochemistry analyzer essentially for confirmatory test, Turbidometer, Electrolyte Analyzer (Indirect ion selective electrode), Fully automated biochemistry analyzer. Card test, Microscopy, Manual, PCR, Nucleic Acid Amplification Test (NAAT),

Sr. No.	Diagnostic Test	Product/Equipment Required
	bacterial enteropathogens, Organism identification and antimicrobial sensitivity for all the above cultures, Arterial blood gas test Cytology, Pap smear, TB – Mantoux, Visual Inspection Acetic Acid (VIA), S.TSH (including for newborn screening), S. Free T3, S. Free T4, Ferritin, Troponin – I, S. PSA, Blood/body fluid culture, Urine culture, Other cultures (pus, throat swab, etc.), Histopathology, Viral load count for HCV, Molecular test for TB,	
2.	**Desirable** Mixing study for Haemophilia, S. Lithium, Test for a drug overdose, Fungal culture, Culture for Diphtheria, Bone marrow examination Immunohistochemistry, CD4 count	**Desirable** Automated for blood cultures; Automated desired for other cultures, Automated/Manual, Chemiluminescence Immuno-assay, Chemiluminescence im-munoassay * if number of tests are more than 100, in-house facility may be planned, ELISA, ELISA/Rapid, Flame Photometry, Flow cytometer.

Note:: *The Diagnostic tests and equipment mentioned under desirable are over and above the tests and equipment mentioned as essential.*

ANNEXURE 10

List of equipment at SDH & DH

Sr. No.	Department	Sub District Hospital		District Hospital	
		(E)	(D)	(E)	(D)
1.	**Medicine OPD**	**Equipment*** Thermometer, Examination Llight, Wall mounted height measuring Scale, Stethoscope, Weighing machine (both adults and pediatrics), LED torch, Measuring tape, Sphygmomanometer, stethoscope+ Otoscope, tuning fork (156), percussion hammer, wooden tongue depressor		**Equipment*** Thermometer, Examination Llight, Wall mounted height measuring Scale, Stethoscope, Weighing machine (both adults and pediatrics), LED torch, Measuring tape, Sphygmomanometer, stethoscope+ Otoscope, tuning fork (156), percussion hammer, wooden tongue depressor	
		Accessories/Consumables** Roof/wall mounted single piece curtain to ensure privacy, Cell for LED torch, Gloves, Shoe covers, Head caps, Masks, Gowns.		**Accessories/Consumables**** Roof/wall mounted single piece curtain to ensure privacy, Cell for LED torch, Gloves, Shoe covers, Head caps, Masks, Gowns	
		Furniture*** Examination table with in-built IV stand, with, Footstool, colour coded bins, Stool, Slim model doctor's table & chair, and slim model two armless chairs for patients and attendants. X-Ray view box		**Furniture***** Examination table with in-built IV stand, with, Footstool, colour coded bins, Stool, Slim model doctor's table & chair, and slim model two armless chairs for patients and attendants. X-Ray view box	
2	**Family Medicine OPD**		**Equipment** * Same as under Medicine OPD		**Equipment** * Same as under Medicine OPD
			Accessories/ Consumables ** Same as under Medicine OPD		**Accessories/ Consumables** ** Same as under Medicine OPD
			Furniture *** Same as under Medicine OPD		**Furniture** *** Same as under Medicine OPD
3	**Surgery OPD**	**Equipment:** * Same as under Medicine OPD		**Equipment:** * Same as under Medicine OPD	
		Instruments: Removal of Stitches Tray		**Instruments:** Removal of Stitches Tray	
		Furniture: *** Same as under Medicine OPD		**Furniture:** *** Same as under Medicine OPD	

Sr. No.	Department	Sub District Hospital		District Hospital	
		(E)	(D)	(E)	(D)
4.	**Obs & Gynecology OPD**	**Equipment:** * Same as under Medicine OPD+ Foetal Doppler, CTG Machine, Obstetric/ Gynaecologic Ultrasound, Foetoscope		**Equipment: :** * Same as under Medicine OPD + Foetal Doppler, CTG Machine, Obstetric/Gynaecologic Ultrasound, Foetoscope	
		Instruments: Removal of Stitches Tray, Gynaecological Examination tray, Vaginal speculums, and Spatula tray		**Instruments:** Removal of Stitches Tray, Gynaecological Examination tray, Vaginal speculums, and Spatula tray	
		Accessories/Consumables: ** Same as under Medicine OPD + Macintosh, OPT		**Accessories/Consumables:** ** Same as under Medicine OPD + Macintosh, OPT	
		Furniture: *** Same as under Medicine OPD		**Furniture:** *** Same as under Medicine OPD	
5.	**Pediatrics OPD**	**Equipment:** * Same as under Medicine OPD + Otoscope, tuning fork (156), percussion hammer, weighing scale (Digital and standing Weighing scale), infantometer, stadiometer, wooden tongue depressor, non-stretchable measuring tape.		**Equipment:** * Same as under Medicine OPD + Otoscope, tuning fork (156), percussion hammer, weighing scale (Digital and standing Weighing scale), infantometer, stadiometer, wooden tongue depressor, non-stretchable measuring tape.	
		Accessories/Consumables: : ** Same as under Medicine OPD		**Accessories/Consumables: :** ** Same as under Medicine OPD	
		Furniture*** Same as under Medicine OPD		**Furniture***** Same as under Medicine OPD	
6.	**NCD Clinic**	**Equipment:** * Same as under Medicine OPD + glucometer, Otoscope, tuning fork (156), percussion hammer, wooden tongue depressor		**Equipment:** * Same as under Medicine OPD + glucometer, Otoscope, tuning fork (156), percussion hammer, wooden tongue depressor	
		Instruments: Mouth Mirror and Cusco's speculum		**Instruments:** Mouth Mirror and Cusco's speculum	
		Accessories/Consumables: ** Same as under Medicine OPD		**Accessories/Consumables:** ** Same as under Medicine OPD	
		Furniture: *** Same as under Medicine OPD		**Furniture:** *** Same as under Medicine OPD	
7.	**Dental OPD**	**Equipment:** Dental chair with all the probes (Air rotor, Ultrasonic scalar with four tips, Compressor oil free medical grade (noise-free), Suction fitted in the dental chair medium and high vacuum., Air rotor hand piece contra angle two and one		**Equipment :** Dental chair with all the probes (Air Rotor, Ultrasonic Scalar with four tips, Compressor oil free medical grade (noise-free), Suction fitted in the dental chair	

Sr. No.	Department	Sub District Hospital		District Hospital	
		(E)	(D)	(E)	(D)
		straight hand piece (4 lakhs RPM), LED light cure unit, Diathermy Bipolar, Latest foot operated light of 20,000 and 25,000/- Lux, Dental X-ray IOP/OPG X-ray viewer with LED light), Horizontal Autoclave with UV light		medium and high vacuum., Air rotor hand piece contra angle two and one straight hand piece (4 lakhs RPM), LED light cure unit, Diathermy Bipolar, Latest foot operated light of 20,000 and 25,000/- Lux, Dental X-ray IOP/ OPG X-ray viewer with LED light), Horizontal Autoclave with UV light	
		Instruments: Mouth mirror and Examination Instruments		**Instruments:** Mouth mirror and Examination Instruments	
		Accessories & Consumables: : ** Same as under Medicine OPD		**Accessories & Consumables:** Same as under ** in Medicine OPD	
		Furniture* ** Same as under Medicine OPD		**Furniture: *** ** Same as under Medicine OPD	
8.	**Eye OPD**	**Equipment** * Same as under Medicine OPD + Ophthalmoscope- Direct, Ophthalmoscope- Indirect with 20 D Lens, slit lamp refraction units, Streak retinoscope, A- Scan Biometer, B- Scan Biometer, Keratometer, Auto-refractometer, Punctum Dilator, Applanation Tonometer, Fundus Camera, OCT.		**Equipment** * Same as under Medicine OPD + Ophthalmoscope- Direct, Ophthalmoscope- Indirect with 20 D Lens, slit lamp refraction units, Streak retinoscope, A- Scan Biometer, B- Scan Biometer, Keratometer, Auto-refractometer, Punctum Dilator, Applanation Tonometer, Fundus Camera, OCT.	
		Accessories Trial lens set with trial frame Adult/Children, Torch		**Accessories** Trial lens set with trial frame Adult/Children, Torch	
		Accessories & Consumables **Same as under Medicine OPD		**Accessories & Consumables** **Same as under Medicine OPD	
		Furniture* ** Same as under Medicine OPD		**Furniture*** ** Same as under Medicine OPD	
9.	**Ortho OPD**	**Equipment: *** Same as under Medicine OPD + Reflex hammer, Goinometer,		**Equipment: *** Same as under Medicine OPD + Reflex hammer, Goinometer,	
		Instruments: Removal of Stitches Tray		**Instruments:** Removal of Stitches Tray	
		Accessories/Consumables: **Same as under Medicine OPD		**Accessories/Consumables:** **Same as under Medicine OPD	
		Furniture: * ** Same as under Medicine OPD		**Furniture: *** ** Same as under Medicine OPD	

Sr. No.	Department	Sub District Hospital		District Hospital	
		(E)	(D)	(E)	(D)
10.	**ENT OPD**	**Equipment: *** Same as under Medicine OPD+ Ear & nasal Suction machine, Otoscope, Jobson Horne probe, Head lamp		**Equipment: *** Same as under Medicine OPD+ Ear & nasal Suction machine, Otoscope, Jobson Horne probe, Head lamp	
		Instruments : Nasal Speculum, Laryngeal mirror, Nasopharyngeal mirrors Aural speculum Siegles speculum, Tuning fork (512 Hz), Bayonet forces,		**Instruments** : Nasal Speculum, Laryngeal mirror, Nasopharyngeal mirrors Aural speculum Siegles speculum, Tuning fork (512 Hz), Bayonet forces,	
		Accessories/Consumables: **Same as under Medicine OPD		**Accessories/Consumables:** **Same as under Medicine OPD	
		Furniture: * Same as under Medicine OPD +ENT examination chair		**Furniture: *** Same as under Medicine OPD +ENT examination chair	
11	**Dermatology OPD#**		**Equipment: : *** Same as under Medicine OPD + Electric cautery, chemical cautery & punch biopsy gun	**Equipment: : *** Same as under Medicine OPD + Electric cautery, chemical cautery & punch biopsy gun	
			Accessories/ Consumables: **Same as under Medicine OPD	**Accessories/Consumables:** **Same as under Medicine OPD	
			Furniture: : * Same as under Medicine OPD	**Furniture:** *** Same as under Medicine OPD	
12	**Psychiatry OPD#**		**Equipment: : *** Same as under Medicine OPD	**Equipment: : *** Same as under Medicine OPD	
			Accessories/ Consumables: **Same as under Medicine OPD	**Accessories/Consumables:** **Same as under Medicine OPD	
			Furniture: : * Same as under Medicine OPD	**Furniture: : *** Same as under Medicine OPD	
13	**Neonataology OPD##**			**Equipment: : *** Same as under Medicine OPD + Otoscope, tuning fork (156), percussion hammer, weighing scale (Digital and standing Weighing scale), infantometer, stadiometer, wooden tongue depressor, non-stretchable measuring tape.	

Sr. No.	Department	Sub District Hospital		District Hospital	
		(E)	(D)	(E)	(D)
				Accessories/Consumables: **Same as under Medicine OPD	
				Furniture* Same as under Medicine OPD	
14	**Oncology OPD###**				**Equipment: : *** Same as under Medicine OPD
					Accessories/ Consumables: **Same as under Medicine OPD
					Furniture: : *** Same as under Medicine OPD
15	**Cardiology OPD###**				**Equipment: : *** Same as under Medicine OPD
					Accessories/ Consumables: **Same as under Medicine OPD
					Furniture: : *** Same as under Medicine OPD
16	**Gastroentrology OPD###**				**Equipment: : *** Same as under Medicine OPD
					Accessories/ Consumables: **Same as under Medicine OPD
					Furniture: : *** Same as under Medicine OPD

Sr. No.	Department	Sub District Hospital		District Hospital	
		(E)	(D)	(E)	(D)
17	**Nephrology OPD###**				**Equipment: : *** Same as under Medicine OPD
					Accessories/ Consumables: **Same as under Medicine OPD
					Furniture: : *** Same as under Medicine OPD
18	**Urology OPD###**				**Equipment: : *** Same as under Medicine OPD
					Accessories/ Consumables: **Same as under Medicine OPD
					Furniture: : *** Same as under Medicine OPD
19	**Geriatric OPD###**				**Equipment: : *** Same as under Medicine OPD
					Accessories/ Consumables: **Same as under Medicine OPD
					Furniture: : *** Same as under Medicine OPD
20	**Neurology OPD####**				**Equipment: *** Same as under Medicine OPD + Reflex hammer

Sr. No.	Department	Sub District Hospital		District Hospital	
		(E)	(D)	(E)	(D)
					Accessories/ Consumables: **Same as under Medicine OPD
					Furniture: : *** Same as under Medicine OPD
21	**NRC**		**Equipment:** Bed, glucometer, height and weight measurement scale (digital), thermometer, infantometer, stadiometer, crash cart with multipara monitor, nebulizer, laryngoscopes (LED) both straight and curved for adults and pediatrics (for each size), torch	**Equipment:** Bed, glucometer, height and weight measurement scale (digital), thermometer, infantometer, stadiometer, crash cart with multipara monitor, nebulizer, laryngoscopes (LED) both straight and curved for adults and pediatrics (for each size), torch	
			Instruments: Magill's forceps	**Instruments:** Magill's forceps	
			Accessories/ Consumables: Ambu bags (adult & paediatrics), dressing material, syringes and needles of different sizes, ET & TT tube in each size, tracheostomy set, urinary catheters, IV cannulas, IV and BT sets, NG tubes with each size, gloves, goodle's airway, shoe covers, head caps, masks, gowns etc.	**Accessories/Consumables:** Ambu bags (adult & paediatrics), dressing material, syringes and needles of different sizes, ET & TT tube in each size, tracheostomy set, urinary catheters, IV cannulas, IV and BT sets, NG tubes with each size, gloves, goodle's airway, shoe covers, head caps, masks, gowns etc.	

Sr. No.	Department	Sub District Hospital		District Hospital	
		(E)	(D)	(E)	(D)
			Furniture: Colour coded BMW bins, intravenous, stool, bed side chairs, chair for nurses and doctors, medicine trolley	**Furniture:** Colour coded BMW bins, intravenous, stool, bed side chairs, chair for nurses and doctors, medicine trolley	
22	**24x7 Emergency**	**Equipment:** Resuscitation Bed, Multi-Para monitors, Sphygmomanometer, Laryngoscopes with Blades (both straight and curved for adult and paediatric), Oxygen cylinder Type D, Suction Machine (Electrical), Defibrillators, Mechanical ventilators (only for red Beds), Infusion pump, Ultrasonic nebulizer, ECG machine, Transport monitor, Transport Ventilator, Thermometers, Glucometer, stethoscope, ophthalmoscope, otoscope**,** Examination light**.**		**Equipment:** Resuscitation Bed, Multi-Para monitors, Sphygmomanometer, Laryngoscopes with Blades (both straight and curved for adult and paediatric), Oxygen cylinder Type D, Suction Machine (Electrical), Defibrillators, Mechanical ventilators (only for red Beds), Infusion pump, Ultrasonic nebulizer, ECG Machine, Transport monitor, Transport Ventilator, Thermometers, Glucometer, stethoscope, ophthalmoscope, otoscope**,** Examination light**.**	
		Instruments: Magill's forceps, Artery forceps, Surgical blade, Mayo scissors, Sponge forceps etc**.**		**Instruments:** Magill's forceps, Artery forceps, Surgical blade, Mayo scissors, Sponge forceps etc**.**	
		Accessories/Consumables: Ambu Bag (Adults and Paediatrics), Dressing material, syringes and needles of different sizes, wall/roof mounted single piece curtains to ensure privacy, ET & TT tube in each size, Tracheostomy set, Urinary Catheters, IV cannulas, IV and BT sets, NG tubes with each size, Gloves, splints of various sizes, Goodle's airway etc		**Accessories/Consumables:** Ambu Bag (Adults and Paediatrics), Dressing material, syringes and needles of different sizes, wall/roof mounted single piece curtains to ensure privacy, ET & TT tube in each size, Tracheostomy set, Urinary Catheters, IV cannulas, IV and BT sets, NG tubes with each size, Gloves, splints of various sizes, Goodle's airway etc	
		Furniture: Colour coded BMW Bins, Intravenous stand, Stool, Cardiac Tables, Crash Cart with Emergency Medicines, Tray for management of anaphylactic shock		**Furniture:** Colour coded BMW Bins, Intravenous stand, Stool, Cardiac Tables, Crash Cart with Emergency Medicines, Tray for management of anaphylactic shock	
23	**Pre-Anesthesia OPD**	**Equipment** * Same as under Medicine OPD + Spirometer		**Equipment** * Same as under Medicine OPD + Spirometer	
		Accessories & Consumables: **Same as under Medicine OPD		**Accessories & Consumables:** **Same as under Medicine OPD	
		Furniture: *** Same as under Medicine OPD		**Furniture:** *** Same as under Medicine OPD	

Sr. No.	Department	Sub District Hospital		District Hospital	
		(E)	(D)	(E)	(D)
24	**General ICU**			**Equipment:** ICU beds, Multi Para monitor - ECG, SpO_2, NIBP (Non-invasive BP and Temperature) at the head end with $EtCO_2$ measurement and upgradable to invasive monitoring, Syringe Pump, Infusion Pump, Bi-PAP/CPAP mask ventilator, Suction machine (foot-operated), Transport Ventilator, Mechanical Ventilator (Basic Invasive), Glucometer, Central pipelines for supply of Oxygen (3 outlets on each bed), Central Suction and Medical Air.	
				Instruments: Magill's Forceps, PEEP valve	
				Accessories: IV Stand, Portable Inverter Battery set (for transport), Oxygen hood boxes	
				Furniture: Disaster trolley/crash cart, LED view box- 4*2 ft., Stretcher, Wheelchair, Refrigerator	
25	**General HDU**	**Equipment:** ICU beds, Multi Para monitor - ECG, SpO_2, NIBP (Non-invasive BP and Temperature) at the head end with $EtCO_2$ measurement and upgradable to invasive monitoring, Syringe Pump, Infusion Pump, Bi-PAP/CPAP mask ventilator, Suction machine (foot-operated), Transport Ventilator, Glucometer, Central pipelines for supply of Oxygen (3 outlets on each bed), Central Suction and Medical Air.		**Equipment:** ICU beds, Multi Para monitor - ECG, SpO_2, NIBP (Non-invasive BP and Temperature) at the head end with $EtCO_2$ measurement and upgradable to invasive monitoring, Syringe Pump, Infusion Pump, Bi-PAP/CPAP mask ventilator, Suction machine (foot-operated), Transport Ventilator, Glucometer, Central pipelines for supply of Oxygen (3 outlets on each bed), Central Suction and Medical Air.	
		Instruments: Magill's Forceps, PEEP valve		**Instruments:** Magill's Forceps, PEEP valve	
		Accessories: IV Stand, Portable Inverter Battery set (for transport), Oxygen hood boxes		**Accessories**: IV Stand, Portable Inverter Battery set (for transport), Oxygen hood boxes	
		Furniture: Disaster trolley/crash cart, LED view box- 4*2 ft., Stretcher, Wheelchair, Refrigerator		**Furniture:** Disaster trolley/crash cart, LED view box- 4*2 ft., Stretcher, Wheelchair, Refrigerator	

Sr. No.	Department	Sub District Hospital		District Hospital	
		(E)	(D)	(E)	(D)
26	**OBGYN ICU**	**Equipment: :** ICU beds, Multi Para monitor - ECG, SpO_2, NIBP (Non-invasive BP and Temperature) at the head end with $EtCO_2$ measurement and upgradable to invasive monitoring Infusion pump, Syringe pump, Fetal Doppler, USG Machine with color Doppler and Echo facility, CTG machine, Mechanical Ventilators, Defibrillator with TCP and AED, Portable X-ray machine-200mA, Foot operated suction machine, Transport ventilator to shift the patient to ICU, Movable shadow less spot lights with adjustable arms, Blood warmers, Intermittent compression device for DVT prophylaxis, ABG, Negative Ionizer/air purifier, Central pipelines for supply of Oxygen (3 outlets on each bed), Central Suction and Medical Air.		**Equipment** : ICU beds, Multi Para monitor - ECG, SpO_2, NIBP (Non-invasive BP and Temperature) at the head end with $EtCO_2$ measurement and upgradable to invasive monitoring Infusion pump, Syringe pump, Fetal Doppler, USG Machine with color Doppler and Echo facility, CTG machine, Mechanical Ventilators Defibrillator with TCP and AED, Portable X-ray machine-200mA, Foot operated suction machine, Transport ventilator to shift the patient to ICU, Movable shadow less spot lights with adjustable arms, Blood warmers, Intermittent compression device for DVT prophylaxis, ABG, Negative Ionizer/air purifier, Central pipelines for supply of Oxygen (3 outlets on each bed), Central Suction and Medical Air	
		Instruments: Magill's Forceps, PEEP valve, $ Adult and Baby resuscitation kit/cart		**Instruments:** Magill's Forceps, PEEP valve, $ Adult and Baby resuscitation kit/cart	
		Accessories: IV Stand, Portable Inverter Battery set (for transport), Oxygen hood boxes		**Accessories**: IV Stand, Portable Inverter Battery set (for transport), Oxygen hood boxes	
		Furniture: Disaster trolley/crash cart, LED view box- 4*2 ft., Stretcher, Wheelchair, Refrigerator		**Furniture:** Disaster trolley/crash cart, LED view box- 4*2 ft., Stretcher, Wheelchair, Refrigerator	
27	**OBS and GYN. HDU**	**Equipment: :** ICU beds, Multi Para monitor - ECG, SpO_2, NIBP (Non-invasive BP and Temperature) at the head end with $EtCO_2$ measurement and upgradable to invasive monitoring Infusion pump, Syringe pump, Fetal Doppler, USG Machine with color Doppler and Echo facility, CTG machine, Defibrillator with TCP and AED, Portable X-ray machine-200mA, Foot operated suction machine, Transport ventilator to shift the patient to ICU, Movable shadow less spot lights with adjustable arms, Blood warmers, Central pipelines for supply of Oxygen (3 outlets on each bed), Central Suction and Medical Air.		**Equipment: :** ICU beds, Multi Para monitor - ECG, SpO_2, NIBP (Non-invasive BP and Temperature) at the head end with $EtCO_2$ measurement and upgradable to invasive monitoring Infusion pump, Syringe pump, Fetal Doppler, USG Machine with color Doppler and Echo facility, CTG machine, Defibrillator with TCP and AED, Portable X-ray machine-200mA, Foot operated suction machine, Transport ventilator to shift the patient to ICU, Movable shadow less spot lights with adjustable arms, Blood warmers, Central pipelines for supply of Oxygen (3 outlets on each bed), Central Suction and Medical Air.	

Sr. No.	Department	Sub District Hospital		District Hospital	
		(E)	(D)	(E)	(D)
		Instruments: Magill's Forceps, PEEP valve, $ Adult and Baby resuscitation kit/cart		**Instruments:** Magill's Forceps, PEEP valve, $ Adult and Baby resuscitation kit/cart	
		Accessories: IV Stand, Portable Inverter Battery set (for transport), Oxygen hood boxes		**Accessories**: IV Stand, Portable Inverter Battery set (for transport), Oxygen hood boxes	
		Furniture: Disaster trolley/crash cart, LED view box- 4*2 ft., Stretcher, Wheelchair, Refrigerator		**Furniture:** Disaster trolley/crash cart, LED view box- 4*2 ft., Stretcher, Wheelchair, Refrigerator	
28	**SNCU+MNCU**	**Equipment:** Open care Radiant warmer, Neonatal Resuscitation Equipment, Pulse oximeter with Neonatal Wrap up, Multi para Monitor with Neonatal leads, Syringe Pump, Phototherapy Single Surface LED, Nebulizer, Portable LED Standing light, Foot Operating Suction machine, BP Apparatus - Neonatal Cuff, Baby weighing scale –Digital, Infantometer, Transcutaneous Bilirubinometer, Bubble CPAP with compressor, Transport Incubator, Beds for mothers, Irradiance Meter, Vein Finder, Oxygen Hood		**Equipment:** Open care Radiant warmer, Neonatal Resuscitation Equipment, Pulse oximeter with Neonatal Wrap up, Multi para Monitor with Neonatal leads, Syringe Pump, Phototherapy Single Surface LED, Nebulizer, Portable LED Standing light, Foot Operating Suction machine, BP Apparatus - Neonatal Cuff, Baby weighing scale –Digital, Infantometer, Transcutaneous Bilirubinometer, Bubble CPAP with compressor, Transport Incubator, Beds for mothers, Irradiance Meter, Vein Finder, Oxygen Hood	
		Instruments: Magill's forceps		**Instruments:** Magill's forceps	
		Accessories/Consumables: Ambu bags (neonatal & paediatrics), dressing material, syringes and needles of different sizes, ET & TT tube in each size, tracheostomy set, urinary catheters, IV cannulas, IV and BT sets, NG tubes with each size, gloves, goodle's airway, shoe covers, head caps, masks, gowns etc.		**Accessories/Consumables:** Ambu bags (neonatal & paediatrics), dressing material, syringes and needles of different sizes, ET & TT tube in each size, tracheostomy set, urinary catheters, IV cannulas, IV and BT sets, NG tubes with each size, gloves, goodle's airway, shoe covers, head caps, masks, gowns etc.	
		Furniture: Colour coded BMW bins, intravenous, stool, bed side chairs, chair for nurses and doctors, medicine trolley		**Furniture:** Colour coded BMW bins, intravenous, stool, bed side chairs, chair for nurses and doctors, medicine trolley	
29	**NICU**			**Equipment:** Open care Radiant warmer, Neonatal Resuscitation Equipment, Pulse oximeter with Neonatal Wrap up, Multi para Monitor with Neonatal leads, Syringe Pump, Phototherapy Single Surface LED,	

Sr. No.	Department	Sub District Hospital		District Hospital	
		(E)	(D)	(E)	(D)
				Nebulizer, Portable LED Standing light, Foot Operating Suction machine, BP Apparatus - Neonatal Cuff, Baby weighing scale –Digital, Infantometer, Transcutaneous Bilirubinometer, Bubble CPAP with compressor, Transport Incubator, Irradiance Meter, Vein Finder, Oxygen Hood	
				Instruments: Magill's forceps	
				Accessories/Consumables: Ambu bags (neonatal & paediatrics), dressing material, syringes and needles of different sizes, ET & TT tube in each size, tracheostomy set, urinary catheters, IV cannulas, IV and BT sets, NG tubes with each size, gloves, goodle's airway, shoe covers, head caps, masks, gowns etc.	
				Furniture: Colour coded BMW bins, intravenous, stool, bed side chairs, chair for nurses and doctors, medicine trolley	
30	**PICU**			**Equipment:** Pediatric ICU Beds, Pediatrics Resuscitation Equipment, Pulse oximeter with Neonatal Wrap up, Multi para Monitor with leads, Syringe Pump, Phototherapy Single Surface LED, Nebulizer, Portable LED Standing light, Foot Operating Suction machine, BP Apparatus – Pediatric Cuff, Baby weighing scale –Digital, Infantometer, Transcutaneous Bilirubinometer, Bubble CPAP with compressor, Transport Incubator, Irradiance Meter, Vein Finder, Oxygen Hood, Mechanical Ventilator	
				Instruments: Magill's forceps	
				Accessories/Consumables: Ambu bags (paediatrics), dressing material, syringes and needles of different sizes, ET & TT tube in each size, tracheostomy set, urinary catheters, IV cannulas, IV and BT sets, NG tubes with each size, gloves, goodle's airway, shoe covers, head caps, masks, gowns etc.	

Sr. No.	Department	Sub District Hospital		District Hospital	
		(E)	(D)	(E)	(D)
				Furniture: Colour coded BMW bins, intravenous, stool, bed side chairs, chair for nurses and doctors, medicine trolley	
31	**Pediatric HDU**	**Equipment:** Pediatric ICU Beds, Pediatrics Resuscitation Equipment, Pulse oximeter with Neonatal Wrap up, Multi para Monitor with leads, Syringe Pump, Phototherapy Single Surface LED, Nebulizer, Portable LED Standing light, Foot Operating Suction machine, BP Apparatus – Pediatric Cuff, Baby weighing scale –Digital, Infantometer, Transcutaneous Bilirubinometer, Bubble CPAP with compressor, Transport Incubator, Irradiance Meter, Vein Finder, Oxygen Hood		**Equipment:** Pediatric ICU Beds, Pediatrics Resuscitation Equipment, Pulse oximeter with Neonatal Wrap up, Multi para Monitor with leads, Syringe Pump, Phototherapy Single Surface LED, Nebulizer, Portable LED Standing light, Foot Operating Suction machine, BP Apparatus – Pediatric Cuff, Baby weighing scale –Digital, Infantometer, Transcutaneous Bilirubinometer, Bubble CPAP with compressor, Transport Incubator, Irradiance Meter, Vein Finder, Oxygen Hood	
		Instruments: Magill's forceps		**Instruments:** Magill's forceps	
		Accessories/Consumables: Ambu bags (paediatrics), dressing material, syringes and needles of different sizes, ET & TT tube in each size, tracheostomy set, urinary catheters, IV cannulas, IV and BT sets, NG tubes with each size, gloves, goodle's airway, shoe covers, head caps, masks, gowns etc.		**Accessories/Consumables:** Ambu bags (paediatrics), dressing material, syringes and needles of different sizes, ET & TT tube in each size, tracheostomy set, urinary catheters, IV cannulas, IV and BT sets, NG tubes with each size, gloves, goodle's airway, shoe covers, head caps, masks, gowns etc.	
		Furniture: Colour coded BMW bins, intravenous, stool, bed side chairs, chair for nurses and doctors, medicine trolley		**Furniture:** Colour coded BMW bins, intravenous, stool, bed side chairs, chair for nurses and doctors, medicine trolley	
32	**Minor OT**	**Equipment:** OT Table, OT light, Electrical Suction, Laryngoscope with 5 Blades (LED), Flash Autoclave - (Chamber capacity of app. 20 litres/ cycle		**Equipment:** OT Table, OT light, Electrical Suction, Laryngoscope with 5 Blades (LED), Flash Autoclave - (Chamber capacity of app. 20 litres/cycle	
		Instruments: Surgical instruments and sets as required for each surgery/procedure		**Instruments:** Surgical instruments and sets as required for each surgery/procedure	
		Accessories/Consumables: Ambu Bag (Adults and Paediatrics), Dressing material, syringes and needles of different sizes, ET & TT tube in each size, Tracheostomy set,		**Accessories/Consumables:** Ambu Bag (Adults and Paediatrics), Dressing material, syringes and needles of different sizes, ET & TT tube in each size, Tracheostomy set, Urinary Catheters, IV	

Sr. No.	Department	Sub District Hospital		District Hospital	
		(E)	(D)	(E)	(D)
		Urinary Catheters, IV cannulas, IV and BT sets, NG tubes with each size, Gloves, Goodle's airway, Shoe covers, Head Caps, masks, Gowns etc.		cannulas, IV and BT sets, NG tubes with each size, Gloves, Goodle's airway, Shoe covers, Head Caps, masks, Gowns etc.	
		Furniture: Colour coded BMW Bins, Intravenous stand, Stool, Cardiac Tables, Crash Cart, Emergency Medicine Trolly.		**Furniture:** Colour coded BMW Bins, Intravenous stand, Stool, Cardiac Tables, Crash Cart, Emergency Medicine Trolly.	
33	**OT General**	**Equipment:** OT Table, OT light - Ceiling Double Dome, Anaesthesia workstation, Electrical Suction, Laryngoscope with 5 Blades (LED), Defibrillator (AED plus Manual with ECG, Flash Autoclave - (Chamber capacity of app. 20 litres/ cycle, Surgical Diathermy – Bipolar, ECG Machine - 6 Channel, Bowl Sterilizers - Different Sizes, Oxygen Cylinder D type, Washer Disinfector - 30- 45 Litres, Blood Warmer, Glucometer, Thermometer, Infusion Pump		**Equipment:** OT Table, OT light - Ceiling Double Dome, Anaesthesia workstation, Electrical Suction, Laryngoscope with 5 Blades (LED), Defibrillator (AED plus Manual with ECG, Flash Autoclave - (Chamber capacity of app. 20 litres/cycle, Surgical Diathermy – Bipolar, ECG Machine - 6 Channel, Bowl Sterilizers - Different Sizes, Oxygen Cylinder D type, Washer Disinfector - 30- 45 Litres, Blood Warmer, Glucometer, Thermometer, Infusion Pump	
		Instruments: Surgical instruments as required for each surgery.		**Instruments:** Surgical instruments as required for each surgery.	
		Accessories/Consumables: Ambu Bag (Adults and Paediatrics), Dressing material, syringes and needles of different sizes, ET & TT tube in each size, Tracheostomy set, Urinary Catheters, IV cannulas, IV and BT sets, NG tubes with each size, Gloves, Goodle's airway, Shoe covers, Head Caps, masks, Gowns etc.		**Accessories/Consumables:** Ambu Bag (Adults and Paediatrics), Dressing material, syringes and needles of different sizes, ET & TT tube in each size, Tracheostomy set, Urinary Catheters, IV cannulas, IV and BT sets, NG tubes with each size, Gloves, Goodle's airway, Shoe covers, Head Caps, masks, Gowns etc.	
		Furniture: Mayo Stand, Surgical Trolley, Equipment Trolley, Emergency & Drugs Trolley, Anaesthesia Trolley (Complete with Ambu bags and other items), Difficult Airway Trolley- Bronchoscope and intubating, Crash Cart, Patient Trolley, IV Stand.		**Furniture:** Mayo Stand, Surgical Trolley, Equipment Trolley, Emergency & Drugs Trolley, Anaesthesia Trolley (Complete with Ambu bags and other items), Difficult Airway Trolley- Bronchoscope and intubating, Crash Cart, Patient Trolley, IV Stand.	

Sr. No.	Department	Sub District Hospital		District Hospital	
		(E)	(D)	(E)	(D)
34	**Ortho OT**			**Equipment:** OT Table, OT light - Ceiling Double Dome, Anaesthesia workstation, Electrical Suction, Laryngoscope with 5 Blades (LED), Defibrillator (AED plus Manual with ECG, Flash Autoclave - (Chamber capacity of app. 20 litres/cycle, Surgical Diathermy – Bipolar, ECG Machine - 6 Channel, Bowl Sterilizers - Different Sizes, Oxygen Cylinder D type, Washer Disinfector - 30- 45 Litres, Blood Warmer, Glucometer, Thermometer, Infusion Pump, Arthroscope, Image Intensifier, External fixator, Pneumatic drill and reamer, Multimedia Projector	
				Instruments: Surgical instruments as required for each surgery.	
				Accessories/Consumables: Ambu Bag (Adults and Paediatrics), Dressing material, syringes and needles of different sizes, ET & TT tube in each size, Tracheostomy set, Urinary Catheters, IV cannulas, IV and BT sets, NG tubes with each size, Gloves, Goodle's airway, Shoe covers, Head Caps, masks, Gowns etc.	
				Furniture: Mayo Stand, Surgical Trolley, Equipment Trolley, Emergency & Drugs Trolley, Anaesthesia Trolley (Complete with Ambu bags and other items), Difficult Airway Trolley- Bronchoscope and intubating, Crash Cart, Patient Trolley, IV Stand.	
35	**Emergency OT**	**Equipment:** Basic operating theatre table, consisting of head section, Foot section, Body section, Lithotomy poles, Mattress, #shoulder rest, OT light, Oxygen Therapy apparatus, W/ masks, flow meter, cylinder trolley, Suction Apparatus, BP Machine, Portable Autoclave, Operating lamp, mobile, 12 V including Battery, Spare bulbs and supplied with charger, Water		**Equipment:** Basic operating theatre table, consisting of head section, Foot section, Body section, Lithotomy poles, Mattress, shoulder rest, OT light, Oxygen Therapy apparatus, W/masks, flow meter, cylinder trolley, Suction Apparatus, BP Machine, Portable Autoclave, Operating lamp, mobile, 12 V including Battery, Spare bulbs and	

Sr. No.	Department	Sub District Hospital		District Hospital	
		(E)	(D)	(E)	(D)
		Bath (Electric), Medium size, Tourniquet – Adult, Tourniquet – Child, Proctoscope – Adult, Proctoscope – Child, Stethoscope, Thermometer, Nebulizer machine, Torch, ECG 3 Channel		supplied with charger, Water Bath (Electric), Medium size, Tourniquet – Adult, Tourniquet – Child, Proctoscope – Adult, Proctoscope – Child, Stethoscope, Thermometer, Nebulizer machine, Torch, ECG 3 Channel	
		Instruments: Ambu- bag, BP handle, No. 4, artery forceps – straight, artery forceps – curved, mosquito forceps – straight, mosquito forceps – curved, plain dissecting forceps, tooth dissecting forceps, right angle detector, needle holder – large, needle holder – small, BP blade, instrument trolley, stomach tube, resuscitation kit, manual, infant, dissecting scissor 8", allis tissue forceps, Mayo's scissors, dissecting scissors 8" curved, ttitch cutting scissors, gauge cutting/bandage cutting scissors 12, kidney tray – small, kidney tray – big, sponge holing forceps, Kocher's artery forceps – straight, Kocher's artery Forceps – curved, cat's paw retractor, ear speculum, nasal speculum – adult, nasal speculum – child, tracheostomy set, female metallic catheter, tongue depressor, catheter introducer, vaginal speculum – large, vaginal speculum – small		**Instruments:** Ambu- bag, BP handle, No. 4, artery forceps – straight, artery forceps – curved, mosquito forceps – straight, mosquito forceps – curved, plain dissecting forceps, tooth dissecting forceps, right angle detector, needle holder – large, needle holder – small, BP blade, instrument trolley, stomach tube, resuscitation kit, manual, infant, dissecting scissor 8", allis tissue forceps, Mayo's scissors, dissecting scissors 8" curved, ttitch cutting scissors, gauge cutting/bandage cutting scissors 12, kidney tray – small, kidney tray – big, sponge holing forceps, Kocher's artery forceps – straight, Kocher's artery Forceps – curved, cat's paw retractor, ear speculum, nasal speculum – adult, nasal speculum – child, tracheostomy set, female metallic catheter, tongue depressor, catheter introducer, vaginal speculum – large, vaginal speculum – small	
		Accessories/Consumables: Ambu bag (adults and paediatrics), dressing material, syringes and needles of different sizes, ET & TT tube in each size, tracheostomy set, urinary catheters, IV cannulas, IV and BT sets, NG tubes with each size, gloves, goodle's airway, shoe covers, head caps, masks, gowns etc.		**Accessories/Consumables:** Ambu bag (adults and paediatrics), dressing material, syringes and needles of different sizes, ET & TT tube in each size, tracheostomy set, urinary catheters, IV cannulas, IV and BT sets, NG tubes with each size, gloves, goodle's airway, shoe covers, head caps, masks, gowns etc.	
		Furniture: Patient trolley, surgeon's stool, fixed height with stump feet and anti - static cushion, surgical drum inch, surgical down eight inches		**Furniture:** Patient trolley, surgeon's stool, fixed height with stump feet and anti - static cushion, surgical drum inch, surgical down eight inches	

Sr. No.	Department	Sub District Hospital		District Hospital	
		(E)	(D)	(E)	(D)
36	**Obstetrics & Gynecology OT**	**Equipment:** OT Table, OT light - Ceiling Double Dome, Anaesthesia workstation, Electrical Suction, Laryngoscope with 5 Blades (LED), Defibrillator (AED plus Manual with ECG, Flash Autoclave - (Chamber capacity of app. 20 litres/ cycle, Surgical Diathermy – Bipolar, ECG Machine - 6 Channel, Bowl Sterilizers - Different Sizes, Oxygen Cylinder D type, Washer Disinfector - 30-45 Litres, Blood Warmer, Glucometer, Open care Radiant warmer, Hysteroscopy, Foetal Doppler, CTG Monitor, Vacuum extractor, Pulse Oximeter baby & adult		**Equipment:** OT Table, OT light - Ceiling Double Dome, Anaesthesia workstation, Electrical Suction, Laryngoscope with 5 Blades (LED), Defibrillator (AED plus Manual with ECG, Flash Autoclave - (Chamber capacity of app. 20 litres/cycle, Surgical Diathermy – Bipolar, ECG Machine - 6 Channel, Bowl Sterilizers - Different Sizes, Oxygen Cylinder D type, Washer Disinfector - 30- 45 Litres, Blood Warmer, Glucometer, Open care Radiant warmer, Hysteroscopy, Foetal Doppler, CTG Monitor, Vacuum extractor, Pulse Oximeter baby & adult	
		Instruments: Surgical instruments as required for each surgery.		**Instruments:** Surgical instruments as required for each surgery.	
		Accessories/Consumables: Ambu Bag (Adults and Paediatrics), Dressing material, syringes and needles of different sizes, ET & TT tube in each size, Tracheostomy set, Urinary Catheters, IV cannulas, IV and BT sets, NG tubes with each size, Gloves, Goodle's airway, Shoe covers, Head Caps, masks, Gowns etc.		**Accessories/Consumables:** Ambu Bag (Adults and Paediatrics), Dressing material, syringes and needles of different sizes, ET & TT tube in each size, Tracheostomy set, Urinary Catheters, IV cannulas, IV and BT sets, NG tubes with each size, Gloves, Goodle's airway, Shoe covers, Head Caps, masks, Gowns etc.	
		Furniture: Mayo Stand, Surgical Trolley, Equipment Trolley, Emergency & Drugs Trolley, Anaesthesia Trolley (Complete with Ambu bags and other items), Difficult Airway Trolley- Bronchoscope and intubating, Crash Cart, Patient Trolley, IV Stand		**Furniture:** Mayo Stand, Surgical Trolley, Equipment Trolley, Emergency & Drugs Trolley, Anaesthesia Trolley (Complete with Ambu bags and other items), Difficult Airway Trolley- Bronchoscope and intubating, Crash Cart, Patient Trolley, IV Stand	
37	**Eye OT**	**Equipment:** OT Table, OT light - Ceiling Double Dome, Anaesthesia workstation, Electrical Suction, Laryngoscope with 5 Blades (LED), Defibrillator (AED plus Manual with ECG, Flash Autoclave - (Chamber capacity of app. 20 litres/ cycle, Surgical Diathermy – Bipolar, ECG Machine		**Equipment:** OT Table, OT light - Ceiling Double Dome, Anaesthesia workstation, Electrical Suction, Laryngoscope with 5 Blades (LED), Defibrillator (AED plus Manual with ECG, Flash Autoclave - (Chamber capacity of app. 20 litres/cycle, Surgical	

Sr. No.	Department	Sub District Hospital		District Hospital	
		(E)	(D)	(E)	(D)
		- 6 Channel, Bowl Sterilizers - Different Sizes, Oxygen Cylinder D type, Washer Disinfector - 30- 45 Litres, Blood Warmer, Glucometer, Thermometer, Infusion Pump, Cryo surgery unit, Operating Microscope, Phaco Machine, Nd Yag Laser		Diathermy – Bipolar, ECG Machine - 6 Channel, Bowl Sterilizers - Different Sizes, Oxygen Cylinder D type, Washer Disinfector - 30- 45 Litres, Blood Warmer, Glucometer, Thermometer, Infusion Pump, Cryo surgery unit, Operating Microscope, Phaco Machine, Nd Yag Laser	
		Instruments: Surgical instruments as required for each surgery.		**Instruments:** Surgical instruments as required for each surgery.	
		Accessories/Consumables: Ambu Bag (Adults and Paediatrics), Dressing material, syringes and needles of different sizes, ET & TT tube in each size, Tracheostomy set, Urinary Catheters, IV cannulas, IV and BT sets, NG tubes with each size, Gloves, Goodle's airway, Shoe covers, Head Caps, masks, Gowns etc		**Accessories/Consumables:** Ambu Bag (Adults and Paediatrics), Dressing material, syringes and needles of different sizes, ET & TT tube in each size, Tracheostomy set, Urinary Catheters, IV cannulas, IV and BT sets, NG tubes with each size, Gloves, Goodle's airway, Shoe covers, Head Caps, masks, Gowns etc	
		Furniture: Mayo Stand, Surgical Trolley, Equipment Trolley, Emergency & Drugs Trolley, Anaesthesia Trolley (Complete with Ambu bags and other items), Difficult Airway Trolley- Bronchoscope and intubating, Crash Cart, Patient Trolley, IV Stand		**Furniture:** Mayo Stand, Surgical Trolley, Equipment Trolley, Emergency & Drugs Trolley, Anaesthesia Trolley (Complete with Ambu bags and other items), Difficult Airway Trolley- Bronchoscope and intubating, Crash Cart, Patient Trolley, IV Stand	
38	**Dialysis Services**		**Equipment:** Dialysis Machine, Oxygen cylinders with flow meter/tubing/catheter/ face mask/nasal prongs, Suction Apparatus, Defibrillator with accessories, Equipment for dressing/bandaging/ suturing, Basic diagnostic equipment- Blood Pressure Apparatus, Stethoscope, Standing Weighing	**Equipment:** Dialysis Machine, Oxygen cylinders with flow meter/tubing/catheter/ face mask/nasal prongs, Suction Apparatus, Defibrillator with accessories, Equipment for dressing/bandaging/suturing, Basic diagnostic equipment- Blood Pressure Apparatus, Stethoscope, Standing Weighing Scalar, thermometer, ECG Machine, Pulse Oximeter, Nebulizer with accessories, Dialyzer reprocessing unit, ACT machine, Cardiac Monitors	

Sr. No.	Department	Sub District Hospital		District Hospital	
		(E)	(D)	(E)	(D)
			Scalar, thermometer, ECG Machine, Pulse Oximeter, Nebulizer with accessories, Dialyzer reprocessing unit, ACT machine, Cardiac Monitors		
			Instruments: Resuscitation equipment including Laryngoscope, endotracheal tubes, suction equipment, xylocaine spray, oropharyngeal and nasopharyngeal airways, Ambu Bag Adult & Pediatric (neonatal if indicated) Magill's forceps	**Instruments:** Resuscitation equipment including Laryngoscope, endotracheal tubes, suction equipment, xylocaine spray, oropharyngeal and nasopharyngeal airways, Ambu Bag Adult & Pediatric (neonatal if indicated) Magill's forceps	
			Accessories/ Consumables: Ambu bags (adult & paediatrics), dressing material, syringes and needles of different sizes, ET & TT tube in each size, tracheostomy set, urinary catheters, IV cannulas, IV and BT sets, NG tubes with each size, gloves, goodle's airway, shoe covers, head caps, masks, gowns etc.	**Accessories/Consumables:** Ambu bags (adult & paediatrics), dressing material, syringes and needles of different sizes, ET & TT tube in each size, tracheostomy set, urinary catheters, IV cannulas, IV and BT sets, NG tubes with each size, gloves, goodle's airway, shoe covers, head caps, masks, gowns etc.	
			Furniture: Colour coded BMW Bins, intravenous, stool, bed side chairs, chair for nurses and doctors, medicine trolley	**Furniture:** Colour coded BMW Bins, intravenous, stool, bed side chairs, chair for nurses and doctors, medicine trolley	

Sr. No.	Department	Sub District Hospital		District Hospital	
		(E)	(D)	(E)	(D)
39	**Radiology Services**	**Equipment:**X Ray 300 mA, 100 M.A. X-ray machine (Mobile), Dental X-ray machine (Linked with Dental Chair), Colour Doppler Ultrasound machine with 4 probes: Abdomen, Paediatric, Soft Parts and Intra-cavitary, Ultra-Sonogram (Obs&Gyne), ECG machine.	NCV system, EMG machine, VEP machine.	**Equipment:**, X Ray 300 mA, 100 M.A. X-ray machine (Mobile), C arm with accessories*, Dental X-ray machine (Linked with Dental Department), ECG machine, Colour Doppler Ultrasound machine with 4 probes: Abdomen, Paediatric, Soft Parts and Intra-cavitary, Ultra-Sonogram (Obs&Gyne). Portable ultrasound, C.T. Scan Multi slice (64 SLICES)**, Mammography Unit***, NCV machine****, EMG machine*****, VEP machine******	500 M.A. X-ray machine, C arm with accessories, ECHO machine, MRI 1.5 Tesla, EEG machine,
40	**PMR Diagnostics**		NCV system, EMG machine, VEP machine.	NCV machine****, EMG machine*****, VEP machine******	Auditory Brainstem Response machine.
41	**LDR Complex**	**Equipment:** Labour bed, sphygmomanometer, glucometer, foetal doppler, CTG machine, thermometer, laryngoscope with 5 blades (LED, curved & straight for adult and paediatric each size), suction machine, examination light, open care radiant warmer, vacuum extractors, pulse oximeter.		**Equipment:** Labour bed, sphygmomanometer, glucometer, foetal doppler, CTG machine, thermometer, laryngoscope with 5 blades (LED, curved & straight for adult and paediatric each size), suction machine, examination light, open care radiant warmer, vacuum extractors, pulse oximeter.	
		Instruments: Magill's forceps, Mayo scissors, artery forceps, sponge holders, normal delivery kit, episiotomy kit, forceps delivery kit, craniotomy kit		**Instruments:** Magill's forceps, Mayo scissors, artery forceps, sponge holders, normal delivery kit, episiotomy kit, forceps delivery kit, craniotomy kit	
		Accessories/Consumables: Ambu bag (adults and paediatrics), dressing material, syringes and needles of different sizes, ET & TT tube in each size, tracheostomy set, urinary catheters, IV cannulas, IV and BT sets, NG tubes with each size, gloves, goodle's airway, shoe covers, head caps, masks, gowns etc.		**Accessories/Consumables:** Ambu bag (adults and paediatrics), dressing material, syringes and needles of different sizes, ET & TT tube in each size, tracheostomy set, urinary catheters, IV cannulas, IV and BT sets, NG tubes with each size, gloves, goodle's airway, shoe covers, head caps, masks, gowns etc.	
		Furniture: Colour coded BMW bins, intravenous stand, stool, cardiac tables, crash cart with emergency medicines		**Furniture:** Colour coded BMW bins, intravenous stand, stool, cardiac tables, crash cart with emergency medicines	

Sr. No.	Department	Sub District Hospital		District Hospital	
		(E)	(D)	(E)	(D)
42	**IPD (Wards)**	**Equipment:** Beds, bed side locker/trolley, thermometer, SpO_2 monitor, sphygmomanometer digital), crash cart with multipara monitor, Nebulizer, Laryngoscopes (LED) both straight and curved for adults and pediatrics (for each size), torch		**Equipment:** Beds, bed side locker/trolley, thermometer, SpO_2 monitor, sphygmomanometer digital), crash cart with multipara monitor, Nebulizer, Laryngoscopes (LED) both straight and curved for adults and pediatrics (for each size), torch	
		Instruments: Magill's forceps		**Instruments:** Magill's forceps	
		Accessories/Consumables: Ambu bags (adult & paediatrics), dressing material, syringes and needles of different sizes, ET & TT tube in each size, tracheostomy set, urinary catheters, IV cannulas, IV and BT sets, NG tubes with each size, gloves, goodle's airway, shoe covers, head caps, masks, gowns etc.		**Accessories/Consumables:** Ambu bags (adult & paediatrics), dressing material, syringes and needles of different sizes, ET & TT tube in each size, tracheostomy set, urinary catheters, IV cannulas, IV and BT sets, NG tubes with each size, gloves, goodle's airway, shoe covers, head caps, masks, gowns etc.	
		Furniture: Colour coded BMW Bins, intravenous, stool, bed side chairs, chair for nurses and doctors, medicine trolley		**Furniture:** Colour coded BMW Bins, intravenous, stool, bed side chairs, chair for nurses and doctors, medicine trolley	
43	**Postmortem**	**Equipment:** Beds, bed side locker/trolley, thermometer, SpO_2 monitor, sphygmomanometer digital), crash cart with multipara monitor, Nebulizer, Laryngoscopes (LED) both straight and curved for adults and pediatrics (for each size), torch		**Equipment:** Mortuary table (Stainless steel)*, Weighing machines (Organs), Measuring glasses (liquids), Spot lights **Instrument:** P.M. Equipment (list) **Accessories:** Aprons*, PM gloves (Pairs)*, rubber sheets*, Lens	
44	**Physiotherapy**	Shoulder Wheel, Wall ladder finger Exerciser, Finger Exerciser web, Shoulder Pulley, Walking aid for training – Adjustable Walker, Reciprocal walker, Exercise Couch, pillow, towel, Floor patterns may be designed having alternate patterns different colour tiles (1 feet X 1 feet) so to help in teaching gait pattern/visual feedback for neurological impaired geriatric patients, One wheelchair, Exercise Charts for teaching basic exercise for neck, back, shoulder, knee joint etc, Chart for showing positioning, lifting, and		Shoulder Wheel, Wall ladder finger Exerciser, Finger Exerciser web, Shoulder Pulley, Walking aid for training – Adjustable Walker, Reciprocal walker, Exercise Coucdih, pillow, towel, Floor patterns may be designed having alternate patterns different colour tiles (1 feet X 1 feet) so to help in teaching gait pattern/visual feedback for neurological impaired geriatric patients, One wheelchair, Exercise Charts for teaching basic exercise for neck, back, shoulder, knee joint etc, Chart for showing positioning, lifting, and carrying	

Sr. No.	Department	Sub District Hospital		District Hospital	
		(E)	(D)	(E)	(D)
		carrying technique for elderly, Spiro meter with disposable mouthpiece for those patients who need to perform breathing exercise multiple times in a day (Diagnosed cases of chronic bronchitis, emphysema, cystic fibrosis), Lower & upper extremity cycle/basic ergo meter, Ultrasound therapy, TENS, Interferential therapy/ electrotherapy unit		technique for elderly, Spiro meter with disposable mouthpiece for those patients who need to perform breathing exercise multiple times in a day (Diagnosed cases of chronic bronchitis, emphysema, cystic fibrosis), Lower & upper extremity cycle/ basic ergo meter, Ultrasound therapy, TENS, Interferential therapy/electrotherapy unit	

OPD Services

 # Desirable at SDH and 50 Bedded DH and essential from 100 Bedded DH onwards

##Desirable at 200 and 300 Bedded DH and essential from 400 Bedded DH Onwards

Desirable from 200 bedded DH onwards.

Desiarble from 300 bedded DH onwards.

Radiology Equipment:

***C arm with accessories:** Desirable at 200 bedded DH and Essential at 300 bedded DH onwards*

***C.T. Scan Multi slice (64 SLICES):** Desirable at 50 & 100 bedded DH and Essential at 200 bedded DH onwards*

****Mammography Unit**: Desirable at 200 bedded DH and Essential at 300 bedded DH onwards*

PMR Equipment:

*****NCV machine**: Desirable at 100 & 200 bedded DH and Essential at 300 bedded DH onwards*

******EMG machine**: Desirable at 100 & 200 bedded DH and Essential at 300 bedded DH onwards*

*******VEP machine**: Desirable at 100 & 200 bedded DH and Essential at 300 bedded DH onwards*

ANNEXURE 11

Cleaning Protocols at SDH & DH (Public Health Facilities)

Routine cleaning is of utmost importance in every area of a health care facility. Certain chemicals are recommended for cleaning, particularly in moderate and high-risk areas, but such chemicals keep on changing based on scientific updates. It needs to be understood that since none of the chemicals used on walls and floors provide 100% safety from various microorganisms and spores. So, behaviour of staff towards routine cleaning and adherence to infection prevention protocols is the most important action which needs to be followed by health care staff and workforce.

Cleaning frequency, level of cleaning/disinfection and evaluation/auditing frequency according to the type of functional area risk category Functional Area Risk Category	Frequency of cleaning	Level of cleaning/ disinfection (As per Spaulding's Classification)	Method of cleaning/ disinfection	Evaluation/ auditing frequency
High risk areas • Operation Theatre Complex • Labour Room Complex • Emergency • Laboratory • Blood Storage Unit	**Floors, walls and surfaces:** Routine cleaning once in two hours with aldehyde free high-level disinfectant (HLD) like 70% isopropyl alcohol **Spot cleaning**: As required OT table, labour beds and other such surfaces to be cleaned and disinfected after every use **Intensive deep cleaning**: Weekly/ Holidays	Cleaning and intermediate level disinfection	Routine cleaning with soap. detergent plus disinfection with aldehyde free high-level disinfectant (HLD) like 70% isopropyl alcohol **Spot cleaning**: As required after disinfection with 0.5% chlorine solution All equipment and instruments to be disinfected and cleaned with aldehyde free high-level disinfectant like peracetic acid and autoclaving accept heat sensitive equipment & instruments	Weekly or monthly if cleanliness of high standards is maintained as certified by Officer In-Charge Sanitation and Infection Control Team
Moderate risk areas • Consultation Room • Examination Room • Counselling Room/ Adolescent Friendly Health Clinic • Radiology Room • Nursing Station • Inpatient wards/ Nutritional Rehabilitation Centre (NRC) • Toilets	**Floors, walls and surfaces:** Routine cleaning once in four hours with aldehyde free high-level disinfectant (HLD) like 70% isopropyl alcohol **Spot cleaning**: As required	Cleaning and low-level disinfection	Routine cleaning with soap. detergent plus disinfection with aldehyde free high-level disinfectant (HLD) like 70% isopropyl alcohol	Once a month or once in two months if cleanliness of high standards is maintained as certified by Officer In-Charge Sanitation and Infection Control Team

Cleaning frequency, level of cleaning/disinfection and evaluation/auditing frequency according to the type of functional area risk category Functional Area Risk Category	Frequency of cleaning	Level of cleaning/ disinfection (As per Spaulding's Classification)	Method of cleaning/ disinfection	Evaluation/ auditing frequency
	Intensive deep cleaning: Weekly/ Holidays		**Spot cleaning**: As required after disinfection with 0.5% chlorine solution. All equipment and instruments to be disinfected and cleaned with aldehyde free high-level disinfectant like peracetic acid and autoclaving accept heat sensitive equipment & instruments	
Low risk areas • Corridors • Lifts • Waiting halls/Waiting rooms/Registration area • Stores (Medicine store, Linen store) • Pharmacy • Kitchen & Pantry • Cafeteria	**Floors, walls and surfaces:** Routine cleaning for areas working round the clock at least once in a shift or in areas having general shift at least twice in the shift with water and Soap/Quaternary Ammonium Compound **Spot cleaning**: As required **Intensive deep cleaning**: Weekly/ Holidays	Only cleaning	Routine physical removal of soil, dust or foreign material followed by cleaning with water and soap/quaternary ammonium compound **Spot cleaning**: As required after disinfection with 0.5% chlorine solution	Once in three months

Note: For infective spills like blood, it should be first treated with 0.5% hypochlorite solution.

General cleaning practices for all health care settings

Before cleaning

- Check for additional (isolation) precautions signs
- Follow precautions as indicated
- Remove clutter before cleaning
- Follow manufacturer's instructions for proper dilution and contact time for cleaning and disinfecting solutions

- Gather materials required for cleaning before entering the room
- Visibly check and ensure all cleaning equipment itself is clean
- Clean hands before entering the room
- Prepare chemical dilutions and put on gloves before beginning cleaning.

During cleaning

- Progress from the least soiled areas to the most soiled areas and from high surfaces to low surfaces
- Remove gross soil (visible to naked eye) prior to cleaning and disinfection
- Minimise turbulence to prevent the dispersion of dust that may contain micro-organisms
- Never shake mops
- Use dust control mop prior to wet/damp mop. Do not use brooms
- Wash the mop under running water before doing wet mopping
- Do not '*double-dip*' mops (dip the mop only once in the cleaning solution, as dipping it multiple times may re contaminate it)
- An area of 120 square feet to be mopped before re-dipping the mop in the solution
- Cleaning solution to be changed after cleaning an area of 240 square feet (This does not apply to critical areas like OT and ICU)
- Change more frequently in heavily contaminated areas, when visibly soiled and immediately after cleaning blood and body fluid spills
- Be alert for needles and other sharp objects. Safely handle and dispose sharps into puncture proof container. Report incident to supervisor
- Collect waste, handle plastic bags from the top (do not compress bags with hands)
- Clean hands on leaving the room.

After cleaning

- Do not overstock rooms
- Tools used for cleaning and disinfecting should be cleaned and dried between uses
- Launder mop heads daily
- All washed mop heads should be dried thoroughly before re-use
- Clean sanitation cart and carts used to transport biomedical waste daily

ANNEXURE 12

Surgical Safety Checklist in the Operation Theatre

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

ANNEXURE 13

Service Area-Wise Protocol

Service area (Please mark): (OPD/Sample collection area/Clinical/Central Lab/Minor OT/Major OT/ICU/HDU/LDR Complex/NRC/Dialysis Unit/Emergency/DEIC/SNCU/CLMC/NICU/PICU/Blood bank/Radiology area/Mortuary/IPD area/any other etc.)

Room no:

Timings:

Staff in the room:

Designation	Name
Specialist	
MO	
Nurses	
Other health care staff	
Cleaning staff	

Activities (Key services provided)

1.
2.
3.

List of Equipment and its maintainence

S. no.	Equipment/ Material	Quantity	Frequency of utilisation	Cleaning material & frequency	Responsible person

Toll-free number of BMMP:

Nodal person at the facility with contact details:

Records and Registers

S. No	Name of the Register	Key information recorded in the Register	Frequency of updating	Person responsible	Designation of authority responsible for verification of Register

Performance Indicators *(Number/type of services/number of patients served/numbers of procedures undertaken/number of data recorded/medicines dispensed/diagnostics conducted etc or any key services being provided in the service area to be indicated below and their performance chart comparing current and previous month/year may also be displayed):*

1.
2.

Performance

Periodicity: → / Indicators ↓	Cumulative from April to March		1st quarter (April to June)		2nd quarter (July to September)		3rd quarter (October to December		4thquarter (January to March)	
	Previous Year	Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year	Current Year

Performance Bar Graph:

Cleaning Protocols

Category of Service Area (Please tick)	High Risk	Moderate Risk	Low Risk	Remarks
Availability of colour coded Bins	Not available	Partially available	Available	
Adherence to Infecton Prevention Control (IPC) Protocols	Poor	Needs improvement	Good/Satisfactory	
Segregation of Biomedical Waste	Not practiced	Partially practiced	Fully adhered	
Frequency of Biomedical Disposal (Please indicate in hours)				
Frequency of cleaning (Please indicate in hours)				
Date and Time of Last Cleaning				
Date & Time of supervision				
Name & Signature of Supervisor				

ANNEXURE 14

Checklist for Daily Rounds

S. No.	Observe/Monitor and guide Date:	1	2	3	4	5	6	7	8	9	10
1.	Display of duty roster and presence of staff accordingly in their respective duty station										
2.	Staff is in proper uniform & maintains decorum										
3.	Department/service area-wise protocols and performance displayed in respective service areas										
4.	Clinical practices as per the SoPs in each service area										
5.	Privacy during patients' examination is maintained in all service areas										
6.	Wards' readiness for doctors' round										
7.	Infection control protocols are adhered										
8.	Biomedical waste is segregated properly										
9.	Adherence to handing over and taking over protocols is done in all critical areas										
10.	Records of IPD are maintained and complete in each service area										
11.	Availability of stock required in every service area (drugs, gloves, mask, injection etc.)										
12.	Necessary equipment is available and functional in every service area										
13.	Sterilisation of the instruments is as per protocols in:										
	13.1 Operation theatre										
	13.2 Labour room										
	13.3 Casualty										
	13.4 Any other department										
14.	Only sterilised/autoclaved instruments are used in service areas										
15.	Records of sterilisation are maintained										
16.	Cleanliness and checking of the cleaning checklist for completion in the below mentioned areas (OPD, wards, labour room, OT, lab. & diagnostic rooms, injection & dressing room, toilets etc.) is as per cleaning protocols										
17.	Presence of junk or unnecessary item in service areas										
18.	Availability of linen and quality of laundry services										
19.	Availability of food to patients is on time, it is hot and fresh and quality is good										
20.	Requisitions for special diet are sent to dietician/kitchen and is served accordingly										
21.	Visiting times are maintained										
22.	Quality of services maintained by nursing and other junior staff										

Round taken by (Please tick and sign):

1. Medical Superintendent/Health Facility In-Charge:
2. Deputy Medical Superintendent/Hospital Manager:
3. Nursing Superintendent/Matron/Nursing In-Charge:
4. Any Other

ANNEXURE 15

List of Contributors

A. Ministry of Health and Family Welfare

S No	Name	Designation
1.	Mr. Rajesh Bhushan	Secretary
2.	Ms. Preeti Sudan	Former Secretary
3.	Mr. Vikas Sheel	Additional Secretary & Mission Director, NHM
4.	Mr. Manoj Jhalani	Former Additional Secretary & Mission Director, NHM
5.	Ms. Vandana Gurnani	Former Additional Secretary & Mission Director, NHM
6.	Mr. Vishal Chauhan	Joint Secretary, Policy
7.	Dr. Harmeet Singh	Joint Secretary, Urban Health
8.	Ms. Preeti Pant	Former Joint Secretary, Urban Health
9.	Dr. Sachin Mittal	Director – NHM
10.	Dr. Neha Garg	Director – NHM
11.	Dr. Harsh Mangla	Director – NHM
12.	Dr. N. Yuvaraj	Former Director – NHM

B. NITI Aayog

S No	Name	Designation
1.	Dr. K Madan Gopal	Senior Consultant (Health)

C. Committee Members (As notified)

1. Main Committee

1. Dr. Manohar Agnani, Joint Secretary- Policy - **Chairman**
2. Dr. Anil Kumar, Addl. DDG, DGHS-Co - **Co-chair**
3. Prof. Jayanta K. Das, Director, NIHFW
4. Dr. Rajani Ved, ED, NHSRC
5. Dr. Rajesh Kumar, Prof & Head of Public Health, PGIMER, Chandigarh
6. Dr. Pankaj Arora, Asst. Prof Dept. of Hospital Administration, PGIMER, Chandigarh
7. Dr. Yogesh Jain, JSS
8. Dr. Suresh Mohammad, World Bank
9. Dr. B. S Arora, Ex DGFW, Advisor NHM, UP
10. Special Secretary, DHS, Orissa
11. Director Public Health - Tamil Nadu
12. Dr. Satish Pawar (Additional Mission Director) - Maharashtra
13. CMO - Rajasthan (State to nominate)
14. CMO - Uttar Pradesh (State to nominate)
15. Dr. J. N. Srivastava, Advisor, Quality Division, NHSRC
16. Dr. S. B Sinha, Advisor, NHSRC

17. Ms. Mona Gupta, Advisor, NHSRC
18. Dr. Mayank Sharma, Consultant NHM
19. Dr. Himanshu Bhushan, Advisor, PHA division, NHSRC - **Member Secretary**

2. Sub-Committee - Physical Infrastructure

1. Dr. Anil Kumar, Addl. DDG, DGHS, MoHFW
2. Dr. Rajesh Kumar, Prof & Head of Public Health PGIMER, Chandigarh
3. Dr. Srikumar Venkataraman- Assistant Professor of Physical Medicine & Rehabilitation, AIIMS Delhi
4. Dr. J. N. Srivastava, Advisor, Quality Division NHSRC
5. Mr. Anurag Salwan, Head (ID) & VP (O), HITES
6. Mr. Rajiv Kanaujia, Sr. Architect Head of CDN, MoHFW
7. Mr. Mukesh Bajpai, Sr. Architect, CDB, MoHFW
8. Dr. Himanshu Bhushan, Advisor, PHA division, NHSRC - **Member Secretary**
9. Mr. Rajneesh Upmanyu Sr. Consultant Infrastructure MoHFW
10. Dr. Krushna Sirmanwar, Consultant NHM, MoHFW

3. Sub-Committee – Human Resource for Health

1. Dr. Mohd. Shaukat, Advisor NCD
2. Dr. Nobhojit Roy, Advisor PHP, NHSRC
3. WHO representative
4. Nodal person HRM- MP
5. Ms. Sumitha Chalil, Sr. Consultant NHM
6. Dr. Rakshita Khanijou, Consultant NHM
7. Ms. Mona Gupta, Advisor policy and planning- NHSRC - **Member Secretary**

4. Sub-Committee - Urban Health facilities

1. Dr. Basab Gupta, DC NUHM - **Chair**
2. Dr. Ranjana Garg, AC NUHM
3. Dr. Chandrakant Lahariya, WHO representative
4. MD-NHM West Bengal or representative
5. Municipal Corporations Mumbai- representative
6. Municipal Corporations Chennai- representative
7. Dr. Adil Shafie, Sr. Consultant NUHM
8. Dr. Himanshu Bhushan, Advisor PHA - **Member Secretary**

5. Sub-Committee - Equipment list

1. Dr. Sandhya Kabra - Additional Director NCDC - **Chair**
2. HLL - representative
3. Kerala Medical Service Corporation-rep
4. Odisha Medical Service Corporation-rep
5. Mr. Mandar Randive, Consultant, NHM
6. Dr. S.B. Sinha, Advisor NHSRC - **Member Secretary**

6. Sub-Committee - Essential drug List

1. Dr. V.S. Salhotra, Add. DDG (RNTCP) - **Chair**
2. DCGI- Representative
3. Dr. C. D Tripathi, Director Professor, Department of Pharmacology, Vardhman Mahavir Medical College, New Delhi
4. Dr. Anil Gurtoo, Director Professor, Department of Medicine, Lady Hardinge Medical College, New Delhi
5. Nodal Person- Rajasthan Medical service Corporation
6. Nodal Person- Madhya Pradesh Medical service Corporation
7. Nodal Person- Tamil Nadu Medical Service Corporation
8. Nominee Kerala Medical Service Corporation
9. Dr. Rakshita Khanijou, NHM Consultant
10. Dr. J.N. Srivastava- Advisor NHSRC - **Member Secretary**

D. Other Invited Members

1. MoHFW Representatives

S No	Name	Designation
1.	Dr. C. Das	DADG (NCD), DGHS
2.	Dr. Manas P. Roy	DADG, DGHS
3.	Dr. Rathi Balachandran	ADG
4.	Dr. Gowri N Sengupta	ADG, DGHS
5.	Dr. L. Swasticharan	Addl. DDG
6.	Dr. Raghuram Rao	DD (TB)
7.	Dr. Neeraj Dhingra	Add. Dir, NVBDCP
8.	Dr. Arun K Bansal	Add. Dir, NVBDCP
9.	Dr. Sandhya Kabra	Add. Dir, NVHCP, NCDC
10.	Dr. Indu Grewal	CMO (NFSG), DGHS
11.	Dr. Sushil Vimal	DC (NUHM)
12.	Dr. Sumita Ghosh	AC In Charge (Child Health, RBSK, AH, CAC & AD)
13.	Dr. Sila Deb	AC (CH & I/C - Nutrition)
14.	Dr. Jyoti Rawat	AC (NUHM)
15.	Dr. Dinesh Baswal	Former DC (MH) IC
16.	Dr. Sandhya Bhullar	Former Dir, NHM-2
17.	Mr. S. Nayak	Dy. Secretary
18.	Mr. VK Bhalla	US (NHM)
19.	Ms. Chandni Chandran	Asstt. Sec
20.	Mr. Sanjeev Gupta	FC, NHM
21.	Dr. Renu Srivastava	Advisor, MNCH
22.	Dr. Bhumika Talwar	Lead Consultant
23.	Dr. Vinita Srivastava	National senior consultant, Blood cell, NHM
24.	Dr. Kumkum Marwah	Sr. Consultant (Nutrition), DGHS

S No	Name	Designation
25.	Mr. Vikas Sheemar	Sr. Consultant
26.	Mr. Mohd. Kamil	Sr. Consultant
27.	Dr. Shikha Bansal	Sr. Consultant
28.	Dr. Nisha Kadyan	Sr. Consultant, NUHM
29.	Er. Dinesh Kumar	Sr. Consultant
30.	Dr. Richa Saxena	Sr. Consultant
31.	Dr. Narendra Goswami	Sr. Consultant
32.	Dr. Sarita Sinha	Sr. Consultant, HMIS
33.	Dr. Shraddha Masih	Sr. Consultant, NHM
34.	Dr. Abhiskek Gupta	Sr. Consultant, NUHM
35.	Dr. Vishal Kataria	Sr. Consultant
36.	Dr. Kapil Joshi	Sr Consultant CH
37.	Dr. Disha Agarwal	Senior Consultant, Immunization
38.	Dr. Sudipta Basa	Sr. Consultant
39.	Dr. Pankaj Agarwal	Consultant, Immunization Div.
40.	Dr. Akriti Mehta	Consultant NOHP
41.	Dr. Gaurav Chauhan	Consultant, PHPP
42.	Dr. Ashish Bhat	Consultant, NHM
43.	Dr. Sneha Mutreja	Consultant, NHM
44.	Dr. Deepak Kumar	Consultant Adolescent Health
45.	Dr. Pooja Gupta	Consultant
46.	Dr. Prayas Joshi	Consultant, NUHM
47.	Ms. Seema Pati	Consultant, NUHM
48.	Dr. Apurva Kohli	Jr. Consultant
49.	Mr. Maisnam Niresh	Tech- Consultant
50.	Dr. Asif Shafie	Tech- Consultant
51.	Dr. Nadeem Shaikh	Intern
52.	Dr. Prashant	Intern
53.	Mr. Shahid Ali Warsi	Intern, NHM
54.	Mr. Suresh Kumar Singh	SSO

2. State representatives

S No	Name	Designation	State 3
1.	Dr. Bishnu Prasad Mahapatra	Add. Dir (HRH)	Odisha
2.	Dr. PK Srinivas	Advisor, NUHM, NHM	Karnataka
3.	Dr. Archana Mishra	DD, MH, NHM	Madhya Pradesh
4.	Dr. Mangala Gomare	Dy EHO-FWMCH/NUHM	Mumbai, Maharashtra
5.	Dr. Sanjeev Tak	CMHO, Medical & Health Dept	Udaipur, Rajasthan
6.	Dr. V.B. Singh	CMO, Medical & Health Dept	Varanasi, UP
7.	Mr. Mrunal Das	HMD, NHM	Odisha
8.	Dr. KL Sahu	Retd. DHS	Bhopal, MP

S No	Name	Designation	State 3
9.	Dr. Bhavana Sharma	Prof, Head, Ophthalmology, AIIMS	Bhopal
10.	Dr. RK Singh	Specialist, Cardiologist	Bhopal
11.	Dr. Kamlesh Deopujari	Specialist MS (Ortho)	Bhopal
12.	Dr. Mrs. Priti Chaturvedi	Anaesthetist	Bhopal
13.	Dr. Mrs. Nirmala Dubey	Sr. dental Surgeon	Bhopal
14.	Dr. B.D Pawar	Sr. IPHS Consultant, NHM	PHD, Maharashtra
15.	Dr. K. Kolanda Swamy	DPH & PM	Chennai
16.	Dr. V. Prakash	Health Officer, Dir of PH	Chennai
17.	Dr. B. Viduthalai Virumbi	Medical Officer, DPH&PM,	SPMU Chennai
18.	Dr. Rakesh Shrivastava	Medical Specialist	Bhopal
19.	Mr. Sanjay Nema	Consultant civil, NHM	MP
20.	Dr. John	Add. Prof Surgery	Bhopal
21.	Dr. Sharma	Asso. Prof.	Bhopal
22.	Dr. Mahesh Maheshwaran	Asso. Prof. Paediatrics	Bhopal
23.	Dr. Surendra K. Shrivastava	Associate Prof. Surgery	GMC, Bhopal
24.	Dr. Kamlesh Jain	Associate Professor cum SNO, DHS	Chhattisgarh
25.	Dr. Gauvav Khandelwal	Asst. Prof. Cardiology	Bhopal
26.	Dr. Nitin Pandya	Asst. Prof. Derma	Bhopal
27.	Dr. Rajesh	Asst. Prof. Medicine	Bhopal
28.	Dr. Mahendra Attani	Asst. Prof. Nephrology	Bhopal
29.	Dr. Saurabh Jain	Asst. Prof. Urology	Bhopal
30.	Dr. Madhur Gupta	Technical officer, Pharmaceutical	WHO, New Delhi
31.	Mr. Urya Nag	SPM	Chhattisgarh
32.	Dr. Sonia	SPM, NHM	Punjab
33.	Mr. Adait kumar Pradhan	SPM, NHM	Odisha
34.	Dr. Sudha Gupta	SPM, NHM	UP
35.	Mr. Sukanta Kumar Mishra	Program Manager, NHM	Odisha
36.	Ms. K. Priya	SUHM, NHM	Tamil Nadu
37.	Mr. Navdeep Gautam	SNO- NUHM, NHM	Punjab
38.	Mr. V Ramaswamy	Executive engineer	Tamil Nadu service corporation
39.	Mr. K Anandan	Senior manager	Tamil Nadu service corporation
40.	Dr. M Sharmila	General manager	Tamil Nadu service corporation
41.	Dr. D S Nagesh	Scientist G	SCTIMST Trivandrum
42.	Mr. A L Biran Chandra	SM HITES	HITES, Noida
43	Dr. Dileep Kumar	General Manager	Kerela Medical Service Corporation
44.	Mr. Prakash Mallick	Biomedical Engineer	NHM Odisha
45.	Dr. Ritesh Tanwar	DD, Ayushman Bharat	DGHS, MP
46.	Dr. Himani Yadav	DD, Child health, RBSK, Nutrition	DGHS, MP

3. Institutional Experts

S No	Name	Designation	Organisation
1.	Mr. Bijender Singh	EA	Health
2.	Dr. Jyoti	DD	IDSP, NCDC
3.	Dr. B.S. Garg	Director & Prof. of Community Medicine	MGIMS, Sewagram
4.	Dr. Anu George	APD, India	NACO
5.	Dr. Vinay Garg	DD	NCDC
6.	Mr. J Chaudhary	AMD, WB	H&FW, Govt Of WB
7.	Mr. Prem Prakash	DGM	HITES, Noida
8.	Dr. Anubhav Srivastav	Asstt. Director	NCDC
9.	Dr. Manish Chaturvedi	Prof.	NIHFW
10.	Dr. Rajesh Kumar	Prof. & HOD, SPH	PGIMER, Chandigarh
11.	Dr. C M Singh	Professor	AIIMS Patna
12.	Dr. Rajesh Khadgawat	Professor, Department of Endocrinology & Metabolism	AIIMS, Delhi
13.	Dr. Ashish Pathas	Prof. Paediatric	RD Gardi Med. College, Ujjain
14.	Dr. Deepika Garg	Professor, ENT & HNS	MGIMS Sewagram, Maharashtra
15.	Dr. Rajib Das Gupta	Professor	JNU, New Delhi
16.	Dr. Mayank Dwivedi	Public Health Specialist & Lab advisor	CDC
17.	Dr. Suraj Singh	Associate Prof.	AIIMS, New Delhi
18.	Dr. Bhawna Gulati	Associate Professor	ASCI, HYD
19.	Dr. Tej Prakash Singh	Associate Professor, Dept of Emergency Medicine JPNATC	AIIMS, Delhi
20.	Dr. Ravikirti	Associate Prof.	AIIMS, Patna
21.	Dr. Rekha Singh	Associate Prof	AIIMS, Bhopal
22.	Dr. Vikas Gupta	Associate Prof.	AIIMS, Bhopal
23.	Dr. Abhir singh	Associate Prof.	AIIMS, Bhopal
24.	Dr. NP Singh	Asst. Prof. Surgery	AIIMS, Bhopal
25.	Dr. R R Bonde	Associate Prof.	EpMC
26.	Dr. Dhiraj Bhandari	Associate Prof & Intensivist	MGIMS, Maharashtra
27.	Dr. Arun Singh	HOD, Dept. of Neonatology	AIIMS, Jodhpur
28.	Dr. Priyanka Bhushan	Prof & Head, Public health Dentistry	ITS Dental College
29.	Lt Col (Dr.) Kundan Kumar	Dental officer	Base Hospital, Army Dental Corps
30.	Dr. R K Singh	HOD, Emergency Medicine Department	SGPGI, Lucknow
31.	Dr. Kirti Iyengar	NPO (RH)	UNFPA
32.	Dr. Dilip Singh Mairembam	NPO	WHO India
33.	Er. Dhirendra Chaudhary	Superintendent Engineer	CPWD, GOI
34.	Mr. Rohit	FC	NHM-Finance
35.	Dr. Vandana Kumar	Consultant	WHO India
36.	Dr. Sushant Agarwal	Consultant QI	ADB, NHSRC

4. NHSRC

S.No.	Name	Designation
1.	Maj Gen (Prof) Atul Kotwal	Executive Director
2.	Dr. M. A Balasubramanya	Advisor, CP-CPHC
3.	Dr. Ranjan K Choudhury	Advisor, HCT
4.	Ms. Sweta Roy	Lead Consultant
5.	Dr. Neha Dumka	Lead Consultant, KMD
6.	Dr. Deepika Sharma	Lead Consultant, QPS
7.	Mr. Sandeep Sharma	Lead Consultant, HCF
8.	Mr. Prasanth KS	Senior Consultant, PHA
9.	Dr. Smita Shrivastava	Senior Consultant, PHA
10.	Dr. Aashima Bhatnagar	Senior Consultant, PHA
11.	Mr Divya Prakash	Senior Consultant, HRH
12.	Ms. Vertika Agarwal	Senior Consultant, HCT
13.	Mr. Anjaney Shahi	Senior Consultant, HCT
14.	Mr. Padam Khanna	Senior Consultant, KMD
15.	Dr. Vinay Bothra	Former Sr. Consultant, PHA
16.	Mr. Ajit Kumar Singh	Former Sr. Consultant, PHA
17.	Mr. Mohd. Ameel	Former Sr. Consultant
18.	Dr. Parminder Gautam	Former Sr. Consultant, QPS
19.	Dr. Neha Jain	Former Sr. Consultant
20.	Dr. Rupendra Sahota	Former Sr. Consultant
21.	Dr. Kalpana Pawalia	Consultant, PHA
22.	Dr. Poonam	Consultant, PHA
23.	Dr. Ashutosh Kothari	Consultant, PHA
24.	Dr. Aditi Joshi	Consultant, PHA
25.	Dr. Nidhi Awasthi	Consultant, PHA
26.	Ms. Neelam Tirkey	Consultant, PHA
27.	Ms. Diksha	Consultant, PHA
28.	Ms. Vasudha Khanna	Legal Consultant, PHA
29.	Ms. Isha Sharma	Consultant, HRH
30.	Ms. Charu	Consultant, HCT
31.	Ms. Manisha Sharma	Consultant, HCT
32.	Dr. Arpita Agrawal	Consultant, QPS
33.	Mr. Gulam Rafey	Consultant, QPS
34.	Mr. Mohd. Shoeb Alam	Architect, New Delhi
35.	Mr. Sangramsinh Gaikwad	Architect, Maharashtra
36.	Ms. Ritu	Junior Consultant, HCT
37.	Mr. Hariom Tiwari	Short term Consultant, QPS
38.	Dr. Shuchi Soni	Former Consultant, PHA
39.	Ms. Shivangi Rai	Former Legal Consultant, PHA
40.	Dr. Gurinder Randhawa	Former Consultant, QPS

S.No.	Name	Designation
41.	Mr. PS Vigneshwaran	Former Consultant, HCT
42.	Dr. Yogita Kumar	Former Consultant, HCT
43.	Mr. Ajai Basil	Former Consultant, HCT
44.	Dr. Archana Pandey	Former Consultant, PHA
45.	Dr. Rashmi Wadhwa	Former Consultant, QPS
46.	Dr. Shifa Arora	Former Consultant, PHA
47.	Ms. Vasundhra Bharti	Former External Consultant, PHA
48.	Ms. Nasrain Nikhat Khan	Former External Consultant, QPS
49.	Dr. Bhupinder Singh	Former External Consultant, PHA
50.	Ms. Akshita Singh	Former External Consultant, PHA
51.	Dr. Sujeet Sinha	Former Short-term Consultant, QPS
52.	Ms. Shilpa Pawar	Former Short-term Consultant, QPS
53.	Ms. Ashu Ranga	Fellow, PHA
54.	Dr. Musarrat Siddiqui	Fellow, PHA
55.	Dr. Syeda Tahseen Kulsum	Fellow, PHA
56.	Dr. Isha Chalotra	Former Fellow PHA
57.	Dr. Ishita	Former Fellow PHA
58.	Mr. Pawan	Former Fellow HCT
59.	Ms. Purnima	Former Fellow HCT
60.	Dr. Kushagr Duggal	Former Fellow, PHA
61.	Dr. Diksha Dhupar	Former Fellow, PHA
62.	Dr. Deepak Bhagat	Former Fellow, PHA
63.	Dr. Charu Chandrika	Fellow, PHA
64.	Dr. Priya Goel	Fellow, PHA
65.	Dr. Zeba Bano	Fellow, PHA
66.	Ms. Manju Bisht	Secretarial Assistant
67.	Mr. Ravi Kumar	Office Assistant
68.	Mr. Prakash Chemjung	Office Assistant

Ministry of Health and Family Welfare
Government of India