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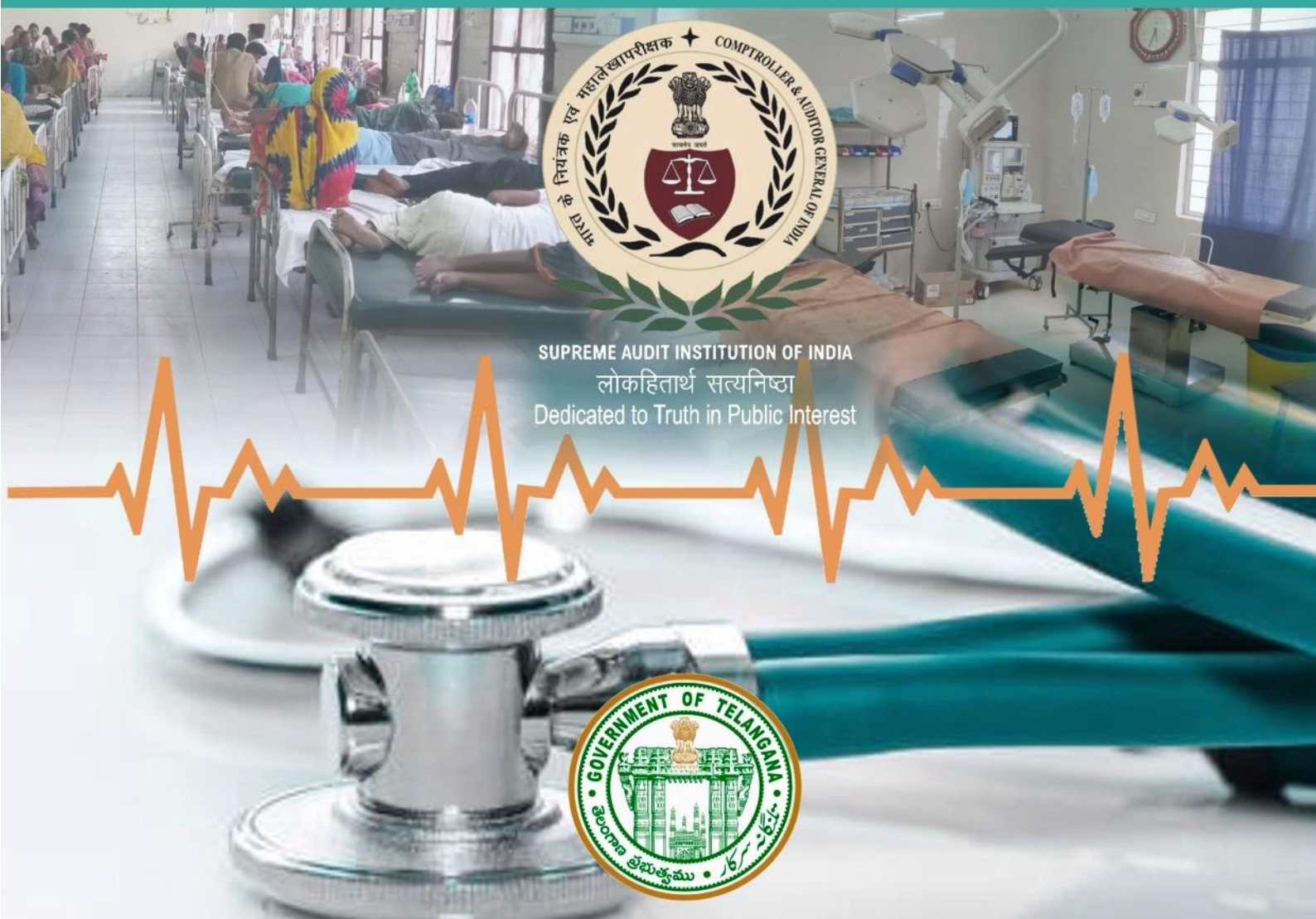
Report of the Comptroller and Auditor General of India

Performance Audit on

Public Health Infrastructure and Management of Health Services in Telangana State

for the year ended March 2022



Government of Telangana

Report No. 4 of 2024

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Preface

This Report of the Comptroller and Auditor General of India for the year ending 31 March 2022 has been prepared for submission to the Governor of Telangana under Article 151 of the Constitution of India, for being laid before the Legislature of the State.

The Report contains significant results of the Performance Audit on ***Public Health Infrastructure and Management of Health Services in Telangana State****, covering the period 2016-17 to 2021-22.*

The instances mentioned in this Report are among those which came to notice during the course of test audit. Instances relating to the period subsequent to 2021-22 have also been included wherever necessary.

The audit has been conducted in conformity with the Auditing Standards issued by the Comptroller and Auditor General of India.

Audit wishes to acknowledge the cooperation received from Health, Medical & Family Welfare Department at each stage of the Audit process.

Executive Summary

Health, Medical & Family Welfare (HM&FW) Department is one of the vital Departments of the State Government and is responsible for providing essential healthcare services to the people of Telangana. The Secretary (HM&FW) is the Head of the Department at the Government Level. The Secretary is entrusted with the responsibility of providing directions and coordinating the general functioning of the Department within the Operational Guidelines of Government policies and ensuring the effective delivery of its mandate.

The Performance Audit was carried out with a view to assess the adequacy of funding for health care, the availability and management of healthcare infrastructure and the availability of Drugs, Medicine, Equipment and other consumables. The Performance Audit also sought to examine the availability of necessary Human Resources at all levels, e.g., Doctors, Nurses, Paramedics etc., the implementation of various schemes of the Government of India including the assistance/grants/equipment received by the States and the State spending on Health and improvement of wellbeing conditions of people as per Sustainable Development Goal 3.

Audit was conducted covering the period from 2016-17 to 2021-22 through a test-check of records in the Offices of the Secretary, Department of Health, Medical & Family Welfare; Managing Director, Telangana State Medical Services & Infrastructure Development Corporation; Commissioner, HM&FW and Mission Director, National Health Mission; Director of Public Health (DOPH); Director of Medical Education (DME); Commmissioner, Telangana Vaidya Vidhana Parishad, Director of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy; District Hospitals (DHs) in the State; other test checked healthcare facilities included Sub Centres (SCs), Primary Health Centres (PHCs), Urban Primary Health Centres (UPHCs), Community Health Centres (CHCs), Area Hospitals (AHs), Super Specialty Hospitals. Audit also covered Central Medicine Stores (CMSs); Hospitals of AYUSH; Pharmacies; Dispensaries and Government Medical Colleges with attached Teaching Hospitals in the test checked three Districts of Hyderabad, Mahabubnagar and Warangal. A Patients' Survey, a Doctors' Survey and a Joint Physical Verification of Health Institutions were undertaken during the course of the audit.

Significant audit findings, conclusions and recommendations of the Performance Audit are given below:

Chapter 2 – Human Resources

Department had not furnished Human Resources policy for the appointment of Specialist Doctors, Medical Officers and other supporting Paramedical staff to meet the requirement of the healthcare facilities according to the IPHS norms though it was stated to had been prepared.

Department of Health and Family Welfare had not maintained a centralised database of sanctioned strength, actual personnel in positions and District-wise deployment data of Doctors, Nurses and Other Paramedical Staff in healthcare facilities across the state.

As per the norms of WHO, a Doctor is to be available for every 1,000 persons. The availability of Doctors showed an increasing trend from 2017-18 to 2021-22 and the ratio was 1:881 in the State of Telangana which compares favourably with WHO norms.

There were huge gaps between sanctioned posts and the actual position of healthcare staff in the health facilities with the overall vacancies being 45 *per cent*.

Out of six HODs under the HM&FW Department, the highest vacancy was in Director of Medical Education (56 *per cent*) and the lowest was in Drugs Control Administration (34 *per cent*).

Acute shortages of teaching staff were observed in nine Medical Colleges with overall vacancies in the cadre of Associate Professors (48 *per cent*) and Assistant Professors/Tutors (40 *per cent*). Vacancies in the positions of Associate Professors and Assistant Professors have an impact on the quality of education provided to medical students.

Recommendations

- ***State Government should formulate a Human Resource Policy with emphasis on short, medium and long term goals to address the shortage of Human Resources in various cadres.***
- ***State Government should review the availability of manpower in all the health institutions and ensure availability of staff as per the IPHS norms.***
- ***Government should develop a Human Resource Management System (HRMS) to know the deployment of staff in all health facilities across all HODs on real time basis.***

Chapter 3 – Healthcare Services

Fixed Day Health Services (FDHS) program, which aimed to provide comprehensive healthcare services to rural communities, were not being extended to the rural poor as envisaged. The 3206 SCs were converted as Health Wellness Centres (HWCs) and were renamed as Palle Dawakhanas. Of these, Medical Officers were not available in 122 Palle Dawakhanas. Non-provision of some Out-Patient Department Services was observed in the DHs, AH, CHCs and PHCs.

The performance of the State with regard to maternity services like ANC received in the first trimester and consumption of Iron Folic Acid tablets has improved in 2019-20 as compared to 2015-16, while it had not shown any improvement in respect of pregnant women receiving at least four ANC. Patient Satisfaction Survey was not conducted in majority of the test checked Health institutions.

In all the test checked health institutions MNJ Institute of Oncology and Regional Cancer Centre, Osmania General Hospital, Niloufer Hospital, AHs Golconda and Malakpet, CHCs Amberpet, Wardhannapet and Badepally the Bed strength for the Nurses was more than the

required norm of six beds per Nurse. In Niloufer Hospital, the Bed strength per Nurse was almost four times the norm.

Imaging Equipment available with healthcare institutions did not have the requisite licence from Atomic Energy Regulatory Board (AERB) authorities while Thermo Luminescent Dosimeter (TLD)-Badges were not provided to personnel working with X-ray units in some of the DHs. Microbiology services were not available in any of the DHs except DH Narsampet.

In the absence of Fire-Fighting equipment like Fire Hydrants and Smoke Detectors, the Hospitals were non-compliant with the fire safety norms.

Recommendations

- ***Government may ensure Medical Officers are posted in all Palle Dawakhanas so as to achieve the objective of providing healthcare services at the doorstep.***
- ***Government may ensure that all District Hospitals are equipped with imaging equipment and services relating to endoscopy and blood banks in a time bound manner.***
- ***Government may ensure adequate facilities like the availability of adequate fire fighting equipment at all health institutions to ensure safety of patients and uninterrupted power supply.***
- ***Patient Satisfaction Survey Report may be maintained by every health institution to know the level of patient satisfaction and also to initiate remedial measures wherever necessary.***
- ***Government may provide the protective Thermo Luminescent Dosimeter (TLD) badges to personnel working with X-ray unit to protect them from radiation.***

Chapter 4 - Availability of Drugs, Medicines, Equipment and other Consumables

Although the Corporation was to get the EML/AML reviewed and updated once in two years, it was observed that the review of EML/AML was done only twice i.e., in 2015 and 2019 till date.

As against 530 items required to be procured as per the approved EML list-2015, items procured were 396, 336 and 266 during 2017-18, 2018-19 and 2019-20 respectively. Similarly, out of 338 items required to be procured as per the approved EML list-2019, items procured were 209 and 197 during 2020-21 and 2021-22 respectively.

All the Health facilities were not implementing e-Aushadhi up to the Medicine Distribution Centre (MDC) level. There were also gaps and inadequate validation controls in e-Aushadhi application.

Essential drugs and medicines are those which address the priority healthcare requirements of a given population and our scrutiny in the District Hospitals revealed that out of 39 therapeutic medicine groups, medicine related to 20 groups were not available across 11 out of 14 District Hospitals.

Out of 16,016 POs issued by the Corporation, drugs were supplied for 13,950 POs leaving 2,066 POs unsupplied. However, no penalty on the suppliers were levied by the Corporation as per tender conditions.

Contrary to the agreement conditions, the Corporation issued 19 Purchase orders beyond the agreed Rate Contract (RC) resulting in an excess payment of ₹1.65 crore to nine suppliers.

Drugs and Medicines (706 numbers) worth ₹17.13 crore having leftover shelf life ranging from 1 to 89 days were issued by Central Medicine Stores to 1,259 health facilities during the period 2016-17 to 2021-22.

As per e-Aushadhi data, expired drugs valued ₹390.26 crore were not got replaced timely with the suppliers causing huge monetary loss to the Government.

Out of the 39,258 batches of drugs/ surgical/ CTS items, the Corporation had not sent 2,392 batches for Quality Check, (6 *per cent*) not being tested for their quality.

CMS issued 32 batches of drugs without the mandatory testing to Health institutions. Audit observed that 84 samples had been declared as NSQ by DCA/CDSCO of which 13 batches had been issued to the Health Facilities.

In violation of the condition of keeping the batches prior to receipt of reports as quarantined, out of 204 batches of drugs for which reports not received, 158 batches of drugs were issued by CMSs to health facilities during the period April 2016 to November 2021. Delays were also observed in receipt of 426 QC reports with delays ranging from 1 to 1,441 days.

Deficiencies in drugs storage facilities were observed in all the three test checked Central Medical Stores., Hyderabad, Mahabubnagar and Warangal making the drugs susceptible to damages, contamination and theft and risk to the patients.

Against the Minimum Non-Negotiable Outputs of ECRP-II, which required the establishment of 33 DPCUs and LMO Plants, 31 DPCUs have been established so far, with no Liquid Medical Oxygen (LMO) Plants being established. As LMO plants were not established, an amount of ₹35.57 crore was utilised from Emergency Response and Health System Preparedness (ECRP-II) funds towards procurement of Oxygen Gas for use in State-run Hospitals and NIMS during 2021-22 to treat COVID patients. Upgradation of the RT-PCR labs had been achieved by incurring an additional of ₹18.95 crore.

Recommendations

- ***Government may ensure implementation of e-Aushadhi application at all levels as envisaged and efforts may be made to strengthen validation controls in e-Aushadhi system.***
- ***Government may ensure that storage of drugs in CMS stores and health facilities are done appropriately to protect the drugs from deterioration.***
- ***Government may ensure that rules regarding near expiry drugs and its return to supplier timely for replacement of stock are followed by CMSs strictly.***

- ***Essential Medicines List (EML) and Additional Medicines List (AML) should be reviewed and updated at least once in two years or more frequently as needed.***

Chapter 5: Healthcare Infrastructure

Shortage in the number of Community Health Centres (CHCs), Primary Health Centres (PHCs/UPHCs) and Sub-centres/Basti Dawakhanas (SCs) available in the State, as against the prescribed population norms was nearly 69 *per cent*, 25 *per cent* and 29 *per cent* respectively. There were no CHCs in the Districts of Jangaon, Rajanna Sircilla and Hanumakonda. In majority of the Districts, the number of persons who are being served by PHCs and SCs were not as per norms.

Against the requirement of 35,004 beds for the population as per Census 2011, available beds in Government hospitals were only 27,996 beds which resulted in shortage of 7,008 beds. Except for the Districts of Adilabad, Hyderabad and Hanumakonda, shortage of beds was noticed in all the other Districts.

Of the 1,113 Sub-Centre works sanctioned during 2016-22, 331 (30 *per cent*) have been completed, 454 (41 *per cent*) are in various stages of completion, 148 (13 *per cent*) are in the tendering stage and 180 (16 *per cent*) have not been taken up. TSMSIDC has not maintained a comprehensive database of the construction activities since 2019 and as a result, it could not ensure effective monitoring.

The envisaged 50 bedded Integrated AYUSH Hospitals had not materialised in any of the three Districts, *viz.*, Vikarabad, Siddipet and Jayashankar Bhupalpally and the State also lost central funding of ₹7.20 crore.

The Academic building at Osmania Medical College (OMC) constructed and handed over in October 2016 was not put to use as of April 2022, for want of required equipment and furniture. Thus, the expenditure of ₹17.35 crore incurred on the construction remained unfruitful.

The completed Nursing School building at Nizamabad (other than the additional items) was not handed over to the user Department till June 2022, resulting in unfruitful expenditure of ₹14.44 crore. Due to non-completion of the work Nursing College, Jagtial, Nursing College is functioning in an incomplete building, since July 2019 and also without providing hostel facilities to the students.

Recommendations

- ***Government may take necessary steps for establishment of CHCs, PHCs and SCs as per norms.***
- ***Government may take measures to upgrade all PHCs/ SCs as HWCs by providing necessary Human Resources and infrastructure as per norms.***
- ***Government may take necessary measures to increase beds in Government hospitals and provide necessary equipment in accordance with IPHS norms in all the health facilities.***
- ***Government may take steps to maintain a holistic real time database to monitor all construction related activities.***

- ***Government may ensure availability of land, funds and Human Resources while sanctioning new or upgrading existing health facilities.***

Chapter 6: Financial Management

The State Government had not formulated a Specific Comprehensive Policy/Plan with reference to National Health Policy (NHP) 2017 to achieve Universal Health Coverage and deliver quality healthcare services to all at affordable cost. Government had not conducted health, demographic and epidemiological surveys and had only conducted disease survey.

Although as per the NHP 2017, the spending on the Health sector in the State should be more than 8 *per cent* of the total State budget by 2020, during the period 2016-17 to 2021-22, the expenditure in respect of the Health sector ranged between 2.53 *per cent* to 3.47 *per cent*, which was less than 50 *per cent* of the specified norm. The expenditure on Health Sector remained less, i.e., less than one *per cent* w.r.t State GSDP as against the norm of 1.15 *per cent* to be achieved by 2025 as envisaged in the NHP 2017. The actual expenditure on primary healthcare in the State ranged between 15.56 *per cent* (2019-20) to 20.27 *per cent* (2017-18) which was far below the set target of 66.67 *per cent of the* total Health Budget. Under National Health Mission (NHM) Scheme, the State share was not released fully within the same financial year during 2016-22. The release of the State share within the same financial year is showing a decreasing trend from 73 *per cent* (2016-17) to 14 *per cent* (2021-22). Out of the available funds for NHM, utilisation of funds ranged from 36 to 63 *per cent.* Due to the non-provision of funds, required mandatory trainings were not imparted to the members of VHSNCs during the period 2017-22

State Government had accorded administrative sanctions to the extent of ₹144.17 crore during December 2020 – September 2021 for the management of COVID-19 and had directed to meet the expenditure from NHM interest funds subject to reimbursement from COVID funds. The amount was not recouped to NHM till date.

Recommendations

- ***State Government may consider increasing Health sector spending to move closer to NHP targets in terms of 8 per cent of State budget and at least 2.5 per cent of State Gross Domestic Product as specified in NHP 2017 by 2025 to reduce Out of Pocket Expenditure.***
- ***State Government may consider allocation of up to two thirds of the total health budget for primary healthcare in terms of the norms prescribed by NHP 2017.***
- ***Government should ensure that at least budgetary allocations are fully utilised by the Departments and timely and proper utilisation of NHM funds.***
- ***Government may conduct health, demographic and epidemiological surveys as stipulated in NHP 2017.***

Chapter 7 – Implementation of Centrally Sponsored and State Schemes

The State Government implemented all the Centrally sponsored schemes in Telangana under National Health Mission (NHM). As against the targets fixed by GoI, the notification

of TB cases were showing an increasing trend during the years 2018 and 2019 and a decreasing trend in the years 2017, 2020 and 2021 in respect of public health institutions. Under the National Malaria Eradication Programme, Annual Blood Examination Rate (ABER) was less than 10 *per cent* continuously during 2017-21 in eight Districts.

GoI has prioritised approved Patient-Provider Support Agency (PPSA) in the ROP 2019-20. An amount of ₹176.35 lakh was approved for implementation of PPSA in the five Districts of Khammam,Nizamabad, Karimnagar, Nalgonda and Hanumakonda and while the amount was released, it was kept unutilised to the end of March 2022.

In respect of Oral Polio Vaccines 2 & 3, the percentage was less than 50 which shows the coverage was very poor in the Districts which needs focussed attention.

The achievement of targets under Measles I/Measles Rubella 1 (MR1) which had shown a downward trend during the years 2017-18 and 2018-19, however, increased and was 95 *per cent* during the year 2020-21.

C-Section Deliveries in Telangana are higher than the National Average. C-Section Deliveries in the State increased from 56 *per cent* to 62 *per cent* of Total Institutional Deliveries during the period 2017- 18 to 2021-22. However, C-Section deliveries in Government Health facilities decreased from 60 ₹2017-18) to 39 *per cent* (2021-22), while C-Section deliveries in Private Health facilities increased from 40 (2017-18) to 61 *per cent* (2021-22).

Funds of ₹65.20 crore received under PM Matru Vandana Yojana during the year 2017-18 were not utilised as of June 2022 and remained in the ESCROW account.

Out of the total population of 3.56 crore (as of June 2019), under Kanti Velugu Scheme, screening was conducted in respect of 1.55 crore people and the requirement of reading glasses was identified in respect of 24.67 lakh; Surgeries in respect of 9.59 lakh beneficiaries were identified; prescription glasses were provided for 14.36 lakh beneficiaries.

Recommendations

- ***State Government may make resolute efforts to minimise C-section deliveries.***
- ***State Government may ensure that payments under MCH Kit are distributed to the eligible beneficiaries after bio-metric authentication of beneficiary.***
- ***State Government should ensure that funds received from GoI for implementation of programmes are utilised on priority basis.***

Chapter 8 – Sustainable Development Goals - 3

Telangana had already achieved the required target of Maternal Mortality Rate (MMR) of less than 70. Telangana had also met the target Infant Mortality Rate (IMR) of 28 per 1000 live births in urban areas, but fell short in rural areas. Similarly, while achieving the target Under 5 Mortality Rate (U5MR) of 25 per 1000 live births in urban areas, Telangana fell short of this goal in rural areas.

Monthly Per Capita Out-of-pocket Expenditure on health in the State is higher than the National Average. Against the target of 45 health professionals per 10,000 population to be achieved, the availability of health professionals was only 10 per 10,000 and thus, Telangana was far behind the target.

As per the NITI Aayog SDG Index 2021, Telangana had a score of 67. Telangana has performed well in aspects of Maternal Mortality Rate (MMR), Immunisation, IMR, U5MR, Neonatal Mortality Rate (NMR), Institutional Deliveries. However, still there is scope for improvement in respect of certain indicators, *viz.*, Total Physicians, Nurses and Midwives per 10000 population, Suicide Mortality Rate, Death Rate due to Road Traffic Accidents, Caesarian Deliveries etc.

Recommendations

- ***State Government may ensure achievement of targets and plans by the Health Department and associated line Departments to achieve the goals of SDG – 3.***
- ***State Government may take all the necessary measures to address the issues of higher Infant Mortality Rate, U5MR and Neonatal Mortality rate in rural areas, Suicide Mortality Rate and Deaths due to Road Traffic Accidents in Telangana.***

Chapter 1

Introduction

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Introduction

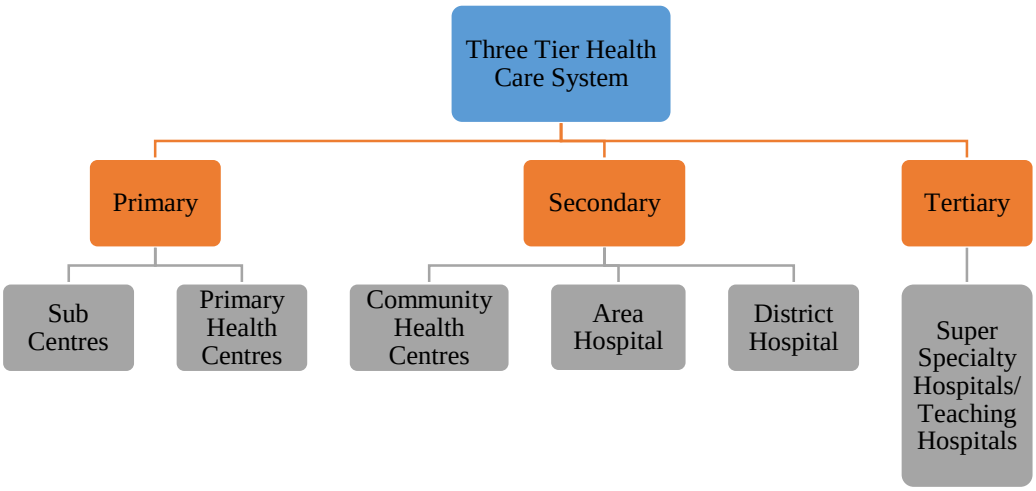
1.1 Introduction

Health, Medical & Family Welfare (HM&FW) Department is one of the vital Departments of the State Government and is responsible for providing essential healthcare services to the people of Telangana. The Secretary (HM&FW) is the Head of the Department at the Government Level. The Secretary is entrusted with the responsibility of providing directions and coordinating the general functioning of the Department within the Operational Guidelines of Government policies and ensuring the effective delivery of its mandate.

1.1.1 Overview of healthcare facilities in the State

The public healthcare delivery system which is organised at three levels – Primary, Secondary and Tertiary is as follows.

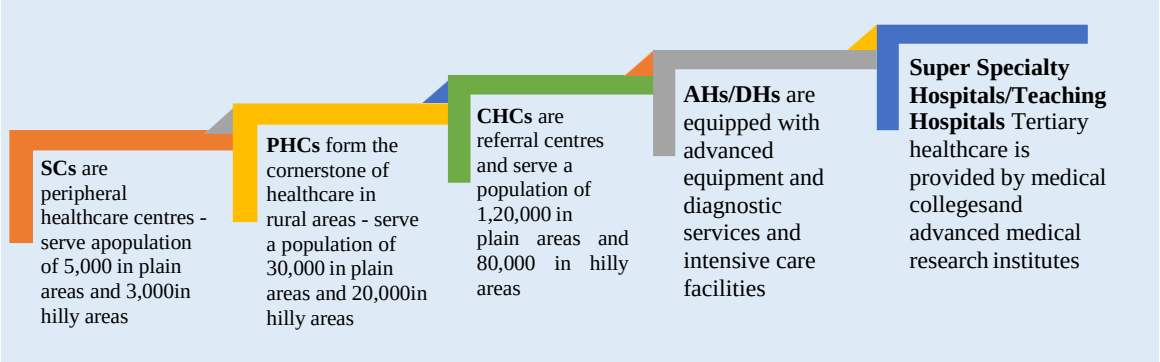
Chart 1.1 – Three Tier Health Care System in the State of Telangana



The vast network of Sub Centres (SCs), Primary Health Centres (PHCs), Urban Primary Health Centres (UPHCs) form the Primary Tier of the public healthcare delivery system for rural and urban population. These health centres provide preventive and protective healthcare services like immunisation, epidemic diagnosis, childbirth and maternal care, family welfare, etc. Community Health Centres (CHCs), Area Hospitals (AHs) and District Hospitals (DHs) serve as the Secondary Tier for the rural and urban population. These hospitals handle the treatment and management of diseases or medical conditions that require specialised care. Tertiary healthcare involves providing advanced and super-speciality services through Government General Hospitals (GGHs) or Teaching Hospitals and Super Speciality Hospitals in urban areas, which are well-equipped with sophisticated diagnostic and investigative facilities. Providing Medical Education through Medical Colleges, Nursing Colleges etc., is another important role of the Department. The HM&FW Department is also implementing the Indian System of Medicine through the Commissioner

of **Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy (**AYUSH). The ascending levels of healthcare facilities are shown in Chart below:

Chart 1.2 – Details of Health facilities



Details of Healthcare facilities available in the State are given below:

Table 1.1 – Healthcare facilities available in the State as on April 2023

GGHs	DHs	AHs	CHCs	PHCs/UPHCs	SCs
18	14[1]	26	115	834	4910[2]

Source: *Telangana State Statistical Abstract 2021*

In addition to the above mentioned facilities there are 14 Speciality Hospitals in the State as per Telangana State Statistical Abstract 2021.

Government in its reponse furnished (August 2023) that there were 34 Government General Hospitals (GGHs), 10 Specialty Hospitals, 59 DHs/AHs, 109 CHCs, 965 PHCs/UPHCs, 4,745 SCs and 434 Basti Dawakhanas. However, details of the DHs that were converted into GGHs, details of the healthcare institutions (indicating type of institution, location, bed strength, etc) and supporting documents in respect of this information were not furnished to Audit.

Various components of Health services

Line services

i. Outdoor Patient Department
ii. Indoor Patient Department
iii. Emergency Services
iv. Super Specialty (OT, ICU)
v. Maternity
vi. Blood Bank
vii. Diagnostic Services

Support services

i. Oxygen Services
ii. Dietary Service
iii. Laundry Service
iv. Biomedical Waste Management
v. Ambulance Service
vi. Mortuary Service

Auxiliary services

i. Patient safety facilities
ii. Patient registration
iii. Grievance/Complaint redressal
iv. Stores

Resource Management

i. Building Infrastructure
ii. Human Resources
iii. Drugs and Consumables
iv. Equipment

[1] Includes two DHs *viz*., DH Utnoor and DH Medchal Malkajgiri which have 50 sanctioned beds
[2] Includes 165 Basti Dawakhanas in the District of Hyderabad

1.1.2 Organogram of the Department

The Organogram of the HM&FW Department is given below:

Chart 1.3 - Organogram of the HM&FW Department

Source: *Information sourced from Outcome Budget*

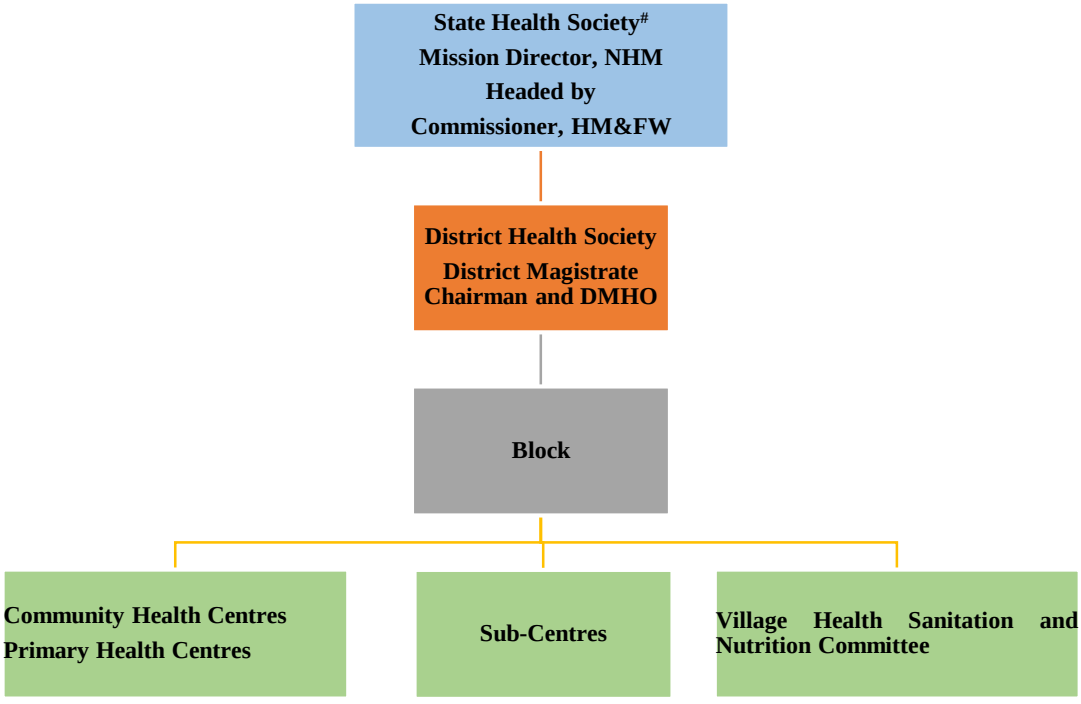
1.1.3 Schemes of the Government of India (GoI) implemented in the State

1.1.3.1 National Health Mission (NHM)

The NHM is the GoI's largest public health programme. It consists of two Sub-Missions *viz.*, National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM). The funds are shared between the Government of India and the States in ratio of 60:40.

NRHM was launched in April 2005 with a view to providing accessible, affordable and quality healthcare to the rural population, especially the vulnerable sections. NUHM, a Sub-Mission under NHM was launched in 2013 for Urban Health. It is being implemented in cities and towns where the population is above 50,000 as well as District Headquarters having a population between 30,000 to 50,000 while smaller cities and towns continue to be covered under NRHM.

Chart 1.4 – Organogram



Source: *Departmental website*

*[#] **Chief Secretary (Chairperson); Principal Secretary/Secretary, HM&FW Department (Vice Chairperson); Mission Director of the State Health Mission (Convenor); Members (Commissioner, HM&FW Department; Principal Secretary, Finance Department; Principal Secretary, WD&CW Department; Principal Secretary, PR Department; Principal Secretary, RD Department; Principal Secretary, SW Department; Principal Secretary, TW Department; Principal Secretary, MA&UD Department)***

NHM is an umbrella programme subsuming the existing programmes of Health and Family Welfare. The GoI transfers funds in the form of Grants-in-Aid (GIA) to the State Government which in turn transfers the funds to State Health Societies on the basis of respective State Programme Implementation Plans (SPIPs) and approved Annual Work

Plans which are prepared on the basis of District Health Action Plans of each of the Districts in the State.

1.1.3.2 National AYUSH Mission (NAM)

The basic objective of NAM is to promote AYUSH medical systems through cost effective AYUSH services, strengthening of educational systems, facilitate the enforcement of quality control of Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy (AYUSH) drugs and sustainable availability of AYUSH raw materials. It envisages flexibility in the implementation of the programmes which will lead to substantial participation of the State Governments/UTs. The funds are shared between the Government of India and the States in a ratio of 60:40.

1.1.4 State Schemes

1.1.4.1 KCR Kit Scheme

KCR (MCH) Kit[3] scheme was implemented[4] by the State Government with its own funds, to improve the incidence of institutional deliveries and to improve Infant Mortality Rate (IMR) & Maternal Mortality Rate (MMR) duly providing wage compensation of ₹12000 and ₹13000 in case of male and female child respectively in four instalments as detailed in the table:

Table 1.2 – KCR Kit Scheme wage compensation

Instalment	Amount	Conditions
1st	₹3,000	• Registration of pregnancy at Public Health Facility. • At least two Antenatal Care (ANC) check-ups by the Medical Officer with Iron Folic Acid (IFA) tablets & Inj.Tetanus Toxoid.
2nd	₹5,000 (For Female child) ₹4,000 (For male child) (KCR kit also be provided to the pregnant women after delivery)	• Delivery in public health institution. • The Child has to be administered BCG, OPV 0 dose and Birth Dose of Hepatitis B.
3rd	₹2,000	• Child has to be administered OPV 1, 2 & 3; IPV 1 & 2 doses; and Pentavalent 1, 2 & 3 doses i.e. by the age of 3 ½ months.
4th	₹3,000	• Child has to be administered Measles vaccine, Vitamin A and JE 1st dose i.e. by the age of 9 months to child.

Source: *Scheme Guidelines*

[3] Comprising soaps for mother and child, baby oil, baby bed, mosquito net, dresses, towel and napkins, powder, diapers, shampoo, sarees, handbag, toys for kid, etc
[4] with a view to provide quality healthcare throughout pregnancy and post-delivery, to encourage institutional deliveries

1.1.4.2 Kanti Velugu Scheme

Government decided (August 2018) to take up universal eye screening by covering the entire population of the State under the name "Kanti Velugu" with an objective to

i. conduct eye screening & vision test for all citizens of the State
ii. provide Spectacles free of cost
iii. arrange for surgeries and other treatments free of cost
iv. provide medicines for common eye ailments
v. educate people on prevention of serious disabling eye diseases.

1.1.5 Health Indicators

A comparison between Telangana and India in terms of important Sustainable Development Goals (SDGs) Indicators are given below:

Table 1.3 – Comparison of SDG indicators of Telangana and India of NFHS 4 and NFHS 5

Sl. No.	Indicator	NFHS[5] 4 (2015-16)		NFHS 5 (2019-21)	
		Telangana	India	Telangana	India
1	Neonatal Mortality Rate (NMR) (Per 1,000 live births)	20	29.5	16.8	24.9
2	Infant Mortality Rate (IMR) (Per 1,000 live births)	27.7	40.7	26.4	35.2
3	Under-Five Mortality Rate (U5MR) (Per 1,000 live births)	31.7	49.7	29.4	41.9
4	Total Fertility Rate (TFR) (Children per woman)	1.8	2.2	1.8	2.0
5	Institutional Births (%)	91.5	78.9	97	88.6
6	Full Immunisation (%)	67.5	62.0	79.1	76.4
7	Maternal Mortality Rate (MMR) (Per Lakh Live Births)	76 (SRS 2015-17)	122 (SRS 2015-17)	43 (SRS 2018-20)	97 (SRS 2018-20)

Source: *NFHS of respective years*
Note: SRS – Sample Registration System

1.2 Improvement in overall Health Indicators

While there has been improvement in the score of the State of Telangana from 61 (2018) to 69 (2020-21), the overall SDG ranking has gone down from 9th in 2018 to 11th in 2021-22. As regards the ranking in respect of SDG-3 relating to Good Health and Wellbeing, there has been a decline both in respect of score and rank from 3rd rank (73 score) in 2018 to 19th rank (67 score) in the year 2020-21 as detailed in the table below:

Table 1.4- Ranking of Telangana State

Overall and SDG-03	2018		2019-20		2020-21	
	Score	Rank	Score	Rank	Score	Rank
Overall SDG	61	9	67	5	69	11
SDG-3: Good Health and Wellbeing	73	3	66	10	67	19

Source*: NITI Aayog SDG India Index Base Line Report 2018, 2019-20 and 2020-21*

[5] National Family Health Survey

State Government in its response stated (August 2023) that the State Health Index was an Annual Tool to assess the Performance of the States and Union Territories based on Weighted Composite Index of 24 indicators grouped under the domain of "Health Outcomes Governance information". It was also stated that, in terms of annual incremental performance, Telangana was one of the top three ranked States among the larger States.

1.2.1 Telangana Health indicators compared with National Health Indicators

Table 1.5- Telangana Health indicators compared with National Health Indicators

Indicator	NFHS -4		NFHS-5	
	India (2015-16)	Telangana (2015-16)	India (2019-21)	Telangana (2019-20)
Sex ratio of the total population (females per 1,000 males)	991	1007	1020	1049
Sex ratio at birth for children born in the last five years (females per 1,000 males)	919	872	929	894
Total Fertility Rate (children per woman)	2.2	1.8	2.0	1.8
Neonatal Mortality Rate (NMR)	29.5	20.0	24.9	16.8
Infant Mortality Rate (IMR)	40.7	27.7	35.2	26.4
Under-five mortality rate (U5MR)	49.7	31.7	41.9	29.4
Mothers who had an Antenatal check-up in the first trimester (%)	58.6	83.1	70.0	88.5
Mothers who had at least 4 Antenatal care visits (%)	51.2	74.9	58.1	70.4
Mothers whose last birth was protected against Neonatal Tetanus[6] (%)	89.0	88.8	92.0	89.6
Mothers who consumed Iron Folic Acid for 100 days or more when they were pregnant (%)	30.3	52.7	44.1	57.9
Mothers who consumed Iron Folic Acid for 180 days or more when they were pregnant (%)	14.4	28.8	26.0	34.4
Registered pregnancies for which the Mother received a Mother and Child Protection (MCP) card (%)	89.3	89.1	95.9	96.7
Mothers who received postnatal care from a Doctor/Nurse/LHV/ANM/Midwife/other health personnel within 2 days of delivery (%)	62.4	81.7	78.0	87.6
Average Out-Of-Pocket Expenditure per delivery in a public health facility (₹)	3,197	4,218	2,916	3,846
Children born at home who were taken to a health facility for a check-up within 24 hours of birth (%)	2.5	9.0	4.2	15.6
Children who received postnatal care from a Doctor/Nurse/LHV/ANM/Midwife/other health personnel within 2 days of delivery (%)	N.A.	N.A	79.1	90.0
Institutional births (%)	78.9	91.5	88.6	97.0

[6] Includes mothers with two injections during the pregnancy for their last birth, or two or more injections (the last within 3 years of the last live birth), or three or more injections (the last within 5 years of the last birth), or four or more injections (the last within 10 years of the last live birth), or five or more injections at any time prior to the last birth.

Indicator	NFHS -4		NFHS-5	
	India (2015-16)	Telangana (2015-16)	India (2019-21)	Telangana (2019-20)
Institutional births in public facility (%)	52.1	30.5	61.9	49.7
Home births that were conducted by Skilled Health Personnel[7] (%)	4.3	2.8	3.2	1.3
Births attended by Skilled Health Personnel (%)	81.4	91.3	89.4	93.6
Births delivered by Caesarean section (%)	17.2	57.7	21.5	60.7
Births in a private health facility that were delivered by Caesarean section (%)	40.9	74.5	47.4	81.5
Births in a public health facility that were delivered by Caesarean section (%)	11.9	40.3	14.3	44.5

Source: *NFHS of respective years*

State Health indicators, which have been shaded green above are better when compared to National figure and those which are adverse when compared to the National figure are shaded Red

The birth rate of Telangana as Sample Registration System 2020 was 16.4 as against India was 19.5. The death rate of Telangana and that of India was 6.0. Government in its response (August 2023) has furnished the current status of health indicators as given below:

- Mothers whose last birth was protected against Neonatal Tetanus has improved from 88.8 *per cent* (NFHS-4) to 89.6 *per cent* (NFHS-5) and that, as per HMIS for the year 2022-23, it was 93 *per cent.*
- Average Out of-Pocket Expenditure (OOPE) per delivery in Public Health facility has reduced from ₹4,218 (NFHS-4) to ₹3,846 (NFHS-5). With additional interventions such as free diagnostics, free drugs, diet and transportation being made available to pregnant women, the OOPE was expected to reduce even further.
- Institutional births in public facility has shown an increasing trend from 50 *per cent* (NFHS-5) to 68 *per cent* (KCR Kit) during the period April – June 2023.
- C-Section deliveries which was 60.7 *per cent* (NFHS-5) has reduced to 56.2 *per cent* in 2022-23. Similarly, C-Section deliveries in private health facility which was 81.5 *per cent* (NFHS-5) has reduced to 77 *per cent* in 2022-23. Government has been taking many corrective measures to reduce the C-Section in the State such as C-Section audits and monthly reviews and focus on reduction of C-Sections with reference to the medical indications. Additional financial incentives for conducting normal deliveries above the set benchmark are provided to the maternity team to further reduce the C-Sections in Government Hospitals.

1.3 Audit Objectives

The Performance Audit was carried out with a view to:

1. Assess the adequacy of funding for healthcare.
2. Assess the availability and management of healthcare infrastructure.
3. Assess the availability of Drugs, Medicine, Equipment and other consumables.

[7] Doctor/Nurse/LHV/ANM/midwife/other health personnel.

4. Assess the availability of necessary Human Resources at all levels, e.g Doctors, Nurses, Paramedics etc.
5. Assess the implementation of various schemes of the Government of India including the Assistance/Grants/Equipment received by the States.
6. Assess whether State's spending on health has improved the health and wellbeing conditions of the people as per Sustainable Development Goal 3.

1.4 Audit Criteria

To evaluate the Audit Objectives, the following criteria were sourced from the various guidelines on healthcare services as detailed below:

(i) National Health Policy, 2017

(ii) Sustainable Development Goals

(iii) MCI Act 1956 replaced by National Medical Commission in 2019

(iv) Indian Public Health Standards (IPHS), 2012

(v) Drugs & Cosmetics Act, 1940

(vi) The National Commission for Indian System of Medicine Act, 2020

(vii) The National Commission for Homeopathy Act

(viii) The Indian Nursing Council Act, 1947

(ix) Bio Medical Waste Management Rules

(x) Atomic Energy (Radiation Protection) Rules, 2004

(xi) World Health Organisation (WHO) Norms

(xii) Establishment of Medical College Regulations, 1999

(xiii) Minimum Standards Requirement Regulations 1999

(xiv) National AYUSH Mission Guidelines

(xv) Financial Rules

(xvi) Maternal and New born Health Toolkit, 2013

(xvii) Framework for Implementation of National Health Mission (NHM), 2005-12 & 2012-2017

(xviii) Operational Guidelines for Quality Assurance, 2013 and GoI-2013-'NHM Assessor Guidebook DH Vol. I & II

(xix) Government Policies, Rules, Orders, Manuals and Regulations

1.5 Audit Scope and Methodology

1.5.1 Scope

The audit was conducted between February 2022 and March 2023, covering the period from 2016-17 to 2021-22 through a test-check of records in the Offices of the Secretary, Department of HM&FW; Managing Director, Telangana State Medical Services

Infrastructure Development Corporation (TSMSIDC); Commissioner, HM&FW and Mission Director, NHM; Director of Public Health (DOPH); Director of Medical Education (DME); Commissioner, Telangana Vaidya Vidhana Praishad (TVVP); District Hospitals in the State; test checked healthcare facilities such as SCs, UPHCs/PHCs, CHCs, Area Hospitals (AHs), Super Specialty Hospitals; Central Medicine Stores (CMS); Director of AYUSH and Medical colleges of AYUSH; Pharmacies; Dispensaries and Government Medical Colleges with attached Teaching Hospitals in the test checked three Districts of Hyderabad, Mahabubnagar and Warangal.

1.5.2 Sampling

Out of 33 Districts in Telangana, 10 *per cent* (three Districts, *viz.*, Hyderabad, Mahabubnagar and Warangal) were selected based on the population using Random sampling method. The details of the test checked units are given below:

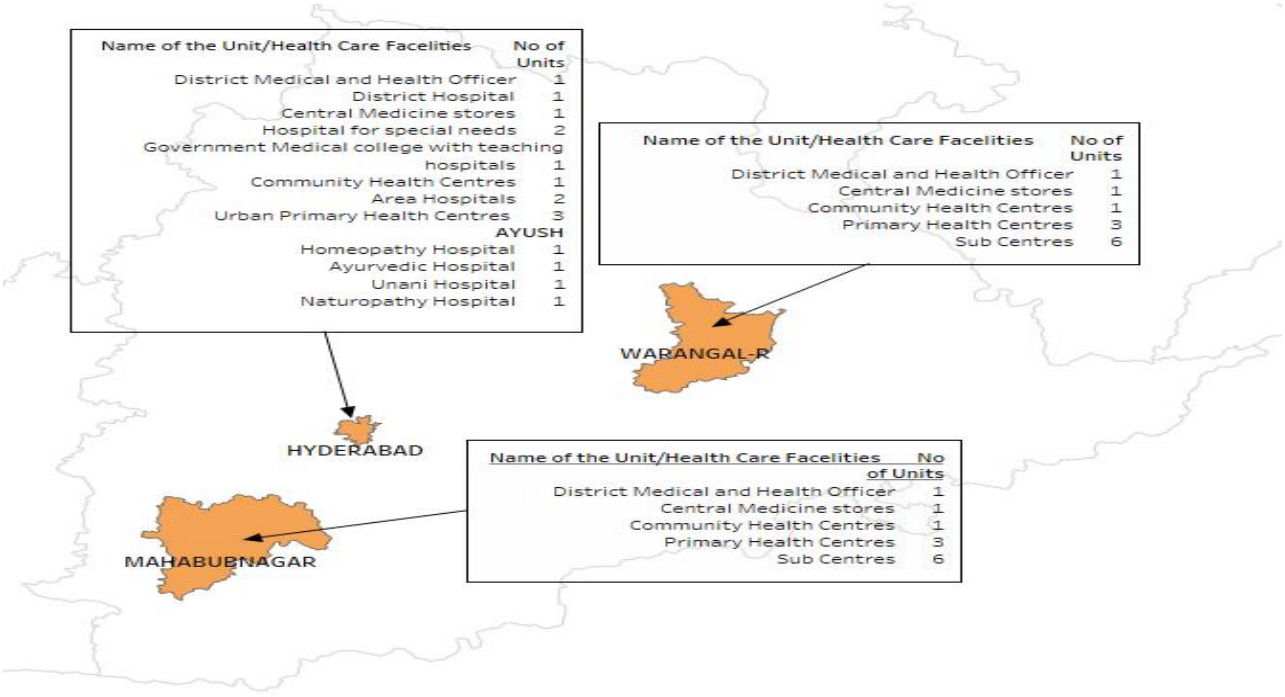


Table 1.6 - Details of test checked units

Sl No	Name of the Unit/ Healthcare Facilities	Test checked units	District	Location
1.	District Medical and Health Officer (DMHO)	3	Hyderabad	DMHO, Hyderabad
			Mahabubnagar	DMHO, Mahabubnagar
			Warangal	DMHO, Warangal
2.	District Hospital	1	Hyderabad	District Hospital, King Koti, Hyderabad
3.	Central Medicine Stores	3	Hyderabad	Central Medicine Store, Hyderabad
			Warangal	Central Medicine Store, Warangal
			Mahabubnagar	Central Medicine Store, Mahabubnagar
4.	Specialty Hospitals	2	Hyderabad	Niloufer Hospital, Hyderabad
				MNJ Institute of Oncology and Regional Cancer Centre, Red Hills, Hyderabad

Sl No	Name of the Unit/ Healthcare Facilities	Test checked units	District	Location
5.	Government Medical Colleges and Teaching Hospitals	1	Hyderabad	Osmania General Hospital and Osmania Medical College, Hyderabad
6.	Area Hospitals	2	Hyderabad	Area Hospital, Golconda
				Area Hospital, Malakpet
7.	Community Health Centres	3	Hyderabad	CHC, Amberpet
			Warangal	CHC, Wardhannapet
			Mahabubnagar	CHC, Badepally
8.	Urban Primary Health Centres	3	Hyderabad	UPHC Azampura UPHC Gaganmahal UPHC Niloufer
9.	Primary Health Centres	6	Mahabubnagar (3)	PHC Edira
				PHC Addakal
				PHC Rajapur
			Warangal (3)	PHC Alankanipet
				PHC Geesugonda
				PHC Duggondi
10.	Sub Centres	12	Mahabubnagar (6)	SC Addakal
				SC Kandur
				SC Christianpally
				SC Zamistanpur
				SC Rajapur
				SC Kucherakal
			Warangal (6)	SC Alankanipet
				SC Geesugonda
				SC Duggondi
				SC Thopanpally
				SC Gorrekunta
				SC Venkatapur
	AYUSH			
11.	Homeopathy Hospital	1	Hyderabad	DK Government Homeopathy Hospital, Hyderabad
12.	Ayurvedic Hospital	1	Hyderabad	Government Ayurvedic Hospital, Hyderabad
13.	Unani Hospital	1	Hyderabad	Government Nizamia Unani Hospital, Hyderabad
14.	Naturopathy Hospital	1	Hyderabad	Gandhi Naturopathy Hospital, Hyderabad.
	TOTAL	**40**		

Source: *Approved sample*

In addition to the above, information in respect of 13 District Hospitals and two Medical Colleges mentioned in the Table below were also collected.

Table 1.7 - Details of Hospitals and Medical colleges from which information was collected

Sl No	Name of the Unit/ Healthcare Facilities	Additional test checked units	District	Location
1	District Hospitals	13	Nizamabad	Bodhan
			Jogulamba Gadwal	Gadwal
			Siddipet	Gajwel
			Rangareddy	Kondapur
			Medak	Medak
			Medchal Malkajgiri	Malkajgiri
			Mulugu	Mulugu
			Narayanpet	Narayanpet
			Warangal	Narsampet
			Peddapalli	Peddapalli
			Vikarabad	Tandur
			Adilabad	Utnoor
			Yadadri Bhuvanagiri	Bhuvanagiri
2	Medical Colleges	2	Hanumakonda (Warangal (Urban))	Kakatiya Medical College
			Mahabubnagar	Government Medical College

1.5.3 Audit Methodology

The Audit Methodology involved scrutiny of records and data analysis, issue of audit enquiries and obtaining replies, collection of information through questionnaires including Doctor and Patient Survey of selected service users/beneficiaries for end-user satisfaction. Apart from that, Joint Physical Verification (JPV) of hospital assets, sub stores and civil works was also conducted. Analysis of the database of e-Aushadhi was also conducted through data-analysis tools such as Microsoft Excel, IDEA and Tableau.

An Entry Conference was held in February 2022 with Secretary, HM&FW Department wherein audit objectives, audit criteria, audit scope and methodology were discussed. The draft report was issued to the concerned Departments in June 2023 and November 2023. Government's response to the audit findings (August 2023) had been included at appropriate places in the Report.

1.6 Doctors'/ Patients' Survey

1.6.1 Doctors' Survey

Survey of Doctors was conducted in respect of 89 Doctors working in various test checked health facilities. Details of Doctors surveyed health facility-wise is as follows:

Table 1.8 – Details of Doctors surveyed Hospital-wise

Sl.No.	Name of the Health Facility	No. of doctors
1	MNJ Institute of Oncology and Regional Cancer Centre	18
2	Niloufer Hospital	18
3	Osmania General Hospital	17
4	District Hospital, King Koti	10
5	Area Hospital, Golconda	5
6	Area Hospital, Malakpet	5
7	CHC, Badepally	2
8	CHC, Wardhannapet	4
9	CHC, Amberpet	2
10	UPHC, Azampura	1
11	UPHC, Gaganmahal	1
12	UPHC, Niloufer	1
13	PHC, Rajapur	1
14	PHC, Alankanipet	1
15	PHC, Duggondi	1
16	PHC, Geesugonda	2
Total		**89**

Details of the Doctor's Survey are included in Chapter 3 Healthcare Services ***Appendix- 3.5***.

1.6.2 Patients' Survey

Survey of Patients was conducted in respect of 581 patients (In-patients 206 and Outpatients 375) admitted in various test checked health facilities are included in Chapter 3 Healthcare Services ***Appendix- 3.5***.

1.6.3 Joint Physical Verification of Health Institutions

Joint Physical Verification of 15 Health Institutions was conducted and the results of the Joint Physical Verification are included in Chapter 3 Healthcare Services ***Appendix- 3.6***.

1.7 Acknowledgement

Audit acknowledges the cooperation extended by the Secretary to Government, HM&FW Department, Commissioner, HM&FW and Mission Director, NHM, Director of Medical Education, Commissioner, Telangana Vaidya Vidhana Praishad, Director of Public Health and Managing Director, TSMSIDC, Superintendents of test checked hospitals and the field functionaries of these Departments for smooth conduct of this Performance Audit. The responses furnished to the audit observations have been included at appropriate places in the Audit Report.

1.8 Structure of the Report

This Report has been structured keeping in mind the major components of healthcare covered as chapters as detailed below:

Chapter 2	Human Resources
Chapter 3	Healthcare Services
Chapter 4	Availability of Drugs, Medicines, Equipment and other Consumables
Chapter 5	Healthcare Infrastructure
Chapter 6	Financial Managment
Chapter 7	Implementation of Centrally Sponsored and State Schemes
Chapter 8	Sustainable Development Goals -3

Audit findings relating to the identified components and the factors that contribute towards their achievement have been discussed in detail in the succeeding chapters.

Chapter 2

Human Resources

CHAPTER 2
Human Resources

2.1 Introduction

Human Resources form the backbone of any healthcare set up. Health Human Resources refers to people who are trained to promote health, prevent and cure disease and rehabilitate the sick and it includes Doctors, Staff Nurse, Paramedical Staff, Auxiliary Nurse Midwife (ANM), Accredited Social Health Activists (ASHAs), trained *dais* and others (occupational Therapy Assistant, Dieticians, etc.).

Having qualified and experienced Human Resources directly impacts the quality of healthcare services provided by the institutions. These IPHS guidelines also prescribe the minimum number of Doctors and Nurses to be available in different hospitals according to the number of sanctioned beds. IPHS guidelines envisage that Doctors and Nurses should be available round the clock in In-patient Department (IPD) to provide due medical care to the in-patients.

2.2 Planning and Assessment of Human Resources

Para 3.3.4 of NHP 2017 initiatives aims for measurable improvements in the quality of health care. Districts and blocks which have wider gaps for the development of infrastructure and deployment of additional Human Resources were to receive focus. Financing additional infrastructure and Human Resources would be based on the needs of outpatient and inpatient attendance and utilisation of key services in a measurable manner. Further for effectively handling medical disasters and health security, the policy recommends that the public healthcare system retain a certain excess capacity in terms of health infrastructure, Human Resources and technology which can be mobilised in times of crisis.

Government was addressed (October 2022) as to whether, any Human Resources policy for the appointment of Specialist Doctors, Medical Officers and other supporting Paramedical staff to meet the requirement of the healthcare facilities according to the IPHS norms had been prepared. Government in its response (August 2023) stated that HR policy of the State was in line with IPHS Standards. Copy of the HR policy was however, not made available to Audit.

2.2.1 Doctor-Population Ratio

As per the World Health Organisation (WHO) norms, one Doctor is to be available for every 1,000 persons. The Department had not maintained the data relating to year-wise Doctor-Population ratio. In the absence of this data, Audit had to calculate the Doctor population ratio taking into consideration the projected population of the State and Doctors

registered with the Telangana State Medical Council and AYUSH as per the data available in NHP 2021.

Table 2.1 - Statement showing year-wise Projected Population, Doctors registered and Doctor - population ratio

Year	Projected Population of Telangana	No. of Doctors registered with Telangana State Medical Council	Doctor - population ratio (Allopathy)	No. of AYUSH Doctors registered	Total Doctors available	Doctor - population ratio overall
2017-18	3,67,14,000	5,023	7,309	Not available	Not available	Cannot be calculated
2018-19	3,69,67,000	8,014	4,613	21,672	29,686	1,245
2019-20	3,72,20,000	11,573	3,216	22,063	33,636	1,107
2020-21	3,74,73,000	15,603	2,402	22,539	38,142	982
2021-22	3,77,25,000	19,427	1,942	23,384	42,811	881

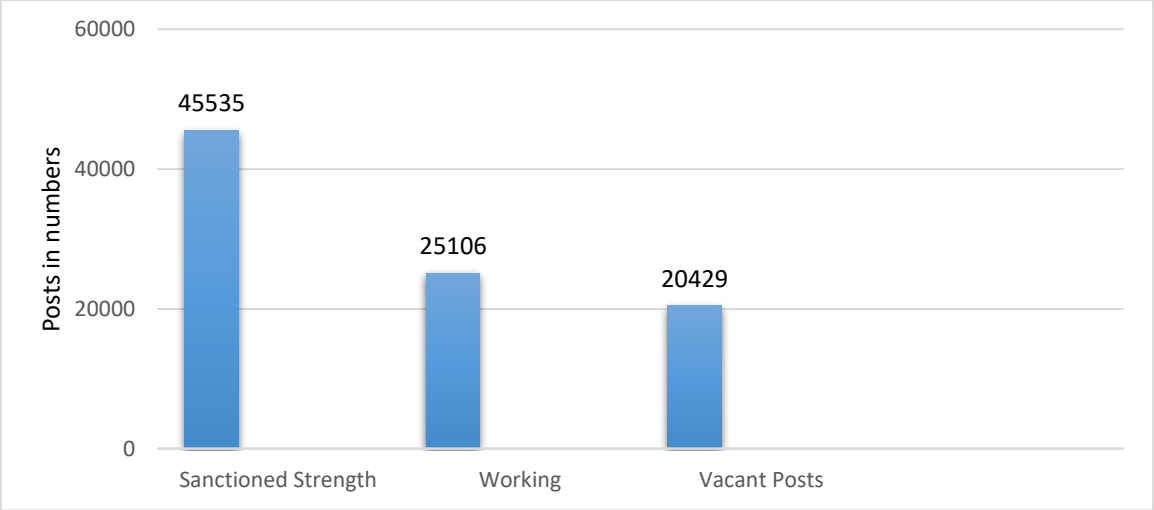
Source: *National Health Profile India 2020-21, Information furnished by Medical Council & AYUSH Department*

- The availability of Doctors showed an increasing trend from 2017-18 to 2021-22.
- As per the information furnished to a Parliament starred question (26 July 2022), the Doctor-population ratio of India was 1:834 which included Allopathic and AYUSH Doctors, while the same was 1:881 in the State of Telangana.

2.2.2 Deployment and availability of sufficient manpower

In the absence of the human resources policy correlating to NHP 2017, Audit was constrained to compare the availability of manpower with the sanctioned posts and actual men in position.

Chart 2.1 – Status of Human Resources (as on March 2022)



Source*: Information furnished by the Heads of the Departments*

Table 2.2 - Status of Human Resources across the different HOD of Health, Medical and Family Welfare Department as of March 2022

Name of the HOD/Department	Sanctioned strength	Working	Vacant Posts	Vacancy percentage
Commissioner of Health and Family Welfare	6,165	4,028	2,137	35
Director of Public Health	13,769	8,207	5,562	40
Telangana Vaidya Vidhana Parishad	10,822	6,196	4,626	43
Director of Medical Education	11,499	5,052	6,447	56
Drugs Control Administration	198	131	67	34
Department of AYUSH	2,691	1,311	1,380	51
Institute of Preventive Medicine	391	181	210	54
Total	45,535	25,106	20,429	45

Source: *Information furnished by the Heads of the Departments*

Colour code:

Vacancy upto 25%		Vacancy more than 25% and upto 50%		Vacancy above 50%	

Audit observed that, there were huge gaps between sanctioned posts and the actual persons in position of healthcare staff. The position of sanctioned post vis-à-vis deployment of Human Resources as of the March 2022 in the healthcare facilities under Commissioner of Health and Family Welfare, DOPH and TVVP (manpower position of DME is mentioned separately) which render primary and secondary healthcare services is shown in Table 2.3.

Table 2.3 - Statement showing the HOD wise position of Human Resources as of March 2022

Name of the post	Sanctioned	Men in position	Vacant	Vacancy percentage
1	**2**	**3**	**4 (2-3)**	**5 {(4/2)*100}**
Director of Public Health				
Medical Officer	1,556	1,402	154	10
CHO/PHN	419	271	148	35
Multi Purpose Health Educator (MPHE)	3,643	1,102	2,541	70
Nursing Staff	1,954	1,664	290	15
Para-Medical	1,353	335	1,018	75
Pharmacist	781	342	439	56
Others	4,063	3,091	972	24
Total	13,769	8,207	5,562	40
Telangana Vaidya Vidhana Parishad (as of August 2023)				
Doctors	4,311	1,740	2,571	60
Nursing Staff	3,583	2,813	770	21
Para-Medical	1,655	888	767	46
ANM/MPHA(F)	633	276	357	56
Others	640	479	161	25
Total	**10,822**	**6,196**	**4,626**	**43**
Commissioner of Health and Family Welfare				
Doctors	147	100	47	32
Nursing Staff	141	109	32	23

MNO	7	5	2	29
MPHA (F)	4,246	2,606	1,640	39
MPHA (M)	76	18	58	76
MPHEO	122	101	21	17
MPHS (M)	399	277	122	31
MPHS (F)	329	319	10	3
Para-Medical	45	29	16	36
Others	653	464	189	29
Total	6,165	4,028	2,137	35

Source: *Information furnished by the Directorates*

Colour code:

Vacancy upto 25%		Vacancy more than 25% and upto 50%		Vacancy above 50%	

Scrutiny revealed the following:

- Shortage is particularly evident in the institutions operating under the administrative control of Telangana Vaidya Vidhana Parishad (TVVP), which are responsible for providing primary and secondary healthcare services to the population. These institutions are experiencing significant vacancies of Doctors (60 *per cent*), ANM/MPHA (56 *per cent*), Para-Medical (46 *per cent*), Nursing Staff (21 *per cent*) and other staff (25 *per cent*).
- Similarly, health institutions under the administrative control of the Director of Public Health (DOPH) are also facing shortage of staff. Shortage of staff is comparatively less in DOPH under the cadres of Medical Officers (10 *per cent*) and Nursing Staff (15 *per cent*). Acute shortages were observed in the cadres of Community Health Officers (35 *per cent*), MPHE (70 *per cent*), Pharmacist (56 *per cent*), Para-Medical (75 *per cent*) and other staff (24 *per cent*).
- In addition, in the health institutions under the administrative control of the Commissioner, Health & Family Welfare, shortage of staff is comparatively less in the cadre of Nursing Staff (23 *per cent*). The Department is however struggling with an overall shortage of Doctors (32 *per cent*), Para-Medical and other staff (29 *per cent*) and ANM/MPHA/Midwives/Nursing Orderlies (36 *per cent*).

Government in its response stated (August 2023) that, massive recruitment drive had been taken up by the State Health Department and that regular recruitment had commenced for over 12,000 posts and would be completed soon. It was also stated that new Medical Colleges were proposed to be established in all Districts and hence all the District Hospitals are converted to Government General Hospitals/Medical Colleges. Further, the process of reorganistion was taken up in secondary level hospitals and adjustments of doctors and staff would be done as per IPHS norms.

Though Government issued (June 2022 onwards) the notifications for recruitment of healthcare manpower in various cadres, the actual number of vacancies filled up were not furnished.

Consequently, the shortage of healthcare personnel has had a significant impact on the delivery of healthcare services to the general public.

2.2.3 Human Resources under National Health Mission

The aim of the National Health Mission besides providing accessible, affordable, accountable, effective and reliable healthcare facilities to the people of the country is also to implement the Centrally sponsored health schemes. In order to achieve the above goals, the State Government sanctions and fills the posts under various categories. The details of Human Resources under National Health Mission are given below:

Table 2.4 - Human Resources under National Health Mission as of August 2023

Name of the post	Sanctioned	Men in position	Vacant	Vacancy percentage
Medical Officers[1]	5,038	4,284	754	15
Nursing Staff	3,960	2,971	989	25
Paramedical Staff	962	708	254	26
ANM/MPHA/Mid Wives	5,352	5,198	154	3
Others	5,430	4,199	1,231	23
Total	**20,742**	**17,360**	**3,382**	**16**

Source: *Information furnished by the Directorates*

Colour code:

Vacancy upto 25%		Vacancy more than 25% and upto 50%		Vacancy above 50%	

As seen from the above, the overall shortage of staff under NHM was 16 *per cent*. Shortage of staff was minimal in the cadre of ANM/MPHA/Mid Wives (3 *per cent)*. Shortages were observed in the cadres of Medical Officers (15 *per cent*), Paramedical Staff (26 *per cent*), Nursing staff (25 *per cent*) and others (23 *per cent*).

Government in its response stated (August 2023) that, the overall shortage of staff under NHM was only 16 *per cent* at present. It was indicated that in the cadre of MOs, against a sanctioned strength of 3,206, men in position were 3,084 which was resulting in vacancy of only four *per cent*. It was further stated that, due to cadre restructuring in UPHCs, the Medical Officers positions were being filled by the Regular Civil Assistant Surgeon (CAS) and that these posts were dropped from NHM. It was assured that the vacancies of Paramedical Services would also be taken up from time to time for filling up.

Government also stated that massive recruitment drive had been taken up by the State Health Department and that regular recruitment had commenced for over 12,000 posts and would be completed soon.

In the absence of the cadre-wise details of the sanctions, final position with regard to men-in-position, the vacancies cadre-wise could not be analysed.

[1] Includes Specialists (Sanctioned 502/MIP 334); Medical Officers (sanctioned 1122/MIP 765); Mid-Level Health Providers (Sanctioned 3020/MIP 2933); Medical Officers (AYUSH) (Sanctioned 394/MIP 252)

2.2.4 Status of Human Resources in Test checked DHs under TVVP

Details of availability of manpower in the DHs of the State are given in the table 2.5:

Table -2.5 - Status of Human Resources in District Hospitals as of May 2023

Cadre	SS	MIP	Vacancy percentage
Doctors	801	382	419 (52)
Nursing Staff	638	397	241 (38)
Pharmacists	85	49	36 (42)
Total	**1,524**	**828**	**696 (46)**

***Source**: Information furnished by the District Hospitals*

Colour code:

Vacancy upto 25%		Vacancy more than 25% and upto 50%		Vacancy above 50%	

Audit observed shortages in the cadre of Doctors (52 *per cent)*, Pharmacists (42 *per cent) and* Nursing Staff (38 *per cent) in the DHs under* TVVP.

Following Abbreviations are used for the Names of the District Hospital in this chapter and entire Report. BOD-Bodhan (Nizamabad District), GAD-Gadwal (Jogulamba Gadwal District)- GAJ-Gajwel (Siddipet District), HYD-Hyderabad (Hyderabad District), KDP- Kondapur (Rangareddy District), MDK-Medak (Medak District), MED-Medchal (Medchal –Malkajgiri District), MUL-Mulugu (Mulugu District), NRY-Narayanpet (Narayanpet Disrict), NRS-Narsampet (Warangal District), PED-Peddapalli (Peddapalli District), TDR-Tandur (Vikarabad District), UT- Utnoor (Adilabad District) and YB - Yadadri (Yadadri Bhuvanagiri District).

Table 2.6 -District Hospital-wise Manpower position as of May 2023

District Hospital	Doctors			Nurses			Pharmacists		
	SS	MIP	Vacancy percentage	SS	MIP	Vacancy percentage	SS	MIP	Vacancy percentage
BOD	52	27	48	32	31	3	4	4	0
GAD	87	28	68	73	29	60	0	0	0
GAJ	61	34	44	42	33	21	11	6	45
HYD	51	28	45	77	58	25	8	7	13
KDP	55	24	56	33	29	12	5	4	20
MDK	65	31	52	38	25	34	9	5	44
MED	35	28	20	15	12	20	4	1	75
MUL	78	35	55	79	25	68	12	5	58
NRY	66	32	52	71	31	56	7	5	29
NRS	26	12	54	17	15	12	2	2	0
PED	59	29	51	19	16	16	4	2	50
TDR	69	27	61	90	46	49	11	4	64
UT	34	15	56	17	15	12	2	0	100
YB	63	32	49	35	32	9	6	4	33
Total	801	382	52	638	397	38	85	49	42

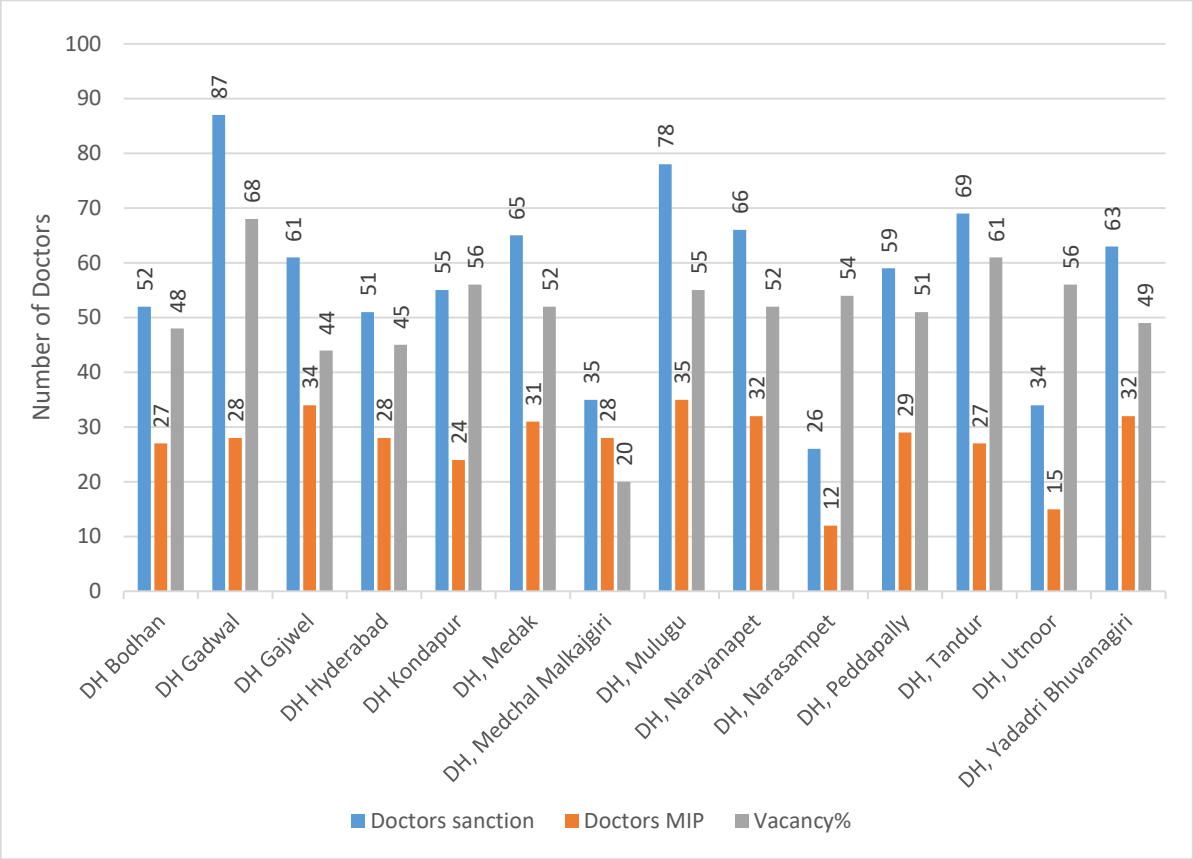
***Source**: Information furnished by the District Hospitals*

SS-Sanctioned Strength; MIP-Men In Position

Colour code:

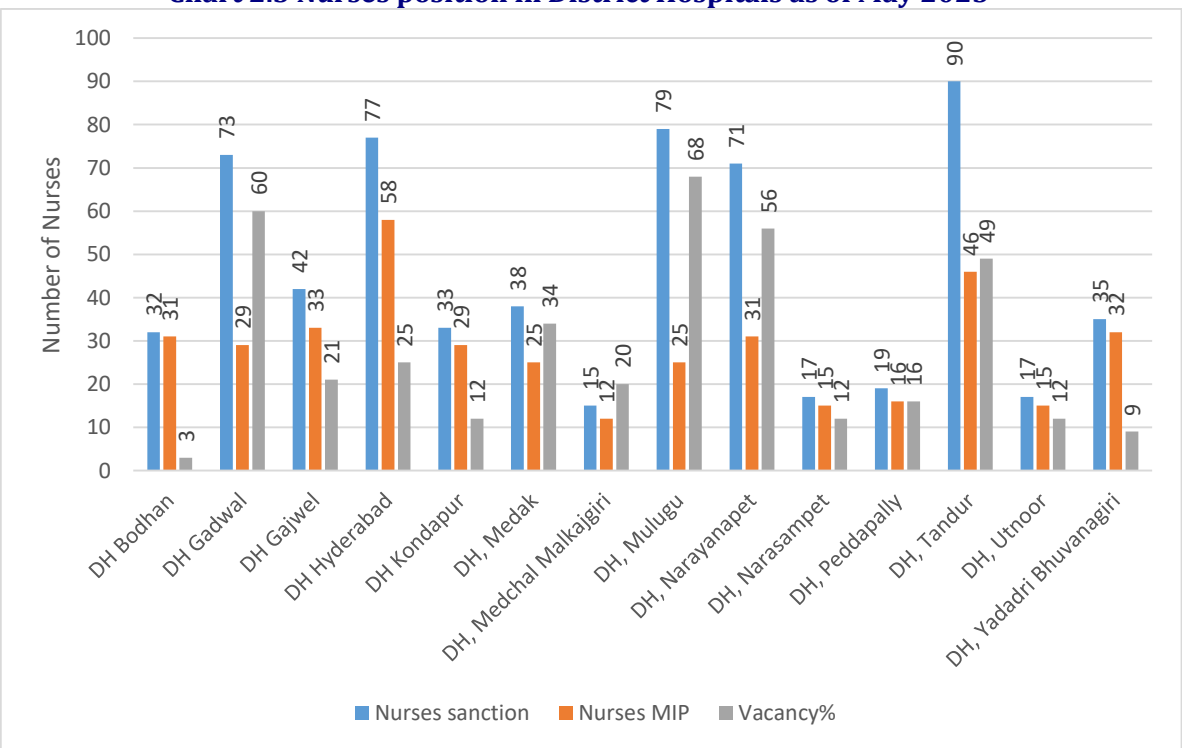
Vacancy upto 25%		Vacancy more than 25% and upto 50%		Vacancy above 50%	

Chart 2.2 Doctors position in District Hospitals as of May 2023



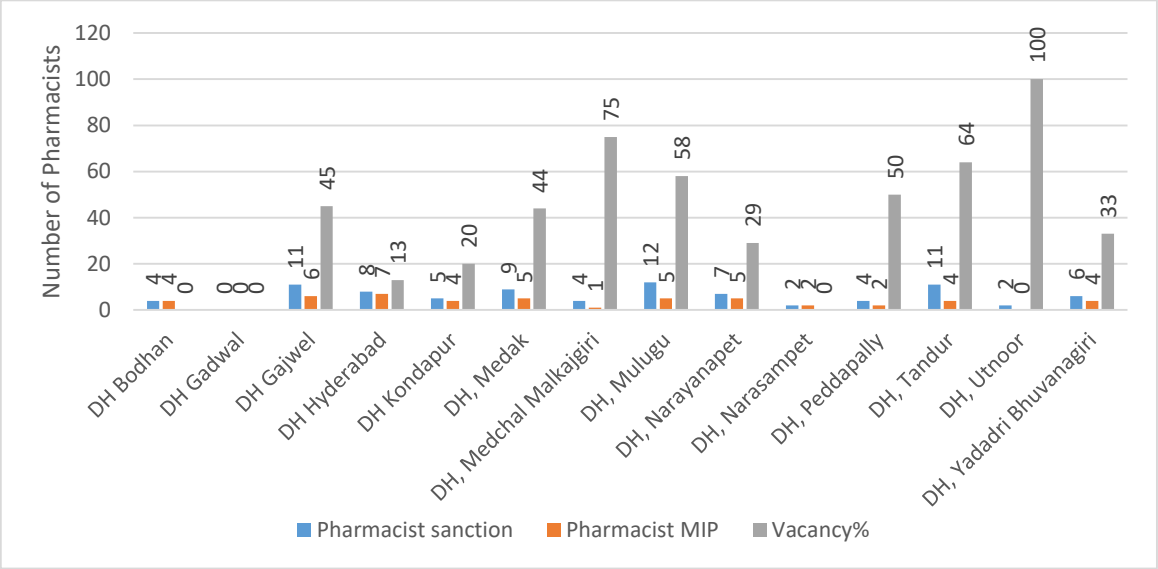
***Source**: Information furnished by the District Hospitals*

Chart 2.3 Nurses position in District Hospitals as of May 2023



***Source**: Information furnished by the District Hospitals*

Chart 2.4 Pharmacist position in District Hospitals as of May 2023



***Source**: Information furnished by the District Hospitals*

As seen from the above, the overall shortage of manpower in the DHs was to the extent of 46 *per cent* with 696 out of the sanctioned 1,524 posts remaining vacant. The vacancy in the cadre of Doctors was 52 *per cent* with 419 out of 801 posts remaining vacant and that of the Nursing Staff was 38 *per cent* with 241 out of the sanctioned 638 posts remaining vacant. Severe shortage of staff was observed in DHs, Jogulamba Gadwal, Medak, Mulugu, Narayanpet and Tandur with vacancies ranging from 64 *per cent* (DH Jogulamba Gadwal) to 24 *per cent* (DH Medchal Malkajgiri). There were no sanctioned posts of Pharmacists in DH Jogulamba Gadwal.

Government in its response (August 2023) stated that, it was establishing new Medical Colleges in all the Districts. Hence, all the District Hospitals are converted to Government General Hospitals/Medical Colleges and the process of cadre re-organisation was taken up in secondary level hospitals and adjustments of Doctors and staff will be done as per IPHS norms.

2.2.5 Status of Human Resources in Test checked AHs and CHCs under TVVP

Details of sanctions, men in position and vacancies in test checked health institutions in respect of Specialist Doctors and other staff in the Area Hospital Malakpet and AH Golconda, CHCs Amberpet, Badepally and Wardhannapet were as follows:

Table 2.7 – Details of sanction of Human Resources in Test checked AHs and CHCs under TVVP as of March 2022

Cadre	Area Hospitals			Community Health Centres		
	SS	MIP	Vacancy (percentage)	SS	MIP	Vacancy (percentage)
Specialist Doctors[2]	105	68	37(35)	80	36	44(55)
Nursing Staff	66	52	14(21)	36	30	6(17)

[2] Includes Civil Surgeon Specialist, Civil Surgeon (RMO), Deputy Civil Surgeon, Civil Assistant Surgeon, Deputy Dental Surgeon and Dental Assistant Surgeon

Para-Medical & other staff	92	60	32(35)	40	27	13(33)
ANM/MPHA/Mid wives/ Nursing Orderly	26	17	9(35)	18	11	7(39)
Total	**289**	**197**	**92(32)**	**174**	**104**	**70(40)**

Source: *Information furnished by the test checked health institutions*

Colour code:

Vacancy upto 25%		Vacancy more than 25% and upto 50%		Vacancy above 50%	

- In the Area Hospital, Golconda, it was observed that there was shortage of Specialist Doctors (39 *per cent*), Nursing Staff (24 *per cent*), Para-Medical & other staff (45 *per cent*) and ANM/MPHA/Mid wives/ Nursing Orderly (43 *per cent*).
- In the Area Hospital, Malakpet, it was observed that there was shortage of Specialist Doctors (32 *per cent*), Nursing Staff (18 *per cent*), Para-Medical & other staff (27 *per cent*) and ANM/MPHA/Mid wives/ Nursing Orderly (25 *per cent*).
- In the CHC, Amberpet it was observed that there was shortage of Specialist Doctors (47 *per cent*), Nursing Staff (10 *per cent*) and Para-Medical & other staff (20 *per cent*).
- In the CHC, Badepally, it was observed that there was shortage of Specialist Doctors (50 *per cent*), Nursing Staff (8 *per cent*), Para-Medical & other staff (20 *per cent*) and ANM/MPHA/Mid wives/ Nursing Orderly (50 *per cent*).
- In the CHC, Wardhannapet, it was observed that there was a shortage of Specialist Doctors (60 *per cent*), Nursing Staff (31 *per cent*) and Para-Medical & other staff (70 *per cent*).

Government in its response (August 2023) stated that, the process of cadre re-organisation was taken up in secondary level hospitals and adjustments of Doctors and staff will be done as per IPHS norms.

In the absence of specific details about the filling up of vacancies pursuant to the notifications issued, the hospital-wise vacancies cannot be analysed by Audit.

2.2.6 Status of Human Resources in PHCs and Sub Centres of test checked institutions of DOPH

As per the IPHS norms relating to PHCs, an MBBS qualified Doctor is to be provided in every PHC.

In response to an audit enquiry about the sanctioned manpower in respect of UPHCs, it was stated by the DMHO, Hyderabad, that UPHCs were not having regular Medical Officer sanctioned posts due to the non-finalisation of redeployment of staff under rationalisation of health institutions. In the absence of this vital information on sanctioned staff, Audit could not quantify the vacancy of staff in UPHCs.

Government in its response (August 2023) stated that, the process of cadre re-organisation was taken up in secondary level hospitals and adjustments of Doctors and staff will be done as per IPHS norms.

Table 2.8 - Status of Human Resources in PHCs and Sub Centres of test checked institutions of DOPH as of March 2022

Cadre	Public Health Centres (PHCs)			Sub Centres		
	SS	MIP	Vacancy (Percentage)	SS	MIP	Vacancy
Doctors	3	3	0	Not Applicable-		
Medical Officers	9	6	3 (33)			
Community Health Officers (CHOs)	4	3	1(25)			
Nursing Staff	6	6	0			
Para-Medical & other staff	31	19	12(39)			
ANM/MPHA/Mid wives/ Nursing Orderly	69	43	26(38)	16	22	No vacancy
Total	**122**	**80**	**42(34)**	Not Applicable		

Source: *Information furnished by test checked health facilities*

Colour code:

Vacancy upto 25%		Vacancy more than 25% and upto 50%		Vacancy above 50%	

In the test checked PHCs, the Men in position of CHOs was nearly equal to the sanctioned strength. Severe shortages of Medical Officers (33 *per cent*), Para-Medical & other staff (39 *per cent*) and ANM/MPHA/Mid wives/Nursing Orderly (38 *per cent*) were observed. In the test checked SCs, the men in position of ANM/MPHA/Mid wives/Nursing Orderly was in excess of the sanctioned strength.

2.2.7 Status of Human Resources in the test checked Super Speciality Hospitals

Scrutiny of the availability of Human Resources in the Super Speciality Hospitals vis-à-vis sanctioned strength revealed the following:

Table 2.9 - Status of Human Resources in the test checked Super Speciality/Teaching Hospitals as of March 2022

Niloufer Hospital, Hyderabad				
Designation	**SS**	**PIP**	**Vacancy**	**% of vacancy**
Specialist Doctors	178	111	67	38
Medical officers	4	4	0	0
Nursing staff	416	125	291	70
ANM	87	16	71	82
Para-Medical & other staff	330	106	224	68
Total	**1,015**	**362**	**653**	**64**
Osmania General Hospital, Hyderabad				
Specialist Doctors	66	45	21	32
Nursing staff	387	259	128	33
ANM	234	142	92	39
Para-Medical & other staff	764	273	491	64
Total	**1,451**	**719**	**732**	50
MNJ Institute of Oncology & Regional Cancer Centre, Hyderabad				
Specialist Doctors	103	51	52	50
Nursing staff	230	116	114	50
Para-Medical & other staff	376	167	209	56
Total	**709**	**334**	**375**	53
Overall shortage of Manpower in test checked Super Speciality Hospitals				
Specialist Doctors	347	207	140	40

Medical Officers	4	4	0	0
Nursing staff	1,033	500	533	52
ANM	321	158	163	51
Para-Medical & other staff	1,470	546	924	63
Total	**3,175**	**1,415**	**1,760**	55

Source: *Information furnished by test checked health facilities*

Colour code**:**

Vacancy upto 25%		Vacancy more than 25% and upto 50%		Vacancy above 50%	

- In the Niloufer hospital, there was no vacancy in the cadre of Medical Officers.
- In the three test checked Super Speciality hospitals, there was shortage of Specialist Doctors (40 *per cent*), Nursing Staff (52 *per cent*), Para-Medical & other staff (63 *per cent*) and ANM/MPHA/Mid Wives/Nursing Orderly (51 *per cent*).
- In the test checked Niloufer hospital, there was shortage of Specialist Doctors (38 *per cent*), Nursing Staff (70 *per cent*), Para-Medical & other staff (68 *per cent*) and ANM/MPHA/Mid Wives/Nursing Orderly (82 *per cent*).
- In the test checked Osmania General hospital, there was shortage of Specialist Doctors (32 *per cent*), Nursing Staff (33 *per cent*), Para-Medical & other staff (64 *per cent*) and ANM/MPHA/Mid Wives/Nursing Orderly (39 *per cent*).
- In the test checked MNJ Institute of Oncology & Regional Cancer Centre, Hyderabad, there was shortage of Specialist Doctors (50 *per cent*), Nursing Staff (50 *per cent*) and Para Medical & other staff (56 *per cent*).

No specific response has been furnished by the Super Specialty Hospitals for the vacancies.

Government in its response stated (August 2023) that, the recruitment of 852 Assistant Professors in various specialities are filled in DME institutions, 193 Associate Professors promotions issued, 59 Professors promotions ordered. For recruitment of staff Nurses for various institutions, tests have been completed and would be filled in shortly.

Hospital-wise details of the filling up of these staff were however not furnished as a result of which actual shortage of staff after these recruitments could not be assessed.

2.3 Human Resource availability against sanctioned strength in all Districts

The Audit noticed that the Department of Health and Family Welfare had not maintained a centralised database of sanctioned strength, actual personnel in positions and District-wise deployment data of Doctors, nurses and other paramedical staff in healthcare facilities across the state. Due to this limitation, the Audit relied on Health Management Information System (HMIS) data for AHs, CHCs, PHCs and Sub Centres.

Furthermore, for District Hospitals, field visit data was obtained as HMIS data for DHs did not fully cover all the existing DHs. The findings of the audit regarding the availability of staff in various posts under Primary and Secondary Healthcare are as follows:

Chart 2.5: Distribution of Human Resources across the Districts in Primary and Secondary Care Health facilities as of April 2023

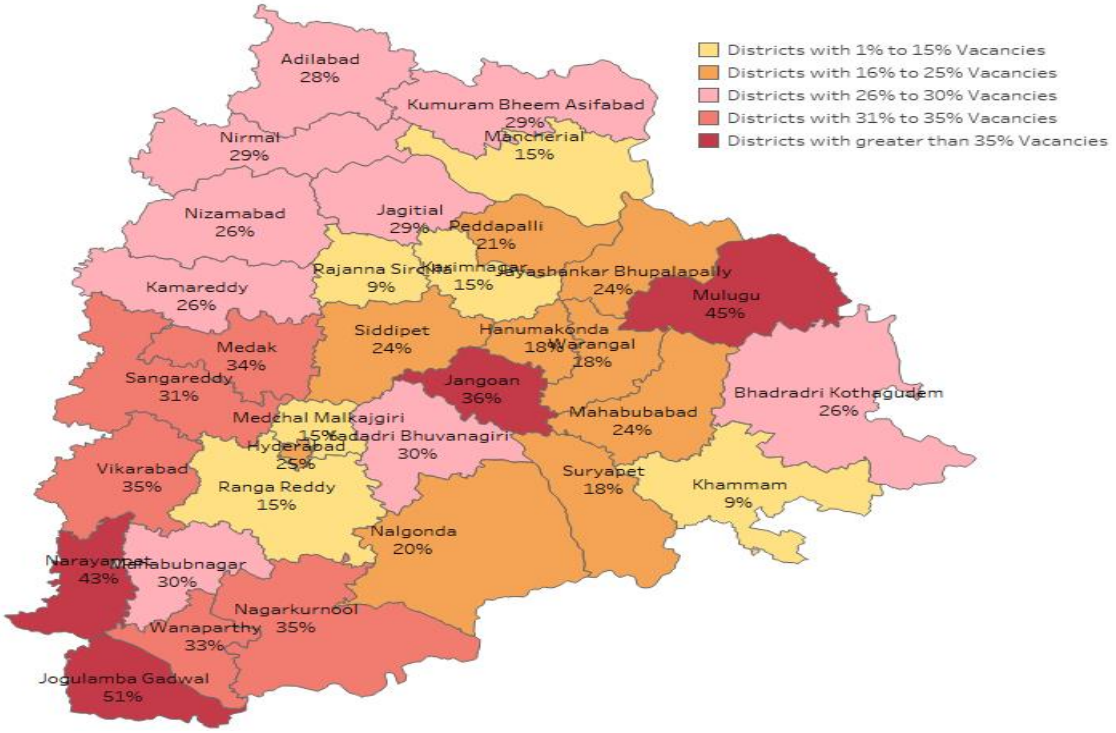


Chart 2.6 – Percentage of Vacancy in Doctors Cadre as of April 2023

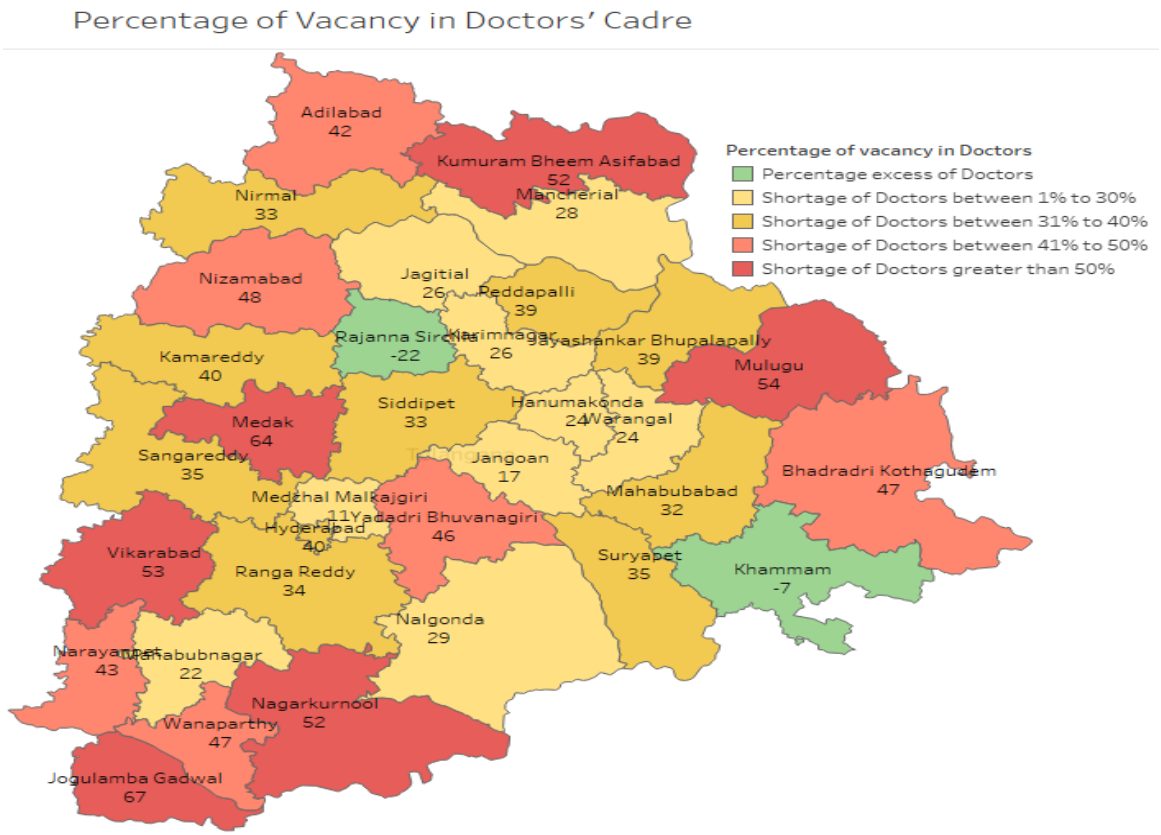


Chart 2.7 – Percentage of vacancy in Nurses Cadre as of April 2023

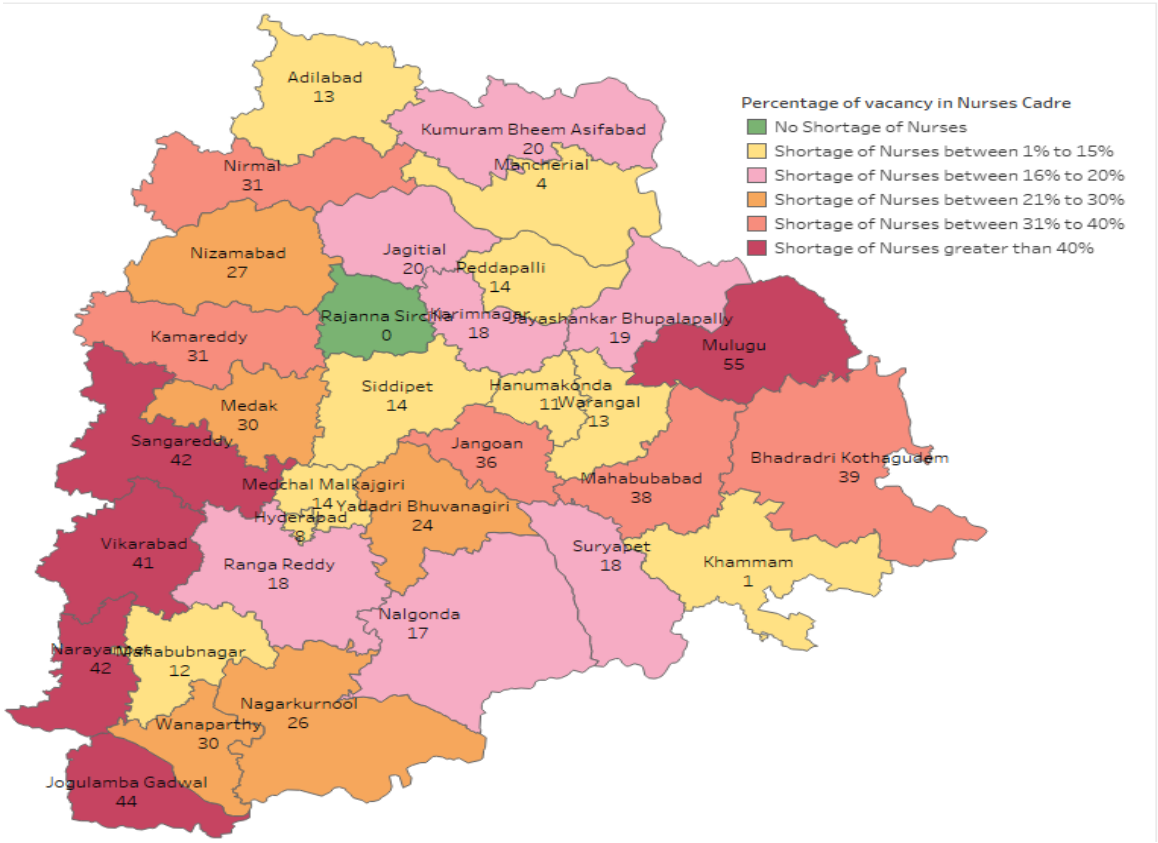
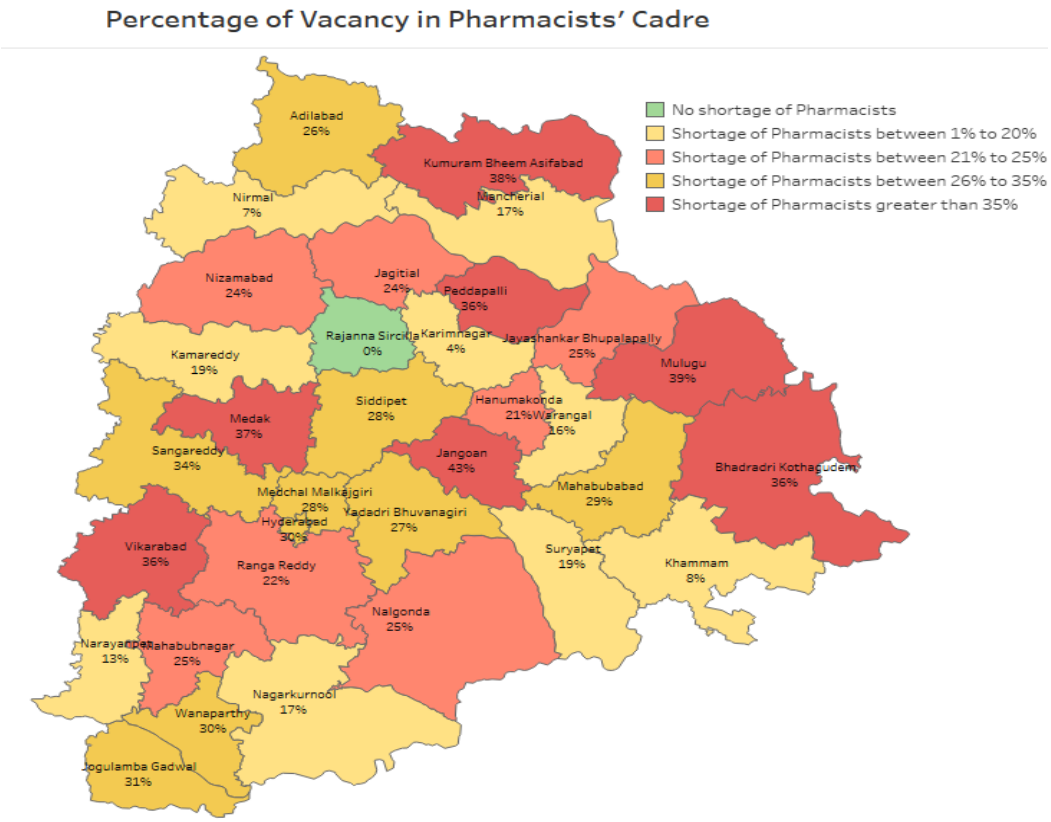


Chart 2.8 Percentage of Vacancy in Pharmacists Cadre as of April 2023



Source: *HMIS and information from District Hospitals*

Government in its response stated (August 2023) that TVVP dealt with Secondary healthcare facilities and that the distribution of Human Resources across the District was on the basis of patient load. However, no specific details were furnished with regard to primary health care.

Non-provision of a requisite number of Doctors, Nurses and Pharmacist affects the day-to-day functioning of these health institutions and affects the delivery of medical services to people. There is an urgent need for strengthening the cadres where there are huge vacancies.

2.4 Human Resources under Directorate of Medical Education

2.4.1 Status of Human Resources under DME

Institutions under the administrative control of the Directorate of Medical Education (DME) are governed by the provisions of The Indian Medical Council Act, 1956 and the rules, regulations and standards made thereunder. The Indian Medical Council, now known as the National Medical Commission, has prescribed minimum requirements for posts and other necessities such as infrastructure and equipment in Medical Colleges and Associated Hospitals. The delivery of quality healthcare services in hospitals largely depends on the adequate availability of manpower, especially in the cadres of Doctors, Staff Nurses, Para-medical personnel and other supporting Staff.

When the Audit called for details of the State-level policy, short-term, medium-term and long-term goals set in the State for Human Resources, the Doctor population, Doctor-Patient ratio, Nurse population, Doctor-Nurse ratio etc., DME only provided the consolidated manpower position without presenting health institution and college-specific data on sanctioned strength, personnel in position, vacant posts, patient load, etc.

In the absence of this data, Audit is unable to ascertain and confirm the availability of a sufficient number of Teaching staff, Doctors, Para-Medical personnel and Nursing staff in its Medical Colleges and Teaching Hospitals to adequately serve the patients.

Table 2.10: Status of Human Resources under DME as of March 2022

Category	Sanctioned Posts	MIP	Vacancy	Vacancy percentage
Doctors	2,975	1,715	1,260	42
Nurses	4,831	2,112	2,719	56
Paramedics	1,412	286	1,126	80
Others	2,281	939	1,342	59
Total	**11,499**	**5,052**	**6,447**	**56**

Source: *Information furnished by the DME*

Colour code**:**

Vacancy upto 25%		Vacancy more than 25% and upto 50%		Vacancy above 50%	

Audit observed an overall shortage of 56 *per cent* in the cadre strength of health institutions under the control of DME. Shortages were also observed in the cadre of Doctors (42 *per cent*), Nurses (56 *per cent*) and Paramedics (80 *per cent*).

2.4.2 Availability of Medical Colleges and intake capacity in State

Adequate healthcare infrastructure with trained medical human resources is a prerequisite for providing equitable access to affordable, accountable and quality healthcare to the citizens. Medical education contributes significantly to make available services of Doctors including specialists in Government as well as private hospitals to cater to the health needs. The National Medical Commission[3] is the Regulatory authority for Medical Education.

Table 2.11 – Year-wise details of Medical Colleges and in take capacity as of March 2022

Year	Course	Government Medical colleges		Private Medical colleges		Total	
		No. of colleges	Intake capacity	No. of colleges	Intake capacity	No. of colleges	Intake capacity
2016-17	Undergraduate	7	1,100	18	2,600	25	3,700
2021-22		10	1,765	23	3,650	33	5,415
2016-17	Postgraduate	3	532	10	697	13	1,229
2021-22		7	905	18	1,301	25	2,206
2016-17	Super Specialty	2	74	4	11	6	85
2021-22		2	92	5	21	7	113

Source: *Information furnished by the Department*

2.4.2.1 Undergraduate (UG) Courses

During the period 2016-22, three new Government Medical Colleges[4] and five Private Medical Colleges were opened whereby intake capacity was increased by 1715 seats (46 *per cent*).

2.4.2.2 Post Graduate (PG) Courses

To mitigate the shortage of specialists, it was essential to increase the PG seats. During the period 2016-22, the intake capacity in these new colleges was increased by 977 seats.

When Audit enquired with the DME as to whether any comprehensive plan to bridge the gaps to achieve the Doctor-Population ratio was conducted, it was replied that gap analysis was done. However, supporting document regarding gap analysis was not produced to Audit.

2.4.2.3 Availability of seats under AYUSH

Under AYUSH, Medical colleges were established to impart quality education at the Graduation and Post-Graduation level through Ayurvedic, Unani, Homeopathy and Naturopathy systems of medicine. Number of colleges and availability of seats in this system to the end of March 2022 are as follows:

Table 2.12 - Availability of Colleges and seats under AYUSH

Sl.No	System	Colleges	UG seats	PG seats
1	Ayurveda	2	126	48
2	Unani	1	94	45
3	Homeopathy	1	125	38
4	Naturopathy	1	60	0
Total		5	405	131

Source: *Information Furnished by the Department*

[3] National Medical Commission (NMC) is an Indian regulatory body of 33 members which regulates medical education and medical professionals. It replaced the Medical Council of India on 25 September 2020

[4] Including ESI Medical College, a college run by ESI Corporation

Audit observed that, there was no increase in the number of Colleges and seats.

2.4.2.4 Cancellation of Diplomate of National Board (DNB) Seats

To increase the number of qualified specialists in peripheral areas, National Board of Examinations[5] (NBE) accredits institutions/hospitals having adequate infrastructure, facilities, faculty and patient load as per stipulated accreditation norms for the training of candidates in various approved medical specialities. The main criteria for seeking accreditation for DNB was the bed strength of the applicant hospital. All District Hospitals above 100-bed capacity can apply for DNB courses and should have a Memorandum of Undertaking (MoU) with existing Medical Colleges.

Accordingly, the Telangana Government had submitted (2015) a proposal to NBE for the introduction of DNB courses in the District Hospital, King Koti Hyderabad in five[6] specialties which are the basic Departments needed at the peripheral level, especially for the Mother and Child Health Centres (MCH). The Superintendent, District Hospital, King Koti, Hyderabad entered (April 2015) into an MoU with the Principal, Osmania Medical College (OMC)[7], Hyderabad to acquire the Human Resources and to utilise the facilities/infrastructure. Based on the application and after conducting inspection, NBE granted accreditation to the District Hospital, King Koti, Hyderabad for operating the Post Graduate training facility for DNB seats during July 2016 to July 2017 for the following specialities.

Table 2.13 - Details of Post Graduate seats under DNB quota

Sl No	Name of the Department	Accreditation valid upto	No of seats
1	General Medicine	July 2016 to June 2021	02
2	Anesthesiology	July 2016 to June 2021	01
3	Obstetrics and Gynaecology (OB&GY)	January 2017 to December 2021	02
4	Paediatrics	January 2017 to December 2021	01
5	General Surgery	July 2016 to June 2021	01

Source: *Information furnished by the Department*

Scrutiny revealed that, NBE has withdrawn its accreditation on 03 July 2018 for all 7 (seven) DNB seats. The withdrawal of the seats was attributed (July 2018) by the National Board of Examinations to the receipt of complaints regarding inadequate thesis guidance support, non-payment of stipend regularly, inadequate research support etc. It was also directed by NBE to District Hospital, King Koti, Hyderabad to relieve all ongoing DNB trainees by issuing provisional DNB training completion certificates.

Due to the non provision of stipends timely, the seats sanctioned by NBE were withdrawn (July 2018) resulting in the loss of seven PG seats.

Government in its response stated (August 2023) that, there was no need for DNB courses in secondary level hospitals as State Government was establishing new Medical Colleges

[5] Which was established in 1975 for improving the quality of Medical Education by establishing high and uniform standards of postgraduate examinations in postgraduate and post-doctoral fellowship examinations in approved disciplines leading to the award of Diploma of National Board (DNB) and Fellow of National Board (FNB)
[6] Obstetrics and Gynaecology (OBG), Paediatric, Anesthesiology, General Medicine and General Surgery
[7] which is annexed to the nearest Government Medical College in the vicinity

in all the Districts. Hence, all the District Hospitals were converted to Government General Hospitals/Medical Colleges.

The reply is not acceptable as the DNB courses are PG Diploma courses whereas Medical Colleges cater to Under Graduate courses.

2.4.3 Availability of Human Resources in nine Medical Colleges

Scrutiny of the sanctioned strength, men in position and vacancy in respect of the nine[8] existing Medical Colleges revealed the following:

Table 2.14 – Vacancy position in respect of nine Medical Colleges as of March 2022

S.No	Name of the post	Sanctioned Strength	MIP	Vacancy	Vacancy percentage
1	Professor	323	267	56	17
2	Associate Professor	524	270	254	48
3	Assistant Professor/ Tutor	1,531	921	610	40
Total:		**2,378**	**1,458**	**920**	39

Source: *Information furnished by DME*

Colour code**:**

Vacancy upto 25%		Vacancy more than 25% and upto 50%		Vacancy above 50%	

The aforementioned Medical Colleges were having an overall shortage of Professors (17 *per cent*), Associate Professors (48 *per cent*) and Assistant Professor/Tutor (40 *per cent*).

The sanctioned strength and men in position in the test checked Medical Colleges were as follows:

Table 2.15 – Vacancy position in the Test checked Medical Colleges as of March 2022

S.No	Name of the post	Sanctioned Strength	MIP	Vacancy	Vacancy percentage
Osmania Medical College					
1	Professor	81	76	5	6
2	Associate Professor	121	69	52	43
3	Assistant Professor/Tutor	304	201	103	34
Total:		**506**	**346**	**160**	**32**
Kakatiya Medical College					
1	Professor	34	28	6	18
2	Associate Professor	71	38	33	46
3	Assistant Professor/Tutor	145	100	45	31
Total:		**250**	**166**	**84**	**34**
Government Medical College, Mahabubnagar					
1	Professor	20	18	2	10
2	Associate Professor	34	26	8	24

[8] Osmania Medical College; Gandhi Medical College; Kakatiya Medical College; RIMS, Adilabad; Government Medical College, Nalgonda; Government Medical College, Siddipet; Government Medical College, Mahabubnagar; Government Medical College, Suryapet; Government Medical College, Nizamabad

3	Assistant Professor/Tutor	79	77	2	3
Total:		**133**	**121**	**12**	**9**

Source: *Information furnished by the test checked colleges*

Colour code**:**

Vacancy upto 25%		Vacancy more than 25% and upto 50%		Vacancy above 50%	

- In the test checked Osmania Medical College, Hyderabad shortage in the cadres of Associate Professors (43 *per cent*) and Assistant Professors/Tutors (34 *per cent*) was observed.
- In the test checked Kakatiya Medical College, Warangal shortage in the cadres of Associate Professors (46 *per cent*) and Assistant Professors/Tutors (31 *per cent*) was observed.
- In the test checked Government Medical College, Mahabubnagar, shortage in the cadre of Associate Professors (24 *per cent*) was observed.

Government in its response stated (August 2023) that, 852 Assistant Professors in various specialities are recruited recently in DME institutions, promotion orders issued to 193 Associate Professors and 59 Professors.

Hospital-wise details of the filling up of these staff were however not furnished as a result of which actual shortage of staff after these recruitments could not be assessed.

The vacancies in the positions of Associate Professors and Assistant Professors have an impact on the quality of education provided to medical students.

2.5 Human Resources under AYUSH

Table 2.16: Human Resources under AYUSH as of March 2022

Category	Sanctioned Posts	Working Strength	Vacancy	Vacancy percentage
Doctor	777	451	326	42
Nurse	417	196	221	53
Pharmacist	581	230	351	60
Para-Medical & other staff	916	434	482	53
Total	**2,691**	**1,311**	**1,380**	**51**

Source: *Information furnished by the Department*

Colour code:

Vacancy upto 25%		Vacancy more than 25% and upto 50%		Vacancy above 50%	

Audit observed overall shortage of 51 *per cent* in the Department of AYUSH. Shortages in the cadre of Doctor (42 *per cent*), Nurse (53 *per cent*) and Pharmacist (60 *per cent*) and Para-Medical & other staff (53 *per cent*) were noticed in the Health institutions under the control of Department of AYUSH.

Table 2.17: Status of Human Resources in some specific posts under AYUSH Department as of March 2022

Category	Sanctioned Posts	Working Strength	Vacant Post	Vacancy percentage
Professors	164	79	85	52
Lecturers	79	29	50	63
Medical Officers	534	343	191	36
Lab technicians	61	18	43	70
Pharmacist (Ayurveda)	249	113	136	55
Pharmacist (Homeo)	106	52	54	51
Pharmacist (Unani)	165	47	118	72
Total	**1,358**	**681**	**677**	**50**

Source: *Information furnished by the Commissioner AYUSH*

Colour code:

Vacancy upto 25%		Vacancy more than 25% and upto 50%		Vacancy above 50%	

Shortages in the cadre of Professors (52 *per cent*), Lecturers (63 *per cent*), Medical Officers (36 *per cent*), Lab Technicians (70 *per cent*) and Pharmacist (Ayurveda) (55 *per cent*) Pharmacist (Homeo) (51 *per cent*) and Pharmacist (Unani) (72 *per cent*) were noticed in the Health institutions under the control of Department of AYUSH.

2.5.1 Availability of Human Resources in upgraded AYUSH Health and Wellness Centres

Table 2.18: Status of Human Resources in AYUSH Health and Wellness Centres as of May 2023

No. of HWCs upgraded upto Nov. 2021	No. of Yoga instructors to be deployed @ 2	No. of HWCs having Yoga instructor	No . of ASHAs to be deployed @5 per HWCs	No. of ASHAs deployed in actual in HWCs	No. of ANMs to be deployed @2 per HWCs	No. of ANMs deployed in actual in HWCs
421	842	0	2,105	1,780	842	0

Source: *Information furnished by the Department*

Audit observed that, of the 421 HWCs upgraded, there were no Yoga Instructors and ANMs in any of the upgraded HWCs. Shortages in the deployment of ASHAs was to the extent of 15 *per cent*.

Table 2.19 Status of Human Resources in the AYUSH Department in Districts as of May 2023

Sl. No.	District Name	AYUSH Dept.			Ayurvedic Medical Officer		
		Sanctioned	working	Vacancy (Percentage)	Sanctioned	Working	Vacancy (Percentage)
1	Adilabad	42	18	24(57)	8	2	6(75)
2	Bhadradri Kothagudem	51	30	21(41)	8	4	4(50)
3	Hyderabad	0	0	0	0	0	0

Sl. No.	District Name	AYUSH Dept.			Ayurvedic Medical Officer		
		Sanctioned	working	Vacancy (Percentage)	Sanctioned	Working	Vacancy (Percentage)
4	Jagtial	18	7	11(61)	5	0	5(100)
5	Jangaon	33	21	12(36)	5	2	3(60)
6	Jayashankar Bhupalpally	21	14	7(33)	5	4	1(20)
7	Jogulamba Gadwal	21	10	11(52)	5	1	4(80)
8	Kamareddy	57	28	29(51)	8	1	7(88)
9	Karimnagar	36	30	6(17)	3	3	0
10	Khammam	54	42	12(22)	13	5	8(62)
11	Kumuram Bheem Asifabad	30	16	14(47)	3	0	3(100)
12	Mahabubabad	30	20	10(33)	4	2	2(50)
13	Mahabubnagar	24	19	5(21)	3	2	1(33)
14	Mancherial	30	16	14(47)	4	2	2(50)
15	Medak	42	33	9(21)	7	5	2(29)
16	Medchal Malkajgiri	27	20	7(26)	3	2	1(33)
17	Mulugu	21	8	13(62)	6	2	4(67)
18	Nagarkurnool	42	25	17(40)	7	1	6(86)
19	Nalgonda	60	45	15(25)	8	3	5(63)
20	Narayanpet	15	12	3(20)	1	1	0
21	Nirmal	36	23	13(36)	8	3	5(63)
22	Nizamabad	75	51	24(32)	14	1	13(93)
23	Peddapalli	27	16	11(41)	5	3	2(40)
24	Rajanna Sircilla	21	10	11(52)	4	1	3(75)
25	Rangareddy	78	50	28(36)	16	6	10(63)
26	Sangareddy	69	60	9(13)	10	6	4(40)
27	Siddipet	42	27	15(36)	8	2	6(75)
28	Suryapet	36	29	7(19)	6	3	3(50)
29	Vikarabad	45	22	23(51)	7	2	5(71)
30	Wanaparthy	15	12	3(20)	1	0	1(100)
31	Warangal Rural	33	28	5(15)	3	3	0
32	Hanumakonda	21	16	5(24)	4	3	1(25)
33	Yadadri Bhuvanagiri	30	21	9(30)	7	1	6(86)
Total		**1182**	**779**	**403(34)**	**199**	**76**	**123(62)**

Source: *Information furnished by the Department*

Colour code:

Vacancy upto 25%		Vacancy more than 25% and upto 50%		Vacancy above 50%	

Audit observed that the overall vacancy in the AYUSH Department was to the extent of 34 *per cent*. Shortage in the cadre of Ayurvedic Medical Officer was to the extent of 62 *per cent*.

2.6 Human Resources under Drugs Control Administration (DCA)

Table 2.20: Manpower position under DCA as of April 2023

Name of the Post	Sanction	Working	Vacancy	Vacancy percentage
Director / Assistant Director	21	20	1	5
Administration	48	25	23	48
Drug inspector	71	53	18	25
Analyst	13	4	9	69
Scientific Officer	5	5	0	0
Vigilance officer	1	0	1	100
Lab technician	2	2	0	0
Driver	4	0	4	100
Others	33	22	11	33
Total	**198**	**131**	**67**	**34**

Source : *Information furnished by the DCA*

Colour code:

Vacancy upto 25%		Vacancy more than 25% and upto 50%		Vacancy above 50%	

Shortages were observed in the cadre of Analysts (69 *per cent*) and Drug Inspectors (25 *per cent*) under the control of Drugs Control Administration

2.7 Accredited Social Health Activist (ASHA)

Accredited Social Health Activist (ASHA) is a health activist in the community whose responsibility includes creating awareness on health and its social determinants and mobilising the community towards local health planning and increase utilisation and accountability of the existing health services. Besides, ASHA is also entrusted with the responsibility of informing about the birth and death in the village and any unusual health problems/disease outbreaks in the community to the Sub-Centres/Primary Health Centres. ASHA must be primarily a woman resident of the village, 'Married/Widow/Divorced' and preferably in the age group of 25 to 45 years. ASHA should have effective communication skills and leadership qualities and should be able to reach out to the community. She should be a literate woman with formal education up to Eighth Class.

Table 2.21 - District-wise shortfall (%) in availability of ASHAs as per IPHS norms as of August 2023

District	Required	Available	Vacancy	Vacancy percentage
Adilabad	1,100	1,006	94	9
Bhadradri Kothagudem	1,560	1,440	120	8
Hanumakonda	765	636	129	17
Hyderabad	1,913	1,913	-	-
Jagtial	890	751	139	16
Jangaon	542	521	21	4
Jayashankar Bhupalpally	446	420	26	6

Jogulamba Gadwal	658	623	35	5
Kamareddy	898	773	125	14
Karimnagar	929	649	280	30
Khammam	1,452	1,353	99	7
Kumuram Bheem Asifabad	849	753	96	11
Mahabubabad	985	892	93	9
Mahabubnagar	915	875	40	4
Mancherial	755	663	92	12
Medak	762	564	198	26
Medchal Malkajgiri	1,273	1,273	-	-
Mulugu	490	484	6	1
Nagarkurnool	1,039	887	152	15
Nalgonda	1,540	1,464	76	5
Narayanpet	610	591	19	3
Nirmal	624	568	56	9
Nizamabad	1,308	1,207	101	8
Peddapalli	626	507	119	19
Rangareddy	1,385	1,385	-	-
Sangareddy	1,212	937	275	23
Siddipet	925	848	77	8
Rajanna Sircilla	505	481	24	5
Suryapet	1,068	1,035	33	3
Vikarabad	885	712	173	20
Wanaparthy	615	572	43	7
Warangal	745	673	72	10
Yadadri Bhuvanagiri	759	704	55	7
Total	**31,028**	**28,160**	**2,868**	**9**

Source: *Information furnished by the Department*

Colour code:

Vacancy upto 25%		Vacancy more than 25% and upto 50%		Vacancy above 50%	

Scrutiny of the District-wise information revealed the following:

- Out of 33 Districts, the shortage in 12 Districts was ranging from 10 *per cent* (Warangal) to 30 *per cent* (Karimnagar).
- In respect of data furnished to the end of 13 September 2022, Audit observed that, out of the 26,573 available ASHA workers, 7,274 workers (27 *per cent*) had a qualification below 8th class and 11,906 workers (45 *per cent*) were aged more than 45 years. Detailed District-wise breakup of ASHA workers with qualification less than 8th class and more than 45 years of age was not furnished by the Department in respect of 2021-22.

Government in its response stated (August 2023) that, as per population norms and ASHA guidelines, there was a requirement of 31,028 ASHAs and that the actual ASHAs in position was 28,160. It was confirmed that, the vacancy position of ASHAs in Warangal District remained at 10 *per cent.* However, the vacancy position of Medchal Malkajgiri has

been addressed and 100 *per cent* ASHAs were in position. It was assured that the State was taking steps to fill up the vacancies as per the requirement.

2.8 Conclusion

Department had not furnished Human Resources policy for the appointment of Specialist Doctors, Medical Officers and other supporting Paramedical staff to meet the requirement of the healthcare facilities according to the IPHS norms though it was stated to had been prepared. Department had also not maintained a centralised database of sanctioned strength, actual persons in position and District-wise deployment data of Doctors, nurses and other paramedical staff in the healthcare facilities across the State.

The availability of Doctors showed an increasing trend from 2017-18 to 2021-22 and was 1:881 in the State of Telangana.

There were huge gaps between sanctioned posts and the men-in- position of healthcare staff with the overall vacancies being 45 per cent. As against 10,822 sanctioned posts in the Telangana Vaidya Vidhana Parishad only 6,196 staff were in position with vacancies ranging up to 43 per cent. In the case of Institute of Preventive Medicine, as against 391 sanctioned posts only 181 staff were in position with vacancies ranging up to 54 per cent. In the Department of AYUSH, as against 2,691 sanctioned posts, only 1,311 staff were in position with vacancies ranging up to 51 per cent.

The overall shortage of manpower in the District Hospitals was to the extent of 46 per cent with 696 out of the sanctioned 1524 posts remaining vacant. The vacancy in the cadre of Doctors was 52 per cent with 419 out of the 801 posts remaining vacant and that of the Nursing Staff was 38 per cent with 241 out of the sanctioned 638 posts remaining vacant.

Acute shortages of teaching staff were observed in nine Medical Colleges with overall vacancies in the cadre of Associate Professors (48 per cent) and Assistant Professors/Tutors (40 per cent). Vacancies in the positions of Associate Professors and Assistant Professors have an impact on the quality of medical education.

There was no increase in the number of Colleges and seats under AYUSH stream. Huge vacancies were noticed in the Department of AYUSH in the cadres of Doctors (42 per cent), Nurses (53 per cent), Pharmacist (60 per cent) and Para-Medical & other staff (53 per cent). Besides these, vacancies were also observed in the cadre of Professors (52 per cent) and Lecturers (63 per cent) which impacted the quality of medical education imparted under AYUSH. Yoga instructors and ANMs have not been posted in any of the 421 upgraded HWCs.

2.9 Recommendations

- State Government should formulate a Human Resource Policy with emphasis on short, medium and long term goals to address the shortage of Human Resources in various cadres.

- State Government should review the availability of manpower in all the health institutions and ensure availability of staff as per the IPHS norms.
- Government should develop a Human Resource Management System (HRMS) to know the deployment of staff in all health facilities across all HODs on real time basis.

Chapter 3

Healthcare Services

CHAPTER 3
Healthcare Services

Healthcare Institutions provide services to the patients which could be categorised under Line Services, Support Services and Auxiliary Services. Line Services include OPD Services, IPD Services, Emergency Services, Super Specialty Services such as Operation Theatres, ICU Services, Maternity Services, Blood Bank and Diagnostic Services. Support Services include provision of Oxygen, Dietary, Laundry, Bio-Medical Waste Management, Ambulance and Mortuary Services. Auxiliary Services include Patient Safety facilities, Patient Registration, Grievance/Complaint Redressal and Stores.

Various components of Health services

Line Services	***Support Services***	***Auxiliary Services***
Outdoor Patient Department	Oxygen Services	Patient Safety Facilities
Indoor Patient Department	Dietary Service	Patient Registration
Emergency Services	Laundry Service	Grievance /Complaint Redressal
Super Specialty	Biomedical Waste Management	Stores
OT, ICU	Ambulance Service	
Maternity	Mortuary Service	
Blood Bank		
Diagnostic Services		

3.1 Fixed Day Health Service (FDHS)

Under FDHS[1], health services are offered by the District Medical and Health Officer (DM&HO) to each village on a 'fixed' day of each month. Fixed Day Health Services consist of a Mobile Health Unit (MHU) comprising medical equipment along with well-trained Lab Technicians and Pharmacists to perform basic lab diagnosis and to dispense the medicines. FDHS is a technology-enabled, comprehensive, once-a-month fixed day health service for the rural poor located more than 3 kilometers away from any public health service provider PHCs with a set of services like primary screening of all pregnant women to identify risky pregnancies, screening of children with insufficient growth/diseases through appropriate lab investigations and distribution of drugs for the chronic diseases and ensures 100 *per cent* immunisation of children. The MHU visits two service points every day of the month according to a pre-determined calendar and on pre-decided and approved routes.

Audit observed that the FDHS were not being extended to the rural poor as envisaged. When the specific reasons for the discontinuance of FDHS were called for, it was replied

[1] A Scheme introduced by the erstwhile State Government in the year 2008 under Public Not for Profit partnership with M/s Health Management and Research Institute

(March 2022) by the Commissioner of HM&FW that, as the SCs in the State were converted into Palle Dawakhanas and services were being brought to the doorstep of people, the FDHS had become infructuous. Hence, these services were provided up to December 2021 and the staff services were being utilised at different health facilities.

The reply of the Department is not acceptable as 1,595 out of 4,797 SCs were yet to be converted as Palle Dawakhanas. Further, Audit also observed that, Medical Officers (earlier known as Mid Level Health Provider (MLHP)) were not available in 122 Palle Dawakhanas.

Government in its response also stated that 3,206 Health Wellness Centres (HWCs) were sanctioned Medical Officers and that currently 3,084 Medical Officers were in position. However, supporting documents in respect of 3,084 Medical Officers being in position were not furnished to Audit. Further, Government had not clarified the position as to how FDHS services are rendered in the absence of conversion of all the SCs into HWCs.

3.2 Delivery of Healthcare Services

3.2.1 Outpatient Department (OPD) Services

Outpatient Department (OPD) is the first point of contact between patient and hospital staff. To avail services in a hospital, patients first register at the registration counter of the hospital. Patients are then examined by OPD Doctors and further diagnostic tests, if necessary, are prescribed for evidence-based diagnosis and/or drugs are prescribed or admission in In-Patient Department (IPD) is advised based on the diagnosis.

3.2.1.1 Availability of Registration Counters and Average Daily Patient Load per Counter in the test checked Health Institutions

Registration Counter is the first point of contact with the hospital for a patient and is an important component of the hospital for patients and their attendants. NHM Assessor Guidebook (Vol-l) estimates that average time required for registration to be 3-5 minutes per patient, which roughly works out to about 20 patients/ hour per counter.

Inadequate Registration Counters

Audit examined the number of patients registered during 2021-22 in the test checked Hospitals with the availability of registration counter(s) and identified shortage of counters in four out of nine health institutions that were test checked.

Table 3.1- Inadequate registration counters in test checked Hospitals

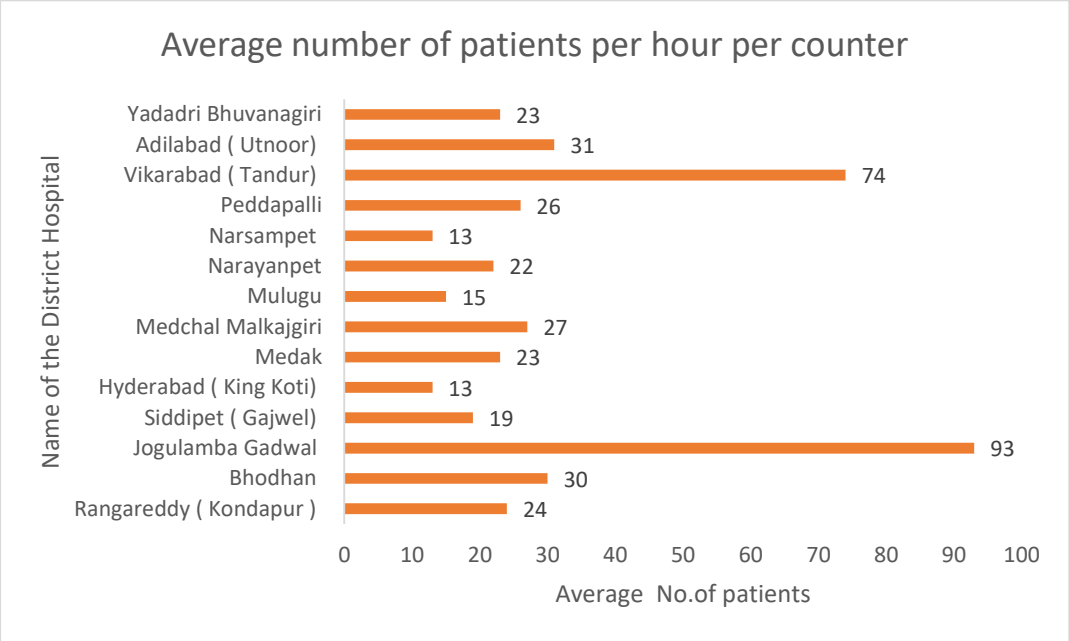
Name of the hospital	Counters available	No. of OPD Patients	Average working hours [2]	Average no. of working days (310[3])	Counters required (20 per hour)	Shortage of counters
Osmania General Hospital	6	5,14,211	6	310	14	8
Niloufer Hospital	4	1,91,576	6	310	5	1
AH, Golconda, Hyderabad	2	2,64,762	6	310	7	5
CHC Badepally, Mahabubnagar	2	95,203	6	310	3	1

Source: - *Information furnished by the Hospitals*

[2] Assuming that a Doctor in OPD worked full time, i.e. six hours continuously
[3] Average working days: - 365 – (52 Sundays & 3 National Holidays) = 310 working days

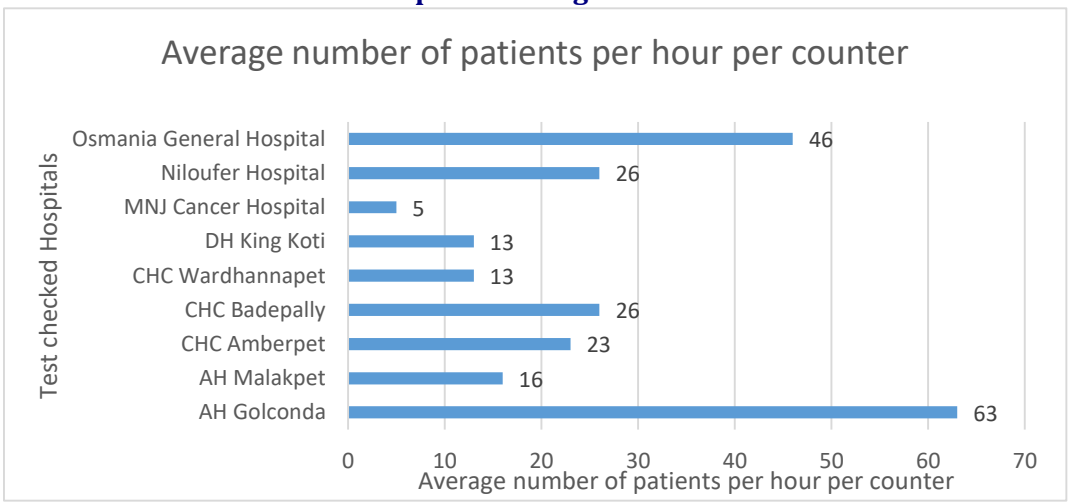
As per the NHM Assessor Guidebook (Vol-l), the shortage of counters ranged from 1 to 8 in the aforementioned hospitals. Due to shortage of registration counters in four out of nine test checked hospitals, each counter per hour was faced with an increased patient load. Thus, the patients were forced to wait a long time for registration and each counter was faced with an increase in workload.

Chart 3.1 - Average number of Patients per hour per counter in all DHs during 2021-22



Source: *Information furnished by the Hospitals*

Chart 3.2 - Average number of Patients per hour per counter in Test checked Hospitals during 2021-22



Source: *Information furnished by the Hospitals*

Government in its response stated (August 2023) that, with the introduction of Hospital Management Information System (HMIS), registration time has drastically come down even for new registrations. For repeat visit by already registered patients which constitute more than 60 *per cent* of the total patients, the time taken was even less. Thus the counters are able to handle the load of all the patients well within the OP hours.

Government response is not acceptable as OP module of HMIS had been implemented in only 29 out of the 102 proposed health institutions (as of March 2023) as mentioned in Para 4.8.5.

3.2.1.2 Outpatient Department Services

Patients after getting registered at Registration Counters are then examined by OPD Doctors and further diagnostic tests, if necessary, are prescribed for evidence-based diagnosis and/or drugs are prescribed or admission in In-Patient Department (IPD) is advised based on the diagnosis.

3.2.1.3 Availability of OPD services in District Hospitals

As per IPHS, DHs should provide specialist out-patient services pertaining to Dental Surgeon (DS), Obstetrics (OB), Gynaecology (GY), Dermatology (DM), General Medicine (GM), General Surgery (GS), Paediatrics (PD), Orthopaedics (Ortho), Ophthalmology (Opth), Ear, Nose and Throat (ENT), Psychiatry (PSY), Emergency Services (ES), Laboratory Services (LS), Dialysis (DIA) etc.

Table 3.2 - Availability of OPD services in the District Hospitals(DHs)

OPD services	DS	OBG & GY	DM	GM	GS	PD	AYUSH	ES	ENT	Ortho	PSY	Opth	LS
District Hospital													
BOD	A	A	NA	A	A	A	NA	A	A	NA	NA	A	A
GAD	A	A	NA	A	A	A	A	A	NA	A	A	A	A
GAJ	A	A	NA	A	A	A	NA	A	A	A	A	A	A
HYD	A	A	A	A	A	A	A	A	A	A	A	A	A
KDP	A	A	A	A	A	A	A	A	A	A	A	A	A
MDK	A	A*	NA	A	A	A*	NA	A	A	A	A	A	A
MED	NA	A	A	A	A	A	NA	A	A	A	A	A	A
MUL	A	A	A	A	A	A	NA	A	A	A	A	A	A
NRY	A	A	NA	NA	A	A	NA	A	NA	A	NA	NA	A
NRS	NA	A	NA	A	A	A	A	A	NA	A	NA	A	A
PED	A	A	A	A	A	A	NA	A	A	A	A	A	A
TDR	NA	A*	NA	A	A	A*	NA	A	A	A	NA	A	NA
UT	A	A	NA	NA	NA	A	A	A	NA	A	NA	A	A
YB	A	A	NA	A	A	A	A	A	A	A	A	A	A

Source: - *Information furnished by the Hospitals.*

*__Note:__ OPD Services for Obstetrics and Gynaecology (OBG) services and Paediatric (PD) are presently delivered through MCH Centre in the Districts of Medak (MDK) and Tandur (TDR).

Colour code: Green colour/A= Available; Red colour/NA=Not available

Audit observed that, out of the 14 DHs, required OPD services as per the IPHS norms were fully available only in DHs Hyderabad and Kondapur.

3.2.1.4 Availability of OPD services in Area Hospitals (AHs)

Scrutiny of the test checked AHs revealed the following:

Table 3.3 - Availability of OPD services in the test checked Area Hospitals

Name of the Hospital	GM	GS	PD	Ortho	Opth	ENT	PSY	DIA
AH, Golconda, Hyderabad	A	A	A	A	A	A	NA	NA
AH, Malakpet, Hyderabad	A	A	A	A	A	A	NA	NA

Source: - *Information furnished by the Hospitals*
Colour code: Green colour/A= Available; Red colour/NA=Not available

Audit observed that, the OPD services of Psychiatry and Dialysis were not available in both the AHs Golconda and Malakpet.

3.2.1.5 Availability of OPD services in Community Health Centres (CHCs)

As per the IPHS guidelines, every CHC should have the OPD Services and IPD Services: General Medicine (GM), Surgery(S), Obstetrics & Gynaecology(OBG), Paediatrics (PD), Laboratory Services (LS), etc.

Table 3.4 – District-wise No. of CHCs in which OPD services are available

District Name	No of CHCs	GM	OBG	PD	S	LS
Adilabad	1	NA	1	NA	NA	1
Bhadradri Kothagudem	5	3	2	1	2	5
Hanumakonda	1	1	1	1	1	1
Hyderabad	11	5	9	10	2	8
Jagtial	2	2	2	2	2	2
Jayashankar Bhupalpally	2	2	2	2	2	2
Kamareddy	6	5	3	5	4	2
Karimnagar	2	1	2	1	1	2
Khammam	1	1	NA	1	NA	1
Kumuram Bheem Asifabad	1	1	1	NA	NA	1
Mahabubabad	2	1	1	1	1	2
Mahabubnagar	2	1	2	2	2	2
Mancherial	3	2	2	2	1	3
Medak	2	2	2	1	NA	2
Medchal Malkajgiri	1	1	1	NA	NA	NA
Mulugu	2	1	1	1	1	1
Nagarkurnool	3	2	3	2	2	3
Nalgonda	1	1	1	1	1	1
Narayanpet	2	NA	NA	NA	NA	NA
Nirmal	1	1	NA	1	NA	NA
Nizamabad	8	3	3	2	2	7
Peddapalli	2	1	2	1	2	2
Rangareddy	6	4	5	4	3	6
Sangareddy	2	2	1	2	1	2
Siddipet	4	3	4	3	3	4
Suryapet	3	2	1	1	1	1

District Name	No of CHCs	GM	OBG	PD	S	LS
Vikarabad	3	2	2	2	2	2
Wanaparthy	2	1	NA	1	NA	2
Warangal	2	2	2	2	2	2
Yadadri Bhuvanagiri	2	2	2	2	2	2
Grand Total	85	55	58	54	40	69

Source: *- HMIS information.*

Colour code:

Services available 50% and more		Services available in 25% to less than 50%		Services available in less than 25%	

Except in the case of CHCs of the Districts of Jagtial, Jayashankar Bhupalpally, Nalgonda, Hanumakonda, Warangal and Yadadri Bhuvanagiri, the OPD services were not extended to patients as per the required norms.

3.2.1.6 Availability of OPD Services in PHCs

IPHS Guidelines relating to OPD services envisage provision of services for six days a week, with four hours provided in the morning and two hours in the afternoon.

Table 3.5 - Availability of OPD services in test checked PHCs

District	Name of the PHC	General	Antenatal Care (ANC)	Delivery services	Immunisation services	Animal Bite
Mahabubnagar	Edira	A	A	A	A	A
	Addakal	A	A	A	A	A
	Rajapur	A	A	A	A	A
Warangal	Alankanipet	A	A	A	A	A
	Duggondi	A	A	A	A	A
	Geesugonda	A	A	A	A	A
Hyderabad	UPHC, Gaganmahal	A	A	A	A	A
	UPHC, Niloufer	A	A	NA	A	NA
	UPHC, Azampura	A	A	NA	A	NA

Source: *Information furnished by the Health facilities*

Colour code: Green colour/A= Available;, Red colour/NA :-Not Available.

Audit observed that, out of the three test checked UPHCs, OPD services relating to Delivery services and for animal bite were not available in UPHC Niloufer and UPHC Azampura.

3.2.1.7 Non-availability of AYUSH services in PHCs

As per IPHS Guidelines, besides one MBBS Medical Officer, one AYUSH Medical Officer (desirable) has to be posted to provide healthcare services to the people.

AYUSH services availability in 394 facilities (out of 636 PHCs) were as follows:

Table 3.6 - Types of AYUSH facilites available in the State

Type	Number of PHC/ UPHC
Ayurveda	199
Homeo	105
Unani	62
Naturopathy	28
Total	394

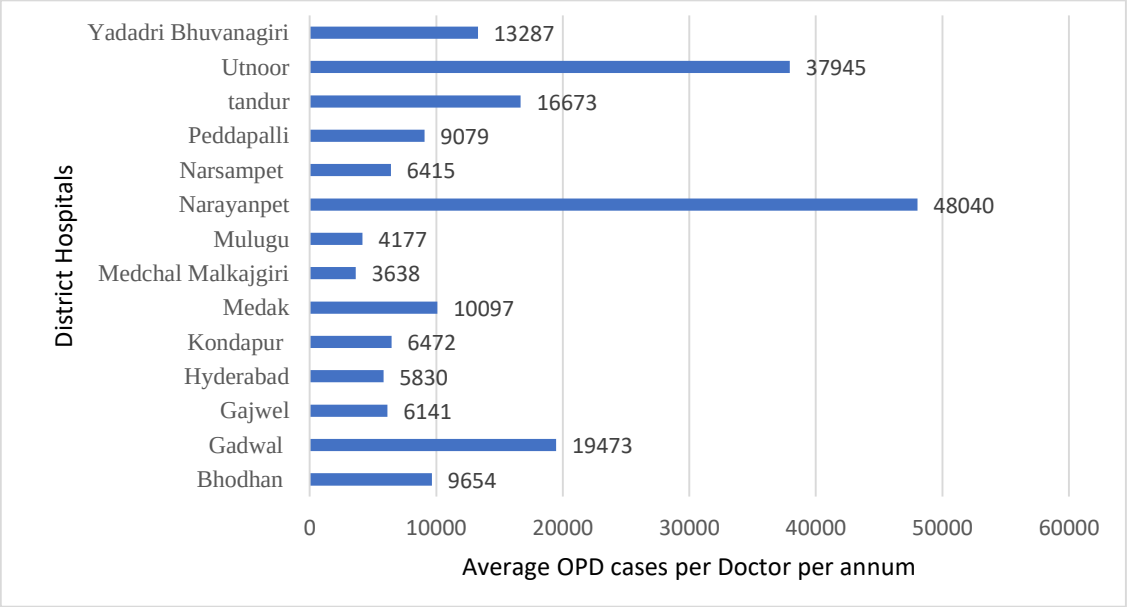
Source: *Information furnished by the Department*

Audit scrutiny revealed that out of these 394 health facilities where AYUSH services were available, AYUSH Medical Officer was not available in 204 health facilties. The post of Pharmacist was lying vacant in 124 health facilities. Thus, the provision of the AYUSH Services has not been done fully in the State.

3.2.1.8 Average OPD Cases per Doctor per annum against available OPD Services in DHs/AHs/CHCs/PHCs/UPHCs

Details of the average number of OPD cases per Doctor per annum against the available OPD services in DHs and test checked AHs/CHCs/PHCs/UPHCs are given in the Chart 3.3 and Chart 3.4:

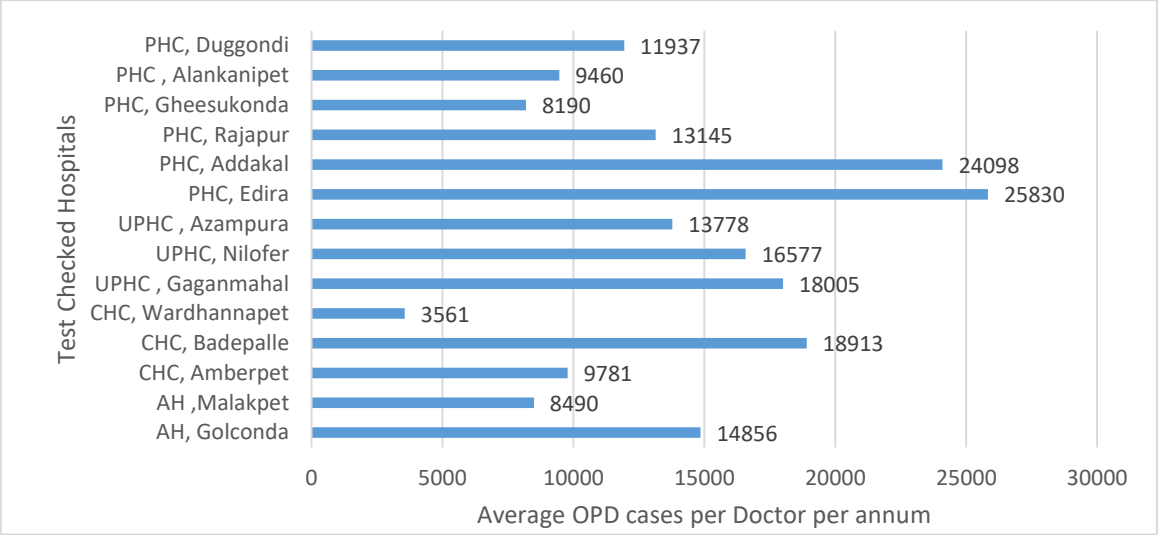
Chart 3.3- Average OPD cases per Doctor per annum in DHs during 2016-17 to 2021-22



Source: *Information furnished by the District Hospitals*

Audit observed that the average OPD cases per Doctor per annum in the DHs ranged from 3,638 cases (DH Medchal Malkajgiri) to 48,040 cases (DH Narayanpet).

Chart 3.4 - Average OPD Cases per Doctor per annum in the test checked hospitals



Source: *Information furnished by the Hospitals*

Audit observed that the average OPD cases per Doctor per annum in the test checked Health Institutions ranged from 3,561 cases (CHC Wardhannapet) to 25,830 cases (PHC Edira).

3.2.1.9 Lack of availability of required infrastructure in Healthcare Facilities in the State

IPHS norms provide for the availability of building, drinking water, toilet etc. in the healthcare facilities.

Analysis of these aspects of own building, drinking water, toilet etc. was done based on information available in the HMIS website as of 24 February 2022. Audit noticed that in the State, various healthcare facilities were running in rented buildings/Government buildings without basic facilities such as drinking water and toilet as detailed in Table below:

Table 3.7 – Details of availability of infrastructure in healthcare facilities

Healthcare facilities	No. of healthcare facilities	Healthcare facilities running in rented buildings *(per cent)*	Water facility not available *(per cent)*	Toilet facility not available *(per cent)*
SC	4,797	2,819 (59)	1,517(32)	1,259 (26)
PHC	636	290 (46)	113(18)	106(17)
CHC	107	53 (50)	48 (45)	46(43)

Source: *Information available on www.hmis.nhp.gov.in*

Audit observed that, out of 4,797 existing SCs, 2819 (59 *per cent*) were functioning from rented buildings, 1517 (32 *per cent*) did not have water facilities and 1259 (26 *per cent*) did not have toilet facilities. In the case of 636 existing PHCs, 290 (46 *per cent*) were functioning from rented buildings, 113 (18 *per cent*) did not have water facilities and 106 (17 *per cent*) did not have toilet facilities. In the case of 107 CHCs, 53 (50 *per cent*) were functioning from rented buildings, 48 (45 *per cent*) did not have water facilities and 46 (43 *per cent*) did not have toilet facilities.

Thus, most of the healthcare facilities in the State were functioning without basic facilities.

3.2.1.10 Facilities in AYUSH Dispensaries

Out of 834 AYUSH dispensaries existing in the State,

- 825 dispensaries were running in own buildings and 9 were in rented buildings.
- 31 dispensary buildings were in a dilapidated condition.

When information relating to the submission of proposals for repairs to buildings was called for, no response was furnished by the Department.

3.2.1.11 General facilities in test checked health facilities

In the test checked healthcare facilities, the following was observed:

Table 3.8 - General Amenities in the test checked hospitals

Type of Hospital	Name of the District	Name of the Hospital	Building Own/ Rented	Drinking Water facility	Separate toilets for men & women	Seating arrangements
Specialty	HYD	MNJ Cancer Hospital	A	A	A	A
Specialty	HYD	Niloufer	A	A	A	A
Teaching Hospitals	HYD	Osmania General Hospital	A	A	A	A
DH	HYD	King Koti, Hyderabad	A	A	A	A
AH	HYD	Golconda	A	A	A	A
AH	HYD	Malakpet	A	A	A	A
CHC	HYD	Amberpet	A	A	A	A
CHC	WGL(R)	Wardhannapet	A	A	A	A
CHC	MBNR	Badepally	A	A	A	A
UPHC	HYD	Azampura	A	A	A	A
UPHC	HYD	Niloufer	Rented	A	NA	NA
UPHC	HYD	Gaganmahal	A	A	A	A
PHC	MBNR	Addakal	A	A	NF	NF
PHC	MBNR	Rajapur	A	A	NF	NF
PHC	MBNR	Edira	A	A	NF	NF
PHC	WGL(R)	Alankanipet	A	A	NF	NF
PHC	WGL(R)	Geesugonda	A	NA	NF	NF
PHC	WGL(R)	Duggondi	A	NA	NF	NF

Source: *Information furnished by the Department.*
Colour code: Green colour/A= Available; Red colour/NA=Not Available; Yellow Colour= Rented; Blue/NF= Not Furnished:

During the test-check of DHs, AHs, CHCs, UPHCs and PHCs, the following were observed:

- Out of the nine[4] test checked UPHCs/PHCs, separate toilet facility for men and women was not available in UPHC, Niloufer. Information was not furnished by the test checked PHCs.
- Only UPHC Niloufer, was working in rented accommodation.
- Drinking water facility was not available in PHCs Geesugonda and Duggondi.

[4] 3 PHCs in Warangal Dist (1)Alankanipet (2) Geesugonda (3) Duggondi, 3 PHCs in Mahabubnagar Dist. (1) Addakal (2) Edira (3) Rajapur and 3 UPHCs in Hyderabad (1) Gaganmahal (2) Azampura and (3) Niloufer

- Seating arrangements for patients in UPHC Niloufer were inadequate and the patients were forced to stand in long queues at the OPD counters for registration.
- Due to the non-availability of sufficient seating capacity in the test checked AYUSH facilities, patients were forced to wait for a longer time for registration at the Out Patient Department (OPD) Registration Counters at Government Nizamia General Hospital, Hyderabad and Government Homeopathy Hospital, Hyderabad.

Figure 3.1 - Government Nizamia General Hospital Unani (10 July 2022)

Figure 3.2 - Government Homeopathy Hospital , Hyderabad (24 March 2022)

3.2.1.12 Availability of necessary facilities

As per IPHS norms, OPD area should have following facilities:

Table 3.9 - Status of availability of facilities

Name of service	Total DHs in the State	AH	CHC	PHC/ UPHC
	Total =14	Test checked 2	Test checked 3	Total=9
Display of fluorescent fire exit sign	14	1	0	0
Enquiry/May I help Desk with staff fluent in local language	13	2	1	8
Directional signage for Emergency, Departments and Utilities	14	2	3	8
Patient calling system (Digitalisation) Queue system	0	0	0	0
Water for drinking purpose	14	2	3	7
Water for utility purpose	14	2	3	8
Separate Toilets for men and women	12	2	3	2
Availability of seating arrangements waiting at Registration, OPD counters and specialists	14	2	3	2
Mandatory information (under RTI Act, PNDT Act, etc.) was displayed	14	2	2	0

Source: *Data furnished by test checked health institutions*

Colour code:

Facilities available 50% and more		Facilities Available in more than 25% and less than 50%		Facilities available in less than 26%	

Audit observed that, Patient calling system (Digitalisation) Queue system was not available in any of the DHs, AHs, CHCs, UPHCs/PHCs. Display of Fluorescent fire exit sign was not available in any of the test checked CHCs/UPHCs/PHCs. Display of mandatory information (under RTI Act, PNDT Act, etc.) was not available in any of the test checked UPHCs/PHCs.

3.2.1.13 Patient Satisfaction Survey

NHM Assessor's Guidebook for Quality Assurance provides for evaluation of the services provided in an OPD through certain outcome indicators.

- Out of 14 District Hospitals in the State, it was stated that, Patient Satisfaction survey was conducted in only six District hospitals. In the remaining eight[5] District hospitals, no survey was conducted.
- Out of three UPHCs test checked, Patient Satisfaction Survey was not conducted in any of the UPHCs.
- In Area Hospitals, Golconda and Malakpet, it was observed that no such survey was conducted.
- In the case of AYUSH institutions, Superintendent, Government Ayurvedic Hospital, Erragadda stated that Director, Institute of Health System has been entrusted with the responsibility of preparing of Patient Satisfaction Survey instrument and protocol in AYUSH teaching hospitals and after the completion of the project, the same would be implemented by the Health institutions

Government in its response assured (August 2023), that Patient Satisfaction Survey as per NQAS guidelines would be conducted in all the hospitals.

3.2.2 Inpatient Department (IPD) Services

In-patient Department (IPD) refers to the areas of the hospital where patients are accommodated after being admitted, based on a Doctor's/specialist's assessment, from the OPD, Emergency Services and Ambulatory Care. In-patients require a higher level of care through nursing services, availability of drugs, observation by Doctors, etc.

3.2.2.1 Availability of IPD Wards in DHs

As per NHM Assessor's Guidebook, a DH should provide in-patient services pertaining to General Medicine, General Surgery, Obstetric and Gynaecology, Paediatrics, Ophthalmology, Orthopaedics, Psychiatry, etc.

Table 3.10- Availability of IPD Wards and Beds in DH

District Hospital	Sanction bed strength	Medical Ward	Surgical Ward	Paediatric ward	OB&G ward	Burns ward	Others	Total
101 -200 Beds District Hospitals								
Ward wise beds required as per IPHS norm		30	30	10	30	0		
MED	50	21	0	0	25	0	4	50
UT	50	30	0	20	15	0	51	116
BOD	100	31	9	11	30	0	40	121
KDP	100	24	12	24	36	0	7	103
YB	100	38	21	21	36	0	12	128
201-300 Beds District Hospitals								
Ward wise beds required as per IPHS norm		50	45	20	30	5		

[5] Jogulamba Gadwal, Medak, Narayanpet, Narsampet, Peddapalli, Tandur, Yadadri Bhuvanagiri and Hyderabad

District Hospital	Sanction bed strength	Medical Ward	Surgical Ward	Paediatric ward	OB&G ward	Burns ward	Others	Total
GAJ	200	14	28	29	61	0	39	171
MDK	200	29	38	29*	51*	0	111	258
MUL	250	16	24	8	16	2	34	100
GAD	250	25	20	67	0*	0	100	212
NRY	250	28	16	24	26	0	46	140
NRS	250	21	28	7	39	0	10	105
PED	200	16	20	5	75	0	20	136
301-500 Beds District Hospitals								
Ward wise beds required as per IPHS norm		80	70	10	60	10		
HYD	350	24	24	24	38	0	90	200
TDR	350	65	30	60*	109*	6	58	328

Source: *IPHS norms and Information furnished by the Hospitals*

***Note:** In DH of Jogulamba Gadwal, there are no dedicated wards for OBG. Patients were extended OBG services and were being accommodated in the Female wards of DH Jogulamba Gadwal as the MCH Centre in the District of Jogulamba Gadwal is not fully functional and provides Antenatal care to the patients. The beds available in the MCH Centre Tandur and Medak have been included under the categories Paediatric, OBG and others.

Audit observed that the Burns ward was not available in 7[6] DHs and beds in Surgical Ward were not available in DHs Medchal Malkajgiri and Utnoor.

3.2.2.2 Availability of six beds in UPHCs/PHCs with Mother and Child Healthcare

As per IPHS norms, every PHC should have six Beds for Mother and Child healthcare and family planning. PHC should also have Labour Room and OT for Vasectomy and Tubectomy.

Table 3.11- Availability of Beds, Labour Room and OT in test checked PHCs/UPHCs

Name of the District	No.of test checked PHCs/ UPHCs	Availbility of six beds	Aailability of Labour room services	Availability of OT for Vasectomy, Tubectomy
Hyderabad	3	2	2	2
Mahabubnagar	3	3	3	2
Warangal	3	3	3	3

Source: *Information furnished by the test checked hospitals*

3.2.2.3 Availability of Isolation wards

National Health Mission (NHM) Assessor's Guidebook prescribes that DHs should have positive and negative isolation wards. Immuno compromised patients like AIDS, Cancer, Type I Diabetes, Leukemia, Asthma, Rheumatoid Arthritis and Genetic Disorder requires Positive Isolation Room. Further, patients affected with Tuberculosis, Measles and other infectious patients (Flu) require Negative Isolation. Only four DHs have both Positive and Negative Isolation Wards.

[6] DHs: Gajwel; Medak; Jogulamba Gadwal; Narayanpet; Narsampet; Peddapalli and Hyderabad (King Koti)

Table 3.12- Availability of positive and negative isolation wards in DHs

District Hospital	Positive Isolation Ward	Negative Isolation Ward
BOD	A	A
GAD	NA	NA
GAJ	NA	NA
HYD	NA	NA
KDP	NA	NA
MDK	NA	NA
MED	A	NA
MUL	One Isolation Ward Available.	
NRY	A	NA
NRS	A	A
PED	A	NA
TDR	NA	NA
UT	A	A
YB	A	A

Source: *Information furnished by the District Hospitals.*
Code: A= Available; NA=Not available

Audit observed that the required isolation ward (both Positive and Negative) was not available in six DHs Jogulamba Gadwal, Gajwel, Hyderabad (King Koti), Kondapur, Medak and Tandur.

Table 3.13 - Details of Isolation Wards available in test checked AHs/CHCs

Name of AHs/CHCs	Positive Isolation Ward	Negative Isolation Ward
Area Hospital, Golconda	NA	NA
Area Hospital, Malakpet	NA	NA
CHC, Amberpet, Hyderabad	NA	NA
CHC, Wardhannapet, Warangal	Not Furnished	
CHC, Badepally, Mahabubnagar	NA	NA

Source: *Information furnished by the Hospitals*
Code: A= Available; NA=Not available

Audit observed that, Positive and Negative isolation wards were not available in both the test checked AHs Golconda and Malakpet and two out of three test checked CHCs Amberpet and Badepally. CHC Wardhannapet had not furnished the information in this regard.

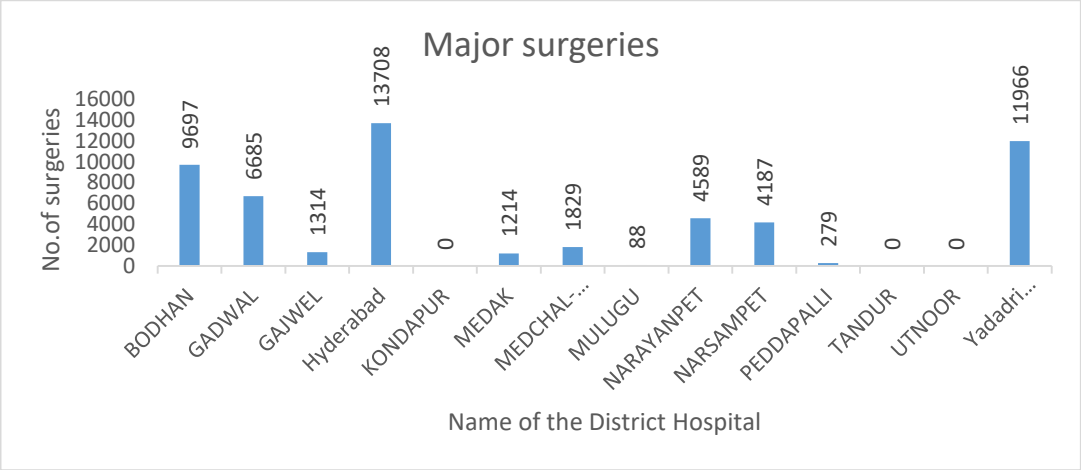
Government in its response assured (August 2023) that, all the DHs are converted/being converted into Teaching Hospitals where these facilities are being made available.

3.3 Details of Surgeries performed in test checked Health Institutions

3.3.1 Availability of Major and Minor surgeries

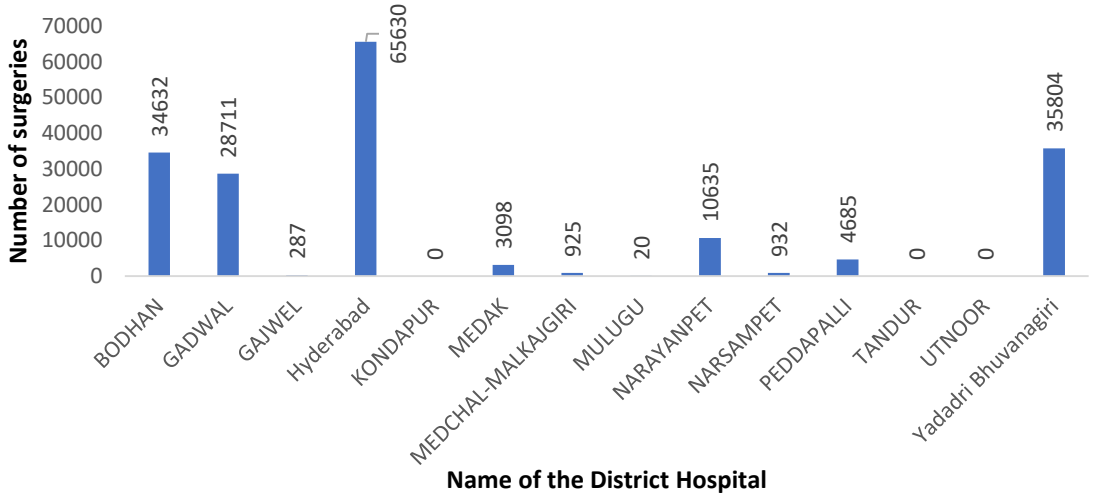
IPHS Guidelines prescribe Operation Theatre (OT) for elective Major Surgeries, Minor services, Emergency Services and Ophthalmology/ENT for District Hospitals. Details of Major and Minor surgeries performed in the District Hospitals are as follows.

Chart 3.5- Major surgeries performed in DHs during 2016-22



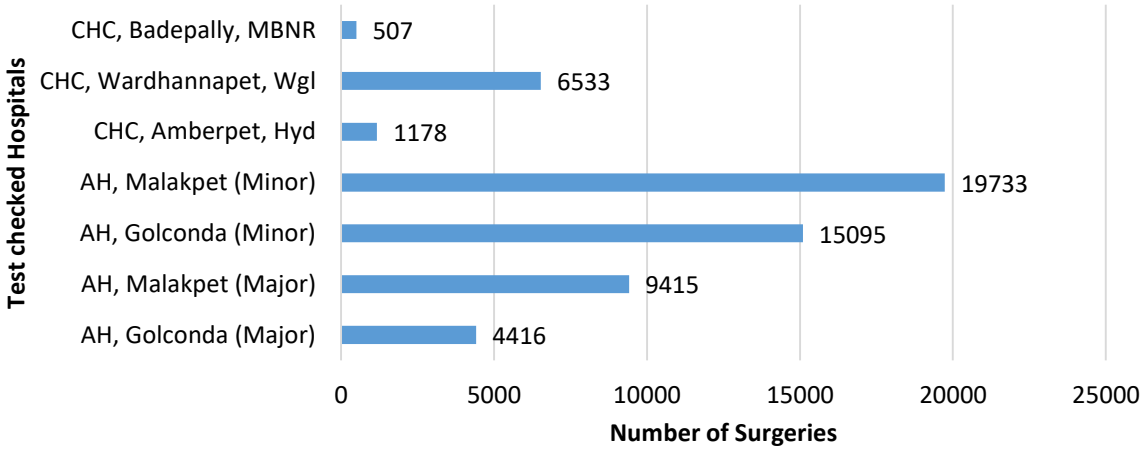
Source: *Information furnished by the District Hospitals*

Chart 3.6 - Minor surgeries in DHs during 2016-22



Source: *Information furnished by the District Hospitals*

Chart 3.7 – Surgeries done in test checked AHs, CHCs during 2016-22



Source:- *Information furnished by the Hospitals*

Table 3.14- Surgical Procedures in District Hospitals

Name of the Surgical Procedure	BOD	GAD	GAJ	HYD	KDP	MDK	MED	MUL	NRY	NRS	PED	TDR	UT	YB
Hernia	A	A	A	A	A	A	A	A	A	A	A	A	NA	A
Hydrocele	A	A	A	A	A	A	A	A	A	A	A	A	NA	A
Appendicitis	A	A	A	A	A	A	A	A	A	A	A	A	NA	A
Haemorrhoids	A	NA	NA	A	A	A	A	A	A	NA	A	A	NA	A
Fistula	A	A	NA	A	A	A	A	A	A	NA	A	A	NA	A
Intestinal Obstruction	A	NA	NA	NA	A	NA	A	A	NA	NA	NA	A	NA	A
Hemorrhage	A	NA	A	NA	A	A	A	NA	A	NA	NA	NA	NA	A
Nasal Packing	A	NA	A	A	NA	A	A	NA	NA	NA	A	NA	NA	A
Tracheotomy	A	NA	NA	NA	NA	A	NA	NA	NA	NA	A	NA	NA	NA
Foreign body removal	A	NA	A	A	NA	A	A	A	NA	A	A	A	A	NA
Fracture reduction	NA	NA	A	A	A	A	NA	NA	A	NA	A	A	A	A
Putting splints/plaster case	NA	NA	A	A	A	A	A	A	A	NA	A	A	A	A
Every/Any available surgical procedure	A	A	NA	A	A	A	NA	A	A	NA	NA	A	NA	NA

Source: *-Information furnished by the Hospitals.*

Colour code: Green colour/A= Available; Red colour/NA=Not availabe

As seen from the table above, all the required surgical procedures were not available in the District Hospitals.

Table 3.15 - Details of Surgical Procedures performed in Test checked AHs, CHCs

Name of the Surgical Procedure	AH, Golconda	AH, Malakpet	CHC, Amberpet	CHC, Wardhannapet	CHC, Badepally
Hernia	A	A	NA	A	NA
Hydrocele	A	A	NA	A	NA
Appendicitis	A	A	NA	NA	NA
Haemorrhoids	A	A	NA	A	NA
Fistula	A	A	NA	NA	NA
Intestinal Obstruction	NA	NA	NA	NA	NA
Nasal Packing	A	A	NA	NA	NA
Tracheotomy	NA	NA	NA	NA	NA
Foreign body removal	A	A	NA	NA	NA
Fracture reduction	A	A	NA	NA	NA
Putting splints/plaster case	A	A	NA	NA	NA
Every/Any available surgical procedure	A	A	NA	A	NA

Source*: Information furnished by the Hospitals*

Colour code: Green colour/A= Available; Red colour/NA=Not available

Audit observed that all the required surgical procedures were not available in CHCs, Amberpet and Badepally. Only four surgical procedures were available in CHC Wardhannapet.

Government in its response stated (August 2023) that, Tracheotomy procedure was done on the basis of requirement of the case, Haemorrhoids and fistula surgery was a common procedure done by every General Surgeon, Intestinal obstruction surgery was done by every General Surgeon on requirement basis, Nasal packing was a common procedure done by every Medical Officer and hence there was no need for a Specialist and Fracture reduction, putting of splints, POP will be done by every Orthopaedic Surgeon.

Government response is acceptable with respect to Haemorrhoids, Fistula, Tracheotomy and nasal packing.

3.3.2 Surgery load per Surgeon in DHs/AHs/CHCs

As per NHM Assessor's Guidebook, Surgery performed per Surgeon is an indicator to measure the efficiency of the hospitals. Analysis of the records of surgeries done in DHs and test checked AHs/CHCs revealed substantial variation in the number of Major and Minor Surgeries performed, per Surgeon, per Year. Details are given below:

Table 3.16- Average number of Surgeries per Surgeon

Name of the District Hospital	Year	General		ENT		Ortho		Eye		Other Surgeries (specifically) LSCS	
		No. of surgeons	Average surgeries	No. of surgeons	Average surgeries	No. of surgeons	Average surgeries	No. of surgeons	Average surgeries	No. of surgeons	Average surgeries
BOD	2016-17	1	22	0	0	0	0	0	0	2	131
	2017-18	1	11	0	0	0	0	0	0	2	256
	2018-19	1	10	0	0	0	0	1	85	2	520
	2019-20	1	33	0	0	0	0	1	106	2	606
	2020-21	1	13	0	0	0	0	1	21	2	656
	2021-22	2	34	0	0	0	0	0	0	2	424
GAD	2016-17	1	167	0	0	1	0	0	0	0	0
	2017-18	1	172	0	0	1	0	0	0	0	0
	2018-19	1	195	0	0	1	0	0	0	0	0
	2019-20	1	226	0	0	1	0	0	0	0	0
	2020-21	1	110	0	0	0	0	0	0	0	0
	2021-22	2	184	0	0	1	0	1	0	0	0
GAJ	2016-17	1	0	0	0	0	0	0	0	6	234
	2017-18	1	0	0	0	0	0	0	0	6	306
	2018-19	2	33	1	0	0	0	0	0	6	328
	2019-20	4	73	1	0	0	0	0	0	6	250
	2020-21	3	98	1	0	1	106	2	24	6	293
	2021-22	3	221	1	0	2	88	3	119	8	280
HYD	2016-17	4	190	1[7]	289	1	415	3	101	10	76

[7] Surgeries performed by Surgeons appointed on Contract basis

Name of the District Hospital	Year	General		ENT		Ortho		Eye		Other Surgeries (specifically) LSCS	
		No. of surgeons	Average surgeries	No. of surgeons	Average surgeries	No. of surgeons	Average surgeries	No. of surgeons	Average surgeries	No. of surgeons	Average surgeries
	2017-18	3	333	1	326	2	169	2	179	9	111
	2018-19	2	388	1	300	2	171	1	566	11	70
	2019-20	2	249	1	322	2	139	1	514	13	38
	2020-21	1	49	1	52	2	15	1	108	7	7
	2021-22	3	17	2	6[8]	2	13	2	8	8	6
KDP	2016-17	2	86	0	0	0	0	0	0	0	0
	2017-18	2	75	0	0	0	0	0	0	0	0
	2018-19	2	76	0	0	1	26	0	0	0	0
	2019-20	2	53	0	0	0	0	0	0	0	0
	2020-21	1	19	0	0	1	0	0	0	0	0
	2021-22	1	47	0	0	2	7	0	0	0	0
MDK	2016-17	1	697	0	0	1	72	1	205	0	0
	2017-18	1	714	0	0	1	85	1	269	0	0
	2018-19	1	736	1	0	1	103	1	229	0	0
	2019-20	1	658	1	0	2	29	1	149	0	0
	2020-21	1	866	1	0	2	22	1	45	0	0
	2021-22	1	641	1	3	2	10	1	80	0	0
MED	2016-17	0	0	0	0	0	0	0	0	0	0
	2017-18	0	0	0	0	0	0	0	0	0	0
	2018-19	2	150	1	0	2	0	1	0	0	0
	2019-20	2	65	1	0	2	0	1	0	0	0
	2020-21	2	200	1	0	2	0	1	0	0	0
	2021-22	2	221	1	19	2	39	1	4	0	0
MUL	2016-17	0	0	0	0	0	0	0	0	2	0
	2017-18	0	0	0	0	0	0	0	0	2	0
	2018-19	0	0	0	0	0	0	0	0	2	0
	2019-20	0	0	0	0	0	0	0	0	2	0
	2020-21	0	0	0	0	0	0	0	0	7	217
	2021-22	2	54	3	0	1	123	1	0	7	281
NRY	2016-17	1	33	0	0	0	0	0	0	0	101
	2017-18	1	20	0	0	1	0	0	0	1	472
	2018-19	1	150	0	0	1	0	0	0	1	718
	2019-20	1	126	0	0	1	0	0	0	1	962
	2020-21	1	99	0	0	1	0	0	0	1	855
	2021-22	1	142	0	0	1	2	0	0	2	1003

[8] Being a COVID designated hospital

Name of the District Hospital	Year	General		ENT		Ortho		Eye		Other Surgeries (specifically) LSCS	
		No. of surgeons	Average surgeries	No. of surgeons	Average surgeries	No. of surgeons	Average surgeries	No. of surgeons	Average surgeries	No. of surgeons	Average surgeries
NRS	2016-17	0	0	0	0	0	0	0	0	0	0
	2017-18	0	0	0	0	0	0	0	0	0	0
	2018-19	1	1	0	0	1	2	1	0	0	0
	2019-20	1	3	0	0	1	0	1	0	0	0
	2020-21	1	0	0	0	1	0	1	0	0	0
	2021-22	1	90	0	0	1	0	1	0	0	0
PED	2016-17	0	0	0	0	0	0	0	0	0	0
	2017-18	0	0	0	0	0	0	0	0	0	0
	2018-19	1	13	0	0	0	0	0	0	0	0
	2019-20	1	55	0	0	0	0	0	0	0	0
	2020-21	1	28	0	0	0	0	0	0	0	0
	2021-22	2	32	0	0	0	0	0	0	0	0
TDR	2016-17	2	230	0	0	2	109	1	62	0	0
	2017-18	3	189	0	0	2	17	1	109	0	0
	2018-19	2	197	0	0	1	11	1	89	0	0
	2019-20	3	167	0	0	2	17	0	0	0	0
	2020-21	3	244	0	0	3	27	0	0	0	0
	2021-22	1	528	0	0	2	11	0	0	0	0
UT	2016-17	0	0	0	0	0	0	0	0	0	0
	2017-18	0	0	0	0	0	0	0	0	0	0
	2018-19	0	0	0	0	0	0	0	0	0	0
	2019-20	0	0	0	0	0	0	0	0	0	0
	2020-21	0	0	0	0	0	0	0	0	0	0
	2021-22	0	0	0	0	0	0	0	0	0	0
YB	2016-17	1	0	1	0	1	0	0	0	6	179
	2017-18	2	19	1	0	1	0	2	0	8	340
	2018-19	1	29	0	0	1	0	2	0	7	409
	2019-20	0	0	0	0	1	0	1	0	6	347
	2020-21	0	0	1	0	1	0	1	0	6	285
	2021-22	0	0	1	0	1	0	1	0	4	373

Source: *Information furnished by the District Hospitals.*

Table 3.17- Average number of Surgeries per Surgeon in test checked AHs, CHCs

Name of the AH/ CHC	Year	General		ENT		Ortho		Eye		Other Surgeries (specifically) LSCS	
		No. of surgeons	Average Surgeries	No. of surgeons	Average Surgeries	No. of surgeons	Average Surgeries	No. of surgeons	Average Surgeries	No. of surgeons	Average Surgeries
AH, Golconda, Hyderabad	2016-17	2	30	0	0	1	598	0	0	3	204
	2017-18	2	228	0	0	1	191	0	0	9	90
	2018-19	2	151	0	0	1	126	0	0	6	162
	2019-20	2	105	0	0	1	104	0	0	6	159
	2020-21	2	46	0	0	1	72	0	0	7	125
	2021-22	2	179	2	0	2	36	1	0	9	121
AH, Malakpet, Hyderabad	2016-17	2	897	0	0	1	0	2	310	0	0
	2017-18	2	897	0	0	1	0	2	238	0	0
	2018-19	2	720	0	0	1	0	2	156	0	0
	2019-20	2	320	0	0	1	0	2	171	0	0
	2020-21	2	2	0	0	1	0	2	67	0	0
	2021-22	2	88	1	25	1	17	2	130	0	0
CHC Amberpet, Hyderabad	2016-17	0	0	0	0	0	0	0	0	0	0
	2017-18	0	0	0	0	0	0	0	0	0	0
	2018-19	0	0	0	0	0	0	0	0	0	0
	2019-20	0	0	0	0	0	0	0	0	0	0
	2020-21	0	0	0	0	0	0	0	0	0	0
	2021-22	0	0	0	0	0	0	0	0	0	0
CHC Badepally	2016-17	2	37	0	0	0	0	0	0	0	0
	2017-18	2	67	0	0	0	0	0	0	0	0
	2018-19	2	44	0	0	0	0	0	0	0	0
	2019-20	2	54	0	0	0	0	0	0	0	0
	2020-21	2	52	0	0	0	0	0	0	0	0
	2021-22	0	0	0	0	0	0	0	0	0	0
CHC Wardhannapet	2016-17	5	71	0	0	0	0	0	0	0	0
	2017-18	6	167	0	0	0	0	0	0	0	0
	2018-19	6	275	0	0	0	0	0	0	0	0
	2019-20	6	235	0	0	0	0	0	0	0	0
	2020-21	6	201	0	0	0	0	0	0	0	0
	2021-22	6	151	0	0	0	0	0	0	0	0

Source: *Information furnished by the Health facilities*

3.3.3 Operation Theatre Services

In all the test checked Super Speciality Hospitals, DHs, AHs and CHCs, Operation Theatre (OT) facilities were available.

IPHS Guidelines provide that DHs should have Operation Theatres (OTs) equipped with all instruments. The OTs should have the Departments of Surgery with Central Sterile Supply Department (CSSD) near to the OTs. It further provides that the OTs should have preparatory, pre-operative and post-operative resting rooms.

Table 3.18- Availability of facilities for OT services in DHs

District Hospital	Have convenient relationship with surgical ward, ICU, radiology, pathology, blood bank and CSSD	Barrier free Access facility for people with disabilities	Piped suction and medical gases, electric supply, heating, air conditioning, ventilation	Patient's records and clinical information is maintained	Defined and established grievance redressal system	AMC and preventive maintenance for equipment	Established with procedure for internal and external calibration of measuring equipment
BOD	A	A	NA	A	A	A	A
GAD	PA	A	NA	A	A	A	NA
GAJ	A	A	PA	A	A	A	A
HYD	A	A	A	A	A	A	A
KDP	A	A	A	A	A	A	A
MDK	A	A	A	A	NA	NA	NA
MED	A	A	A	A	A	NA	A
MUL	A	A	NA	A	A	A	A
NRY	A	A	PA	A	A	A	A
NRS	A	A	A	A	NA	A	A
PED	A	A	A	A	A	A	A
TDR	A	A	A	A	A	NA	A
UT	A	A	A	A	A	A	A
YB	A	NA	A	A	NA	A	A

Source: *Information furnished by test checked DHs*
Colour code: Green colour/A= Available; Red colour//NA=Not available Yellow/PA:- Partially available.

Audit observed that, except in case of four DHs Hyderabad (King Koti), Kondapur, Peddapalli and Utnoor, facilities for all OT services were not available in the remaining 10 DHs.

3.3.3.1 OT services in test checked hospitals

Table 3.19- Availability of OT services in test checked AHs and CHCs

Description	AH, Golconda	AH, Malakpet	CHC, Amberpet	CHC, Wardhannapet	CHC, Badepally
OT have convenient relationship with surgical ward, intensive care unit, radiology, pathology, blood bank and CSSD.	A	A	A	A	NA
Barrier free Access is provided to facility for people with disabilities	A	A	A	NA	A
OT have piped suction and medical gases, electric supply, heating, air conditioning, ventilation.	A	A	A	A	NA
Patient's records and clinical information is maintained	A	A	A	A	A

Has defined and established grievance redressal system in place.	A	A	A	A	A
Whether all equipment are covered under AMC including preventive maintenance.	NA	NA	NA	NA	NA
Whether the facility has established procedure for internal and external calibration of measuring equipment.	NA	A	A	A	NA

Source : *Information furnished by the Health facilities*

Colour code: Green colour/A= Available; Red colour//NA=Not available

Audit observed that in none of the test checked AHs and CHCs, all equipment were covered under AMC including preventive maintenance.

3.3.4 Evaluation of IPD services through Outcome Indicators

The IPD services can be evaluated through Outcome Indicators *viz*., Bed Occupancy Rate (BOR), Bed Turnover Rate (BTR), Discharge Rate (DR), Referral Out Rate (ROR), Average Length of Stay (ALoS), Left Against Medical Advice (LAMA) Rate and Absconding Rate (AR).

Table 3.20- Outcome Indicators of IPD services in DHs during 2021-22

District Hospitals	Average bed occupancy rate (BOR[9]) (%)	Average bed turnover rate (BTR[10])(No. of patients per bed in a year)	Discharge Rate (DR[11]) (%)	Average Referral out rate[12] (%)	Average length of stay[13] (No. of days)	LAMA[14] rate (per 1000 patients)	Absconding rate[15] (per 1000 patients)
BOD	42	NF	101	NF	NF	NF	NF
GAD	119	72	85	12	4 to 5	1	11
GAJ	73	72	100	4	3	0.24	0.11
HYD	42.99	4.91	74.5	9.49	8	47.05	35.82
KDP	67.40	19.91	82.80	2.94	4	60.90	57
MDK	43	38	87	9	6	0.76	2.09
MED	91	62	84	8	5	3.80	3.70
MUL	94	0	87	5	NF	3.90	3.50
NRY	80	50	100	2	2 to 3	5	2

[9] **The Bed Occupancy Rate (BOR)** is an indicator of the productivity of the hospital services and is a measure of verifying whether the available infrastructure and processes are adequate for delivery of health services. As per IPHS, it is expected that the BOR of a hospital should be at least 80 *per cent.* High BOR is a sign of good productivity of the hospital

[10] The **Bed Turnover Rate (BTR)** is a measure of the utilisation of the available bed capacity and serves as an indicator of the efficiency of the hospital. High BTR indicates high utilisation of the in-patient beds in a hospital while low BTR could be due to fewer patient admissions or longer duration of stay in the hospitals

[11] **Discharge Rate (DR)** measures the number of patients leaving a hospital after receiving due health care. High DR denotes that the hospital is providing healthcare facilities to the patients efficiently

[12] **Referral to higher centres** denotes that the facilities for treatments were not available in the hospitals

[13] **Average Length of Stay (ALoS)** is an indicator of clinical care capability and to determine effectiveness of interventions. ALoS is the time between the admission and discharge/death of the patient

[14] To measure service quality of a hospital, **Leave Against Medical Advice (LAMA)** rate is evaluated. LAMA is the term used for a patient who leaves the hospital against the advice of the Doctor. LAMA Rate is calculated for every 1000 admissions

[15] **Absconding Rate (AR)** refers to patients who leave the Hospital without informing the Hospital authorities. Absconding Rate is calculated for every 1000 admissions

District Hospitals	Average bed occupancy rate (BOR[9]) (%)	Average bed turnover rate (BTR[10])(No. of patients per bed in a year)	Discharge Rate (DR[11]) (%)	Average Referral out rate[12] (%)	Average length of stay[13] (No. of days)	LAMA[14] rate (per 1000 patients)	Absconding rate[15] (per 1000 patients)
NRS	100	41	95	20	5	1.71	2.59
PED	97	10.3	72	3	7	9	1
TDR	86	86	93	2	1	0.86	1.96
UT	75	35	80	10	3	4	0
YB	69.50	49.35	88.72	6.90	7	Nil	Nil

Source: *Information furnished by test checked Health Institutions NF – Not furnished*

3.3.4.1 Outcome Indicators of IPD services in test checked Health Institutions

Scrutiny of the records of test checked Specialty Hospitals, AHs and CHCs relating to LAMA and Absconding cases during the period from 2016-17 to 2021-22 revealed the following:

Table 3.21- Outcome Indicators of IPD services in Specialty Hospitals

Name of the Hospital	Number of Admissions	Patients became LAMA	Patients Absconded
MNJ Cancer Hospital	1,34,091	2,724*	NA
Osmania General Hospital	2,93,792	NA	NA
Niloufer Hospital	3,87,283	10,634	961

Source: *- Information furnished by the Hospitals * information available only up to 2020-21*

Table 3.22- Outcome indicators of IPD services in test checked AHs and CHCs during 2021-22

Name of the AH , CHC	Average bed occupancy rate (%)	Average bed turnover rate (No. of patients per bed in a year)	Discharge Rate (%)	Average Referral out rate (%)	Average length of stay (No. of days)	LAMA rate per 1000 patients	Absconding rate per 1000 patients
AH, Golconda	17	16	94	12	2 to 5	0	0
AH, Malkapet	94	94	97	1	2 to 5	1	3
CHC, Amberpet	NF	NF	NF	NF	NF	NF	NF
CHC, Wardhannapet	120	16	96	8	5	0	0
CHC, Badepally	77	2	61	6	3	14	15

Source: *Information furnished by test checked Health Institutions; NF – Not Funished*

Audit observed that Average Referral Out Rate ranged from 12 *per cent* in AH Golconda to 1 *per cent* in AH Malakpet.

3.3.4.2 Other indicators

The Performance of the MCH Services in Distict Hospitals and other test checked health facilities on certain outcome indicators evaluated by Audit is as follows.

Table 3.23 - Average ROR/LAMA/AR in MCH Wards in DHs during 2021-22

Name of the DH	Total IPD Maternity	ROR		LAMA		Absconding	
		Cases	Rate	Cases	Rate	Cases	Rate
BOD	1,519	66	4.34	0	0	0	0
GAD	3,621	3,595	99*	12	0.33	13	0.36
GAJ	4,474	457	10.2	0	0	0	0
HYD	1,282	10	0.78	6	0.5	20	1.6
KDP	2,548	565	22.2	20	0.8	0	0
MDK	3,428	386	11.3	137	4	76	2.2
MED	931	65	7	6	0.6	4	0.4
MUL	1,937	86	4.4	86	4.4	86	4.4
NRY	4,564	0	0	325	7.1	353	7.7
NRS	1,802	109	6	48	2.66	0	0
PED	1,694	305	18	0	0	0	0
TDR	7,392	0	0	0	0	0	0
UT	683	92	13.5	34	5	0	0
YB	NA	NA	NA	NA	NA	NA	NA

Source: *Information furnished by test checked DHs*

* In DH of Jogulamba Gadwal, there are no dedicated wards for OBG. Patients were extended OBG services and were being accommodated in the Female wards of DH Jogulamba Gadwal as the MCH Centre in the District of Jogulamba Gadwal is not fully functional and provides Antenatal care to the patients

Among the above District Hospitals, the Referral out Rate (ROR) of DH Jogulamba Gadwal was found to be highest and the reason was the hospital did not have OBG service as a result of which referral was more.

Table 3.24- Average ROR/LAMA/AR in test checked AHs, CHCs, PHCs during 2021-22

Name of the AHs/CHCs/PHCs	Total IPD Maternity	ROR		LAMA		Absconding	
		Cases	Rate	Cases	Rate	Cases	Rate
AH Golconda	736	0	0	0	0	0	0
AH Malakpet	2,693	104	3.86	1	0.04	3	0.11
CHC Amberpet	NF	NF	NF	NF	NF	NF	NF
CHC Wardhannapet	1,179	0	0	0	0	0	0
CHC Badepally	790	18	2	0	0	0	0
PHC Edira	16	0	0	0	0	0	0
PHC Duggondi	1	0	0	0	0	0	0

Source: *Information furnished by test checked Health facilities; NF – Not furnished*

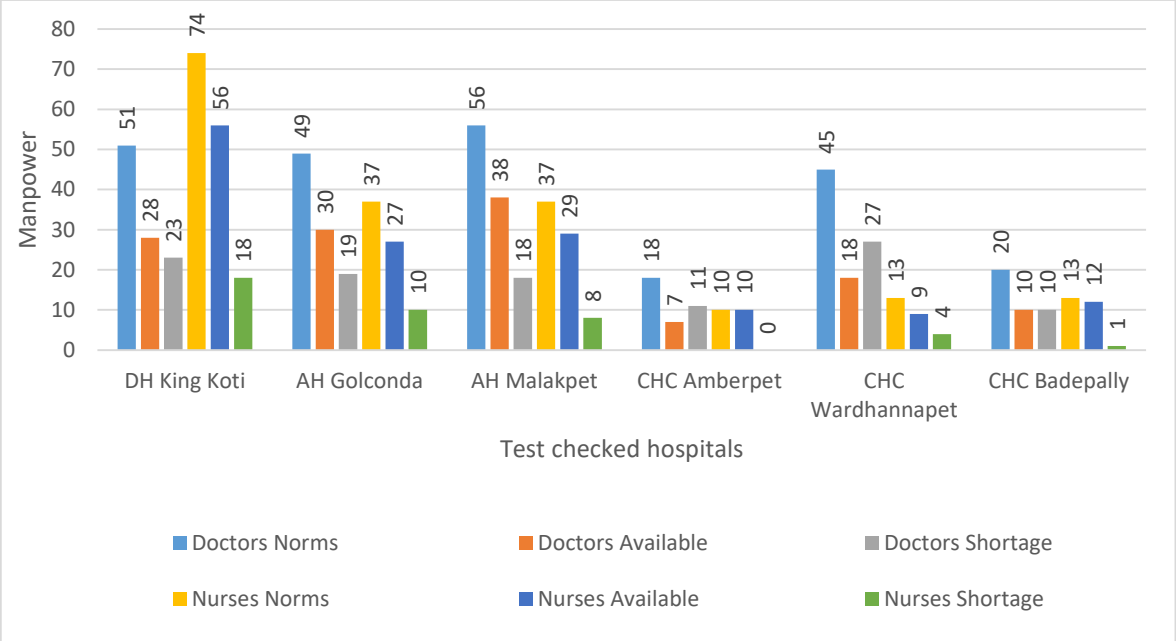
Audit observed that the Referral out Rate in respect of Maternity cases was ranging from 3.86 *per cent* (AH Malakpet) to 2 *per cent* (CHC Badepally). The information was not furnished by CHC Amberpet.

3.3.5 Requirement and Availability of Doctors and Nurses

Doctors and Nurses

In respect of DHs/AHs/CHCs, the requirement of Doctors and Nurses were considered with reference to the IPHS norms.

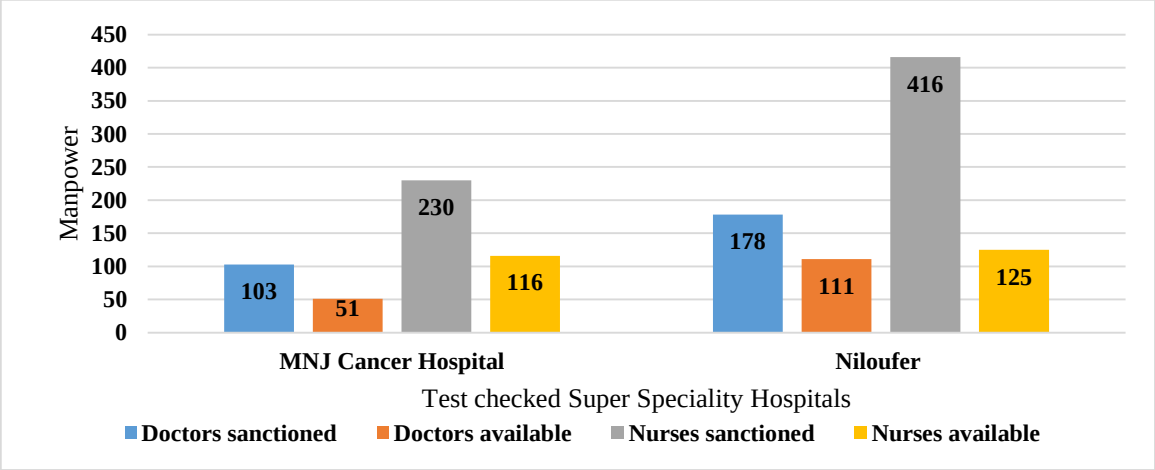
Chart 3.8 – Availability of Doctors and Nurses in test checked DHs, AHs, CHCs



Source: *Information furnished by the Hospitals.*

In the absence of specific norms for Super Specialty Hospitals, the shortage was calculated with reference to the Sanctioned Strength.

Chart 3.9 - Availability of Doctors and Nurses in test checked Super Specialty Hospitals



Source: *Information furnished by the Hospitals*

Rosters for Nurses

Nursing Council of India (NCI) recommends one nurse per six beds in the general ward of a DH/AH/CHC. The bed load in respect of the test checked hospitals is as given below.

Table 3.25- Bed load per Nurse in test checked Hospitals

Name of the Hospital	Bed Strength	Availability of Staff Nurse	Bed Load of No. of beds per nurse[16]
MNJ Cancer Hospital	525	116	14
Osmania General Hospital	1,380	259	16
Niloufer Hospital	1,000	125	24
DH King Koti, Hyderabad	200	56	11
AH Golconda, Hyderabad	100	27	11
AH Malakpet, Hyderabad	100	29	10
CHC Amberpet, Hyd	30	10	9
CHC Wardhannapet	30	9	10
CHC Badepally	30	12	8

Source : *Information furnished by the Hospitals.*

- As seen from the above, in all the test checked hospitals above PHC level, the bed load for the nurses was more than the required norms of six beds per each nurse.
- In Niloufer Hospital, the bed load per each nurse was almost four times the norm, whereas in other test checked hospitals, it was more than the stipulated norm.

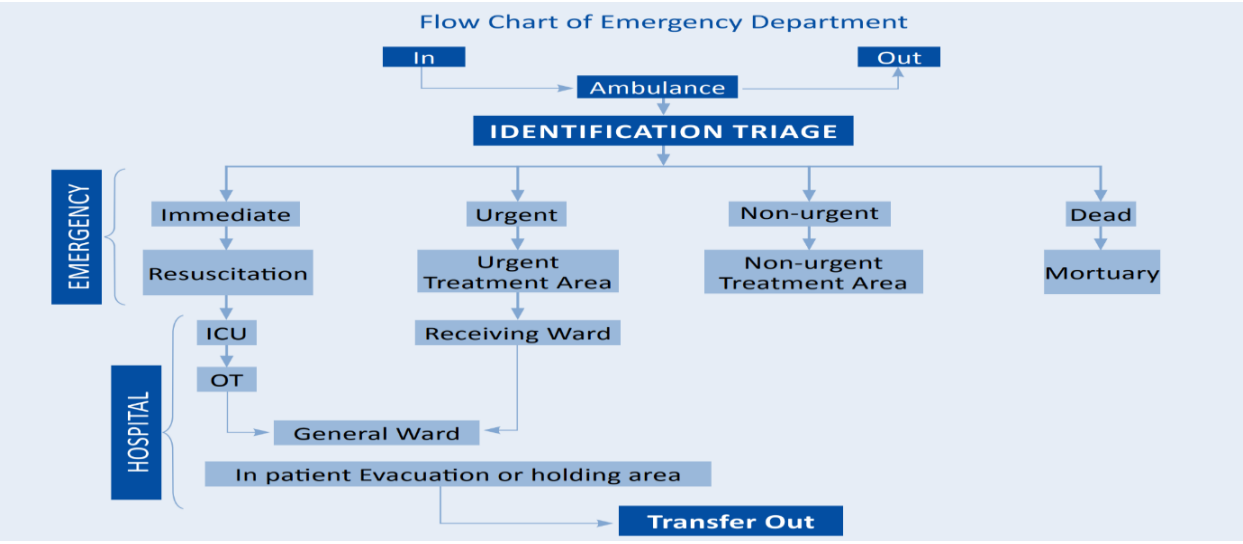
Government in its response stated (August 2023) that, the recruitment of Nursing Staff by Telangana State Public Service Commission (TSPSC) was delayed due to Court cases and that Nursing Staff were recruited on contract/ outsourcing basis to meet the needs of the Hospitals. The Department had initiated steps to fill 5,204 Staff Nurse posts on regular basis and they will be filled by October 2023.

However, Government had not furnished the actual number of Nurses who were recruited pursuant to these notifications and the District-wise, hospital-wise filling up of vacancies.

3.3.6 Emergency Services

Emergency services in DH are provided by Emergency Ward or Emergency Room (ER) which is a facility specialising in acute care of patients who come in emergency. IPHS envisages 24x7 operational emergency with dedicated emergency room in every District Hospital.

Chart 3.10: Flow chart of Emergency Department



Source: *IPHS Guidelines*

[16] Beds covered by each nurse per shift (3 shifts) = (bed strength*3 shifts) / Available staff nurses

3.3.7 Availability of Emergency services in District Hospitals

According to the Indian Public Health Standards (IPHS), a 24x7 operational emergency room with dedicated staff should be available, equipped with mobile X-ray and laboratory services, as well as side labs, a plaster room and minor operating theatre facilities. Additionally, separate beds specifically for emergency cases should be provided.

Table 3.26- Availability of Emergency Services in DHs

Particulars	BOD	GAD	GAJ	HYD	KDP	MDK	MED	MUL	NRY	NRS	PED	TDR	UT	YB
Specific OT *viz.*, Cardiac, Gynaec, Trauma Care, etc	A	NA	A	A	A	A	A	A	A	A	A	NA	A	A
Functioning of emergency OT	A	NA	A	A	A	NA	NA	A	A	A	A	A	NA	A
Infrastructure relating to trauma ward such Bed Capacity, Machinery & equipment etc	NA	NA	A	NA	A	NA	NA	A	A	NA	NA	NF	NA	A
Triage procedure to sort patients	A	NA	A	A	A	A	NA	A	A	A	A	A	A	A
Surgical facilities for emergency appendectomy	A	A	A	A	A	A	A	A	A	NA	A	A	NA	A
Diagnose and to treat for hypoglycemia, ketosis and Coma	A	A	A	A	A	A	NA	A	A	A	A	A	NA	A
Assault injuries/bowel injuries/ head injuries/stab injuries/ multiple injuries/perforation/ intestinal obstruction	A	NA	A	A	A	A	NA	A	A	A	NA	A	NA	NA
Emergency laboratory services	A	A	A	A	A	A	NA	A	A	A	A	A	A	NA
Blood bank near emergency Department	A	A	A	A	A	A	NA	A	A	A	A	A	A	A
Mobile X-ray laboratory, side labs/ plaster room in Accident and emergency service	A	NA	A	A	A	A	NA	A	A	A	A	A	A	NA
Emergency operation theatre for Maternity, orthopaedic emergency, burns and plastic and neurosurgery cases round the clock	A	NA	A	A	A	A	NA	A	A	A	A	A	A	A
Facility for accidents and emergency services including trauma care	A	A	A	NA	A	A	NA	A	A	A	A	A	A	A

Particulars	BOD	GAD	GAJ	HYD	KDP	MDK	MED	MUL	NRY	NRS	PED	TDR	UT	YB
Separate provision for emergency ward for examination of rapes/sexual assault victim	NA	NA	A	A	A	NA	NA	A	A	A	A	NA	NA	NA
Sufficient separate waiting area and public amenity in emergency ward for patients and relatives	A	NA	A	A	A	NA	NA	A	A	A	A	A	A	NA
Emergency protocols in emergency ward	A	A	A	A	A	NA	A	A	A	A	A	NA	A	NA
Disaster Management Plan in emergency ward	A	NA	A	A	A	NA	A	A	A	A	A	NA	A	NA

Source: *Information furnished by test checked Health Institutions*

Colour code: Green colour/A= Available; Red colour/NA=Not available; Yellow=Available but not functional; Blue – Not furnished

As seen from the table above, specific OTs for cardiac, gynaec and trauma care were available in all DHs except DHs Jogulamba Gadwal and Tandur. Surgical facilities for emergency appendectomy were available in all DHs except DHs Narsampet and Utnoor. Emergency laboratory services were available in all DHs except DHs Medchal Malkajgiri and Yadadri Bhuvanagiri. Due to non-availability of all the emergency services the patients were being referred to other hospitals for the treatment.

Government in its response stated (August 2023) that Cardiac OTs were available in Super Specialty Hospitals and that all the DHs have OTs for Gynaec and Trauma. It was also stated that since Telangana Diagnostics Hub (T-Hub) services were available in all the DHs, round the clock emergency lab services were available.

Audit however observed that all samples collected were not tested in the Telangana Diagnostics Hub. It was also observed that some of the samples were also rejected for reasons not on record.

3.3.8 Availability of Emergency Care in DHs/AHs/CHCs

Table 3.27- Availability of Emergency Care

Name of Routine and emergency care services	District Hospitals	Area Hospitals	Community Health Centres
No.of Health facilites test checked	**14**	**2**	**3**
Dengue Haemorrhagic fever	7	2	0
Cerebral Malaria	8	2	0
Dog and Snake Bites cases	14	2	3
Poisoning	14	2	2
Congestive Heart Failure	3	1	1
Left Ventricular Failure	4	1	0
Pneumonia	12	1	1
Meningoencephalitis	5	1	0
Acute Respiratory Conditions	13	1	1

Name of Routine and emergency care services	District Hospitals	Area Hospitals	Community Health Centres
Status Epilepticus	12	1	2
Burns	14	1	1
Shock	12	2	1
Acute Dehydration	14	2	3
Obstetric Care including surgical interventions like Caesarean Sections and other medical intervention	13	2	3

Source: *Information furnished by the Hospitals*

Colour code:

Availability of services in 50% and more		Availability of services in more than 25% and less than 50%		Availability of services in less than 26%	

Audit observed that all the required emergency care services were not available in the test checked DHs and CHCs. In the Area Hospitals, most of emergency care services were available.

3.3.8.1 Emergency cases referred to other hospitals

Table 3.28- Emergency cases referred to other hospitals from District Hospitals

District Hospital	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
BOD	3	5	3	1	1	1
GAD	15	14	14	15	18	12
GAJ	4	4	3	3	3	4
HYD	1	1	1	1	0	6
KDP	4	6	20	7	18	11
MDK	5	5	6	7	8	9
MED	0	0	3	5	6	8
MUL	0	0	4	5	1	5
NRY	20	20	25	20	5	2
NRS	8	8	8	8	17	20
PED	5	4	3	6	4	3
TDR	2	2	2	2	2	2
UT	10	14	13	17	11	10
YB	NF	NF	NF	NF	NF	NF

Source: *Information furnished by the Hospitals; NF – Not Furnished*

Audit observed that the number of emergency cases referred out was highest in DH Narayanpet (92 cases) and least in DH Hyderabad (King Koti) (10 cases) during the period 2016-17 to 2021-22. The information was not furnished by DH Yadadri Bhuvanagiri.

3.4 Delivery of Support Services

3.4.1 Maternity services

3.4.1.1 Achievement of required four Antenatal Check-ups (ANC) and delivery of Iron Folic Acid (IFA) tablets to Pregnant Women

Table 3.29- Indicators of ANC, Tetanus Toxoid (TT) administration and IFA tablets in the State

Indicators	2015-16 *(In per cent)*	2019-20 *(In per cent)*
ANC received in the first trimester	83.1	88.5
Pregnant women received at least four ANC	74.9	70.4
IFA (180 days)	28.8	34.4

Source: *NFHS-5 Survey Report*

The performance of the State with regard to maternity services like ANC received in the first trimester and consumption of Iron Folic Acid tablets has improved in 2019-20 as compared to 2015-16, while it had not shown any improvement in respect of pregnant women receiving at least four ANC.

3.4.1.2 Status of Institutional Deliveries

To minimise the Maternal Mortality Rate (MMR), deliveries in hospital and health institutions are encouraged for safe delivery and survival of the child as well as mother.

Table 3.30- Institutional births, Home birth by Skilled Health Personnel in the State

(In per cent)

Indicators	2015-16	2019-20
Institutional births	91.5	97.0
Institutional births in Public Health Facility	30.5	49.7
Home Birth by Skilled Health Personnel	2.8	1.3

Source: *NFHS-5 survey report*

As seen from the table above, there has been improvement in the institutional births, institutional births in public health facility. However, Home Birth by Skilled Health Personnel has declined.

Government in its response (August 2023) while confirming the figures included in the Table above stated that KCR Kit data indicated 99.90 *per cent* of institutional deliveries in 2022-23 and that as per NFHS V, Telangana stands 4th in the country in institutional deliveries. It was also stated that the State was focusing on ensuring 100 *per cent* safe institutional deliveries for reducing MMR and IMR.

3.4.1.3 Labour room facilities in CHCs/UPHCs/PHCs

Table 3.31- Availability of Labour Room in test checked CHCs/PHCs/UPHCs

Type of Health Institutions	Total Number of HIs	Availability of Labour Room in no. of HIs
CHCs	3	3
PHCs/ UPHCs	9	8

Source: *Information furnished by Hospitals*
Note: *Colour grading has been done on colour scale with Green colour depicting satisfactory performance, while Red colour depicting poor performance*

Labour Room was available in all the test checked CHCs and PHCs/UPHCs except UPHC Niloufer, Hyderabad.

3.4.2 Caesarean Deliveries (C-Section)

Table 3.32- Status of Caesarean deliveries (C-Section) in the State

(In *per cent*)

Indicators	2015-16 (NFHS 4)	2019-20 (NFHS 5)
C-section deliveries	57.7	60.7
Private health facility C-section deliveries	74.5	81.5
Public health facility C-section deliveries	40.3	44.5

***Source**: NFHS-5 Survey Report*

***Note:** Colour grading has been done on colour scale with Yellow depicting moderate performance while Red colour depicting poor performance.*

Audit observed that C-Section deliveries had increased in the State from 57.7 *per cent* (NFHS 4) to 60.7 *per cent* (NFHS 5).

Table 3.33- Number and Percentage of Normal and C-Section deliveries conducted in the Districts during 2016-22

Sl.No.	District	Total Deliveries	Normal Deliveries	Normal Deliveries (%)	C-Section Deliveries	C-Section Deliveries (%)
1	Adilabad	71494	43010	60	28484	40
2	Bhadradri Kothagudem	74802	37373	50	37420	50
3	Hanumakonda	64611	18029	28	46582	72
4	Hyderabad	426073	219192	51	206877	49
5	Jagtial	73647	16386	22	57260	78
6	Jangaon	32275	9664	30	22610	70
7	Jayashankar Bhupalpally	17628	4184	24	13444	76
8	Jogulamba Gadwal	57273	34914	61	22359	39
9	Kamareddy	77936	33301	43	44635	57
10	Karimnagar	76742	16753	22	59989	78
11	Khammam	90516	26384	29	64122	71
12	Kumuram Bheem Asifabad	36617	26603	73	10014	27
13	Mahabubabad	42966	9354	22	33612	78
14	Mahabubnagar	86366	49376	57	36990	43
15	Mancherial	54225	16915	31	37308	69
16	Medak	48753	23814	49	24939	51
17	Medchal Malkajgiri	183354	90745	49	92576	50
18	Mulugu	21073	10358	49	10714	51
19	Nagarkurnool	60309	27379	45	32926	55
20	Nalgonda	105723	28857	27	76850	73
21	Narayanpet	48868	35008	72	13859	28
22	Nirmal	59324	14421	24	44901	76
23	Nizamabad	135299	39240	29	96058	71
24	Peddapalli	45473	9107	20	36358	80
25	Rajanna Sircilla	36156	7593	21	28557	79

Sl.No.	District	Total Deliveries	Normal Deliveries	Normal Deliveries (%)	C-Section Deliveries	C-Section Deliveries (%)
26	Rangareddy	139686	67125	48	72560	52
27	Sangareddy	121581	69207	57	52373	43
28	Siddipet	82840	26662	32	56174	68
29	Suryapet	62674	13535	22	49137	78
30	Vikarabad	64501	35491	55	28992	45
31	Wanaparthy	44037	21378	49	22659	51
32	Warangal	73273	24069	33	49202	67
33	Yadadri Bhuvanagiri	43791	10332	24	33458	76
	Total	2659883	1115759	42	1543999	58

Source: *KCR-kit.telangana.gov.in; and figures above includes total C-section deliveries of all health facilities of the entire district.*

Colour code:

C Section deliveries less than 26%		C Section deliveries between 26% and less than 50%		C Section deliveries 50% and more	

Audit observed that C-Section deliveries was more than 50 *per cent* of the total deliveries in 23 out of the 33 Districts of the State.

3.4.2.1 Still Births

World Health Organisation (WHO) defines Still Birth for international comparison as a baby born with absolutely no signs of life at or after 28 weeks of gestation. Still birth rate is a key indicator of quality of care during pregnancy and childbirth.

Table 3.34 - Still Birth Rate (out of Total Live Births) in District Hospitals

Year	BOD	GAD	GAJ	HYD	KDP	MDK	MED	MUL	NRY	NRS	PED	TDR	UT	YB
2016-17	0	0.52	0.36	0	3.31	0	0	0	2.44	3.5	0	0.57	0	0
2017-18	0	5.6	0.27	0	4.62	0	0	0	2.73	0	0	0.46	0	0
2018-19	0	11.72	1.08	0	5.11	0	0	0	1.04	1.79	0	0	0	0
2019-20	1.21	10.29	0.30	0	1.13	0.65	0	0	2.4	0	0	0	0	0
2020-21	1.25	8.21	1.63	0	0	0.66	0	0	1.99	1.63	0	0	0	0
2021-22	2.07	13.24	1.12	0	1.42	1.46	2.88	1.41	1.85	0.75	0	0	0	0

Source: *Information furnished by the Health facilities.*

Compared to other District Hospitals, the incidence of Still Birth was high in the District Hospital Jogulamba Gadwal during the year 2021-22.

Table 3.35 - Still Birth Rate (out of Total Live Births) in test checked AHs / CHCs

Year	AH Golconda	AH Malakpet	CHC Amberpet	CHC Wardhannapet	CHC Badepally
2016-17	0	0	NF	0	2
2017-18	0	0	NF	0	5.42
2018-19	1.77	1.1	NF	0	0
2019-20	0.53	0	NF	0	0
2020-21	0	0	NF	0	5.15
2021-22	2.20	0	NF	0	2.59

Source: *Information furnished by the Health facilities.* NF – Not furnished

Among the two test checked AHs, AH Golconda had the highest Still Birth Rate and CHC Badepally had the highest Still Birth Rate among the CHCs during 2021-22.

3.4.2.2 Death Review

The Maternal Death Review Guidebook (NHM) stipulates that, at District Hospital, a Committee comprising of Hospital Superintendent, Facility Nodal Officer (FNO) (Obstetrician from the Department), at least two Obstetricians/ MO in Obstetrics and Gynaecology (OBG) Department, one Anaesthetist, one Blood Bank MO, Nursing representative and one Physician should be formed to review the causes of maternal and child deaths. Maternal and Neonatal Death Review was being done in health facilities regularly.

As nine[17] DHs did not have any Maternal Deaths or Neonatal Deaths, there was no need for conducting reviews.

Of the remaining five DHs, details of Maternal death review conducted in the District Hospitals and test checked hospitals during the period 2016-22 are as follows:

Table 3.36- Maternal Death Review/ Neonatal Death Review conducted in DHs

Name of the DH	Maternal Deaths			Neonatal deaths		
	No. of Maternal deaths	No. of Maternal death reviews conducted	Shortfall (%)	No. of Neonatal deaths	No. of Neonatal death reviews conducted	Shortfall (%)
BOD	0	0	0	2	2	0
GAD	2	0	100	0	0	0
MDK	0	0	0	13	13	0
NRY	2	0	100	34	34	0
TDR	0	0	0	414[18]	414	0

Source: *Information furnished by the Health facilities.*

Note: *Colour grading has been done on colour scale with Green colour depicting satisfactory performance; while Red colour depicting poor performance.*

[17] DHs Gajwel; Hyderabad; Kondapur; Medchal Malkajgiri; Mulugu; Narsampet; Peddapalli; Utnoor and Yadadri Bhuvanagiri

[18] DH Tandur Neonatal deaths: 2016-17: 114; 2017-18: 99; 2018-19: 73; 2019-20: 49; 2020-21: 41 and 2021-22: 38

As seen from the Table 3.36, DHs Jogulamba Gadwal and Narayanpet had not conducted any Maternal Death Review for the deaths. The number of neonatal deaths in the DH, Tandur was very high and Government needs to investigate the specific reasons for such high incidence of Neonatal deaths.

Government in its response stated (August 2023) that, SNCU of Vikarabad District was located in a remote tribal area Tandur. Apart from neonates born in DH Tandur, out-born neonates are referred from distant delivery points to the SNCU, Tandur and that SNCU deaths in Tandur have been considerably reduced from 99 (2017-18) to 36 (2022-23). No specific response was furnished by Government regarding non-conduct of Maternal Death Review.

Table 3.37- Maternal Death Review/Neonatal Death Review conducted in test checked PHCs and CHCs for 2021-22

Name of the PHC/ CHC	Maternal Deaths			Neonatal deaths		
	No. of Maternal deaths	No. of Maternal death reviews conducted	Shortfall (%)	No. of Neonatal deaths	No. of Neonatal death reviews conducted	Shortfall (%)
CHC Badepally	0	0	0	2	0	100
PHC Edira	2	1	50	5	5	0

Source: *Information furnished by the Health facilities*

Note: *Colour grading has been done on colour scale with Green colour depicting satisfactory performance; while Red colour depicting poor performance while yellow depicts moderate performance*

Audit observed that CHC Badepally had not conducted the Neo-natal death review in both the Neo-natal deaths.

3.4.2.3 Monthly Satisfaction Survey and Form III Register in Maternity Wing

Table 3.38- Details of survey conducted by Maternity Wing for 2021-22

Name of the AH/CHC/PHC/UPHC	No. of Mothers surveyed	No. of satisfied mothers	%. of satisfied mothers
AH Golconda	189	189	100
AH Malakpet	338	338	100
CHC Amberpet	No Survey conducted		
CHC Wardhannapet	1179	1179	100
CHC Badepally	No Survey conducted		
UPHC Gaganmahal	No Survey conducted		
UPHC Azampura	No Survey conducted		
UPHC Niloufer	No Survey conducted		
PHC Edira	11	11	100
PHC Addakal	22	22	100
PHC Rajapur	514	514	100
PHC Alankanipet	No Survey conducted		
PHC Geesugonda	745	745	100
PHC Duggondi	No Survey conducted		

Source: *Information furnished by test checked Health Institutions*

Audit observed that Monthly Satisfaction Survey were not conducted by CHCs Amberpet and Badepally, UPHCs Gaganmahal, Azampura and Niloufer and PHCs Alankanipet and Duggondi.

3.5 Diagnostic Services

As per IPHS, District Hospital Laboratory shall serve the purpose of public health laboratory and should be able to perform all tests required to diagnose epidemics or important diseases from the public health point of view. The availability of diagnostic services in the District hospitals are shown in the ***Appendix 3.1.***

From the data collected it can be seen that in none of the District Hospitals had diagnostic services relating to ENT, Oesophagus, Stomach, Colonoscopy, Bronchoscopy, Arthroscopy, Hysteroscopy. Similarly, except in DH, Kondapur, Pulmonary function tests were not available in the remaining 13 DHs.

Government in its response stated (August 2023) that, separate Super Specialty Departments were available in all Medical Colleges in the Districts where the above diagnostic facilities were available. However, details of the District-wise Medical Colleges, Specialty Departments and Human Resources available in each Medical College were not furnished.

3.5.1 Radiology Services

IPHS 2012, prescribes the list of Radiology services for the DHs/SDHs/CHCs as indicated in table.

Table 3.39 - List of services for the DHs/SDHs/CHCs

Type of Hospitals	Services prescribed by IPHS norms
DH	X-ray, Dental X-ray, Ultrasonography, Computed Tomography (CT) scan
SDH	X-ray, Dental X-ray, Ultrasonography
CHC	X-ray, Dental X-ray

Source: *IPHS Norms*

Table 3.40 - Availability of Radiology services in the test checked AHs and CHCs

Name of the Hospital	Nature of Diagnostic Service			
	X-Ray	Dental X-Ray	Ultrasonography	CT-Scan
AH Golconda	A	NA	A	NA
AH Malakpet	A	NA	A	NA
CHC Amberpet	A	NA	A	NR
CHC Wardhannapet	A	NA	A	NR
CHC Badepally	A	NA	A	NR

Source: *- Information furnished by the Hospitals*

Colour Code-Green/A = Available; Red/NA=Not available; Yellow/NR i.e. Not required

Audit observed that Dental X-Ray was not available in both the AHs Golconda and Malakpet and in the CHCs Amberpet, Wardhannapet and Badepally.

3.5.2 Non-registration of imaging equipment (like X-Ray, CT scan, MRI) from AERB

As per Atomic Energy (Radiation Protection) Rules 2004, for establishing X-Ray and CT Scan Unit, a license from the Atomic Energy Regulatory Board (AERB) is necessary.

Contrary to the provisions of the said Rules, the requisite license from AERB had not been obtained in the District Hospitals providing X-Ray service.

Table 3.41- Non-registration of Imaging Equipment in District Hospitals

Name of the DH	Installation	Functional	Licence
BOD	Yes	Yes	No
GAD	Yes	Yes	No
GAJ	Yes	Yes	Yes
HYD	Yes	Yes	No
KDP	Yes	Yes	Yes
MDK	Yes	Yes	No
MED	Yes	Yes	No
MUL	Yes	Yes	Yes
NRY	Yes	Yes	Yes
NRS	Yes	Yes	No
PED	Yes	Yes	Yes
TDR	Yes	No	Yes
UT	Yes	Yes	No
YB	Yes	Yes	No

Source: *Information furnished by test checked Health Institutions*
Colour Code-Green = Yes; Red=No

As seen from the table above, Imaging equipment available with DHs Bodhan, Jogulamba Gadwal, Hyderabad, Medak, Medchal Malkajgiri, Narsampet, Utnoor and Yadadri Bhuvanagiri did not have the requisite Licence from AERB authorities. The equipment available in DH Tandur was not functional.

In the absence of AERB certificate, the DHs not only violated the prescribed regulatory requirements but also compromised the safety of patients and staff in the Radiology Departments of these hospitals.

Government in its response stated (August 2023) that the hospitals which did not have AERB licences were in the process of obtaining the licence. Regarding the non-functional equipment in DH Tandur, it was stated that cost of bringing the equipment into working condition was around 50 *per cent* of equipment cost and Hospital authorities were conveyed to obtain approvals for purchasing new equipment.

3.5.3 Thermo Luminescent Dosimeters (TLD) for Radiation Protection

The Atomic Energy (Radiation Protection) Rules, 2004 prescribes that, hospitals have to provide Thermo Luminescent Dosimeter (TLD) badges, a protective device indicating permissible radiation levels to personnel working with X-ray unit.

Further, as per the Atomic Energy Board Regulatory guidelines on personal monitoring of Radiation workers in Radiation facilities, Pocket Dosimeters are required to be provided to the personnel for monitoring the radiation levels.

Table 3.42- Availability of TLD badges and Pocket Dosimeters in DHs

Name of the DH	TLD Badges	Pocket Dosimeters
BOD	No	No
GAD	No	No
GAJ	Yes	No
HYD	No	No
KDP	Yes	Yes
MDK	No	No
MED	No	No
MUL	Yes	No
NRY	No	No
NRS	No	No
PED	No	No
TDR	Yes	No
UT	No	No
YB	No	No

Source: *Information furnished by District Hospitals*

Out of the 14 DHs, Thermo Luminescent Dosimeter (TLD) badges were not provided to personnel working with X-ray unit in 10 DHs. Similarly, except in DH Kondapur, Pocket Dosimeters[19] were not available in any of the District Hospitals.

Table 3.43- Availability of TLD Badges and Pocket Dosimeters in test checked AH/CHCs

Name of the Hospital	TLD	Pocket Dosimeter
Area Hospital, Golconda	No	No
Area Hospital, Malakpet	No	No
CHC, Amberpet, Hyderabad	No	No
CHC, Wardhannapet, Warangal	No	No
CHC, Badepally, Mahabubnagar	Yes	No

Source: *Information furnished by test checked Health Institutions*

Government in its response stated (August 2023) that, TLD Badges were provided to the personnel working with X Ray units based on the indent raised from the institutions. However, documents in support of provision of TLD Badges to personnel working with X Ray units were not provided to Audit.

In the absence of TLD Badges, the safety of the technicians was therefore, compromised.

[19] A small ionization detection instrument that indicated ionizing radiation exposure directly

3.6 Pathology Services

Pathology services are the backbone of any hospital for extending evidence based healthcare to the public. Availability of essential equipment, reagents and Human Resources are the main drivers for the delivery of quality pathology services through in-house laboratories.

3.6.1 Availability of Pathology Diagnostic Services in DHs

IPHS prescribe 79 types of pathological investigations in the categories of clinical, microbiology, serology and biochemistry to be carried out in the District Hospitals.

Table 3.44- Availability of Pathological Diagnostic Services in DHs

Name of the DH	Clinical Paathology (36)	Pathology (08)	Microbiology (07)	Serology (07)	Bio-Chemistry (21)
BOD	23	0	0	2	6
GAD	22	0	0	4	10
GAJ	20	0	0	4	4
HYD	24	0	0	4	11
KDP	18	0	0	2	3
MDK	11	0	0	1	1
MED	5	0	0	3	1
MUL	22	1	0	3	10
NRY	24	2	0	3	10
NRS	18	0	1	4	5
PED	16	0	0	2	6
TDR	28	0	0	6	12
UT	15	2	0	4	2
YB	25	0	0	7	5

Source: *Information furnished by District Hospitals*

Colour code:

Available services 50% and more		Available services more than 25% and less than 50%		Available services less than 26%	

It is seen from the table above that, microbiology services were not available in any of the DHs except DH Narsampet. Pathology services were also not available in 11 out of 14 DHs.

Government in its response stated (August 2023) that, the DHs were linked to Telangana Diagnostics Hubs where Microbiology and Pathology services were provided.

3.6.2 Availability of tests in test checked hospitals

Table 3.45 - Hospital-wise tests required as per IPHS norms and their availability

Name of the hospital	No. of tests required as per IPHS norms	Available	Not available (%)
AH, Golconda, Hyderabad	51	23	28 (55)
AH, Malakpet, Hyderabad	51	21	30 (59)
CHC, Amberpet, Hyderabad	36	10	26 (72)
CHC, Wardhannapet, Warangal	36	19	17 (47)
CHC, Badepally, Mahabubnagar	36	17	19 (53)

Source:- *Information furnished by the Hospitals*

Colour code:

Available in more than 50%		Available in more than 25% upto 50%		Not available in more than 50%	

Scrutiny of the details of tests revealed the following:

- Tests relating to Endoscopy and Respiratory issues were not available in AH, Malakpet and AH, Golconda, Hyderabad.
- Tests related to ENT were not available at AHs Golconda and Malakpet. Test relating to Ophthalmology was not available at AH Golconda. In all the test checked CHCs, tests related to ENT and Opthalmology were not available.

Government in its response stated (August 2023) that, tests related to ENT, Opthalmology are specialty investigations and are available in Medical College attached hospitals in every District.

3.6.3 Ambulance Services

Emergency Medical Service (EMS) is an essential part of the overall healthcare system as it saves lives by providing emergency care immediately. To develop and operationalise comprehensive emergency services in the State, agreement was entered in March 2016 with GVK Emergency Management Research Institute (GVK EMRI) for the period 2nd June 2014 to 30th September 2016. After completion of the agreement period, it was extended up to 31st March, 2018 initially and further extended (June 2019) till the date of finalisation.

Scrutiny of the information revealed that, as per the agreement in 2016, initially 316 vehicles were provided which were later increased to 426 in 2022 for providing services to the patients in 594 mandals.

It was observed that at least one ambulance per mandal was not available to provide the services. When the issue was brought to the notice of Commissioner, HM&FW, it was replied that depending upon the accident prone areas and as per the maximum number of emergency calls received from particular area/mandals, ambulances have been deployed. Further as per the MoU entered into with GVK EMRI, the stipulated average time to be taken for call to scene in different areas was Urban -20 minutes, Rural -25 minutes and Tribal - 30 minutes.

Government in its response stated (August 2023) that, ambulances were provided on the basis of population and not on mandal basis. It was also stated that, as against the requirement of 380 ambulances the State had 488 ambulances which resulted in an ambulance per 78,000 population which was well below the average recommended.

3.6.3.1 Response time

Table 3.46- Area-wise Response Time for Emergency calls from 2016-17 to 2021-22

Response Time Range	Urban	%	Rural	%	Tribal	%
0 - 15 Min	5,92,412	57	5,56,843	38	1,13,981	37
15 - 30 Min	3,24,905	31	5,17,177	35	91,141	30
30 - 60 Min	1,12,404	11	3,51,244	24	77,856	26
60 -120 Min	13,170	1	51,699	3	21,713	7
120-240 Min	12	0	1,195	0	550	0
240-360 Min	2	0	0	0	1	0
Total	**10,42,905**		**14,78,156**		**3,05,241**	

Source: *Information furnished by the hospitals*

It is seen from the above table that, in Urban areas, 12 *per cent* of the emergency calls could not be attended to within the stipulated norms, while the same was 27 *per cent* in Rural areas and 33 *per cent* in Tribal areas.

Government in its response stated (August 2023) that, the average response time for the financial year 2022-23 was achieved and that it was natural that in some cases the response time would be more and in some cases less as it is average response time being monitored. It was also stated that an integrated call centre has become functional from 1st August 2023.

3.6.4 Oxygen Services in District Hospitals

Oxygen is an essential element of basic emergency care and is required for surgery and treatment of several respiratory diseases, both chronic and acute. In June 2017, the World Health Organisation (WHO) included Oxygen in the WHO Model list of Essential Medicines (EML) due to its proven lifesaving properties, safety and cost-effectiveness.

The availability of Centralised Oxygen supply system was installed in 11 DHs (out of 14 DHs). Details of availability of Oxygen services in the District hospitals are shown in the ***Appendix 3.2.***

From the data collected it can be seen that Agreements had not been entered into for supply of uninterrupted Oxygen by 7 out of the 14 DHs. Oxygen reservoir was not available for each bed at Special New-born Care Unit in 7 out of the 14 DHs.

Government in its response stated (August 2023) that all the hospitals were having an agreement with the Oxygen suppliers to avoid interruption of Oxygen (O2) services. It was also stated that, at present there were 7 Liquid Oxygen Tanks (LOTs) and 52 Pressure Swing Adsorbtion (PSA) plants in secondary level hospitals. Documentary evidence in respect of entering into agreements by the 6 DHs were not furnished.

3.6.4.1 Oxygen Services in the Test checked AHs/CHCs

Although the requirement of oxygen of the hospital was assessed and Standard Operating Procedures (SOPs) were available in test checked AHs and CHCs, agreements to ensure uninterrupted supply of oxygen was not ensured. In three CHCs centralised Oxygen supply was not available.

3.7 Dietary Services

As per the IPHS Guidelines, the dietary service of a hospital is an important therapeutic tool. It should easily be accessible from outside along with vehicular accessibility and separate room for dietician and special diet. It should be located such that the noise and cooking odours emanating from the Department do not cause any inconvenience to the other Departments.

3.7.1 Dietary Services in DHs

While dietary services were provided in all DHs, availability of standard procedure for preparation, handling, storage and distribution of clean, hygienic and nutritious diet to the indoor patients as per their caloric requirement was not available in DHs Jogulamba Gadwal, Medak, Narsampet and Peddapalli. Availability of policy and procedure for regular quality checking of raw material, kitchen sanitation, cooked food etc. was not available in DHs Medak, Tandur and Peddapalli. Quality testing of diet supplied in health facilities was not ensured in DHs Medak, Medchal Malkajgiri, Peddapalli and Mulugu. Evaluation of dietary services was not being done in DHs Jogulamba Gadwal, Medak, Medchal Malkajgiri, Mulugu, Peddapalli, Tandur and Yadadri Bhuvanagiri. Dietary research on menu planning, preserving nutritional values, storage of food items, modern methods of cooking, etc. was not conducted to improve the Dietary Services in the hospitals at DHs Jogulamba Gadwal, Kondapur, Medak, Medchal Malkajgiri, Narayanpet, Narsampet, Peddapalli, Tandur and Yadadri Bhuvanagiri. Thus, the DHs were not compliant with the prescribed norms for supply of diet.

Government in its response stated (August 2023) that, it had issued new Diet Policy. Calorific Diet was provided to the patients in all the Hospitals and RMOs were made responsible to look after the standard procedure of diet, storage of food items, handling and distribution of clean hygienic/nutritious diet to the inpatients.

Government had not furnished the copy of the new Diet Policy.

3.7.2 Providing of Diet in test checked hospitals

Out of the three-test checked CHCs, diet was not supplied to inpatients in CHC, Amberpet due to non-availability of sufficient funds.

Details of the Dietary Services in the test checked hospitals are indicated in the table below:

Table 3.47- Dietary Services in test checked hospitals

Name of Service	Area Hospitals		CHCs		
	Golconda	Malakpet	Amberpet	Badepally	Wardhannapet
Availability of dietary service	A	A	NA	A	A
If available, in-house/ outsourced	In house	In house	NA	In house	Out Sourced
Availability of Kitchen	A	A	NA	A	NA

Name of Service	Area Hospitals		CHCs		
	Golconda	Malakpet	Amberpet	Badepally	Wardhannapet
Availability of standard procedures for preparation, handling, storage and distribution of clean, hygienic and nutritious diet to the indoor patients as per their caloric requirement	A	A	NA	A	NA
Availability of policy and procedure for regular quality checking of raw material, kitchen sanitation, cooked food etc.	NA	A	NA	NA	NA
Availability of Quality testing of diet supplied in health facilities	NA	NA	NA	NA	A
Evaluation of dietary services in health facilities	NA	A	NA	A	NA
Dietetic research on menu planning, preserving nutritional values, storage of food items, modern methods of cooking, etc. was not conducted to improve the dietary services in the hospitals	NA	NA	NA	A	NA

Source: *Information furnished by test checked Hospitals*

On this being pointed out, it was replied that, during the period from December 2017 to December 2020, instead of providing diet, funds were transferred to the concerned beneficiaries. Thereafter no amount was paid to the patients towards diet due to non-availability of sufficient funds.

In all the test checked hospitals, it was observed that, the diet contract was extended without calling for fresh tenders.

Government in its response stated (August 2023) that, at present diet was being supplied in all hospitals of TVVP. Menu had been fixed as per the calorific value and as per the Doctor's advice and that the diet menu has been displayed prominently in the concerned hospitals and RMO's were made responsible to look after the standard procedure of diet, storage of food items, handling and distribution of clean hygienic/nutritious diet to the inpatients.

Government had not furnished any specific reply for non-provision of diet in CHC Amberpet.

3.8 Laundry Services

As per IPHS, the number of linen (OT coat, bed sheets, bed covers, pillow, blankets, pillow covers) required in DHs has been quantified as per the bed strength of the DH.

The laundry services were available in all the 14 District hospitals and two test checked Area Hospitals. Details are shown in the ***Appendix 3.3*** and ***Appendix 3.4.***

3.9 Blood Banks

As per IPHS, Blood Bank is one of the essential services that has to be provided by District Hospital. Blood bank should be in close proximity to pathology Department and at an accessible distance to operation theatre, intensive care units and emergency and accident Departments.

Table 3.48 - Availability of Blood Bank in District Hospitals

Name of Service	BOD	GAD	GAJ	HYD	KDP	MDK	MED	MUL	NRY	NRS	PED	TDR	UT	YB
Whether Blood Bank is available	A	A	NA	A	A	A	NA	A	A	A	A	A	A	A
If available license obtained or not	A	A	Not Applicable	A	A	A	Not Applicable	A	A	A	A	A	A	A
Whether General Equipment is available in the Blood Bank	A	A	Not Applicable	A	A	A	Not Applicable	A	A	A	A	NA	A	A
Whether Emergecy Equipment is available in the Blood Bank	A	A	Not Applicable	A	A	A	Not Applicable	A	A	A	A	Data not furnished	A	A
Whether Blood Storage Equipment is available in the Blood Bank	A	A	Not Applicable	A	A	A	Not Applicable	A	A	A	A	NA	A	A
Whether Laboratory Equipment is available in the Blood Bank	A	A	Not Applicable	A	A	A	Not Applicable	A	A	A	A	Data not furnished	A	A
Whether sufficient Manpower available in the Blood Bank	A	A	Not Applicable	A	A	A	Not Applicable	A	A	A	A	A	A	A

Source: *Information furnished by the DHs*
Code: A= Available; NA = Not available

Audit observed that the essential service of Blood Banks were not available in DHs Gajwel and Medchal Malkajgiri.

3.9.1 Availability of Blood Banks in test checked hospitals

Table 3.49 Availability of Blood Bank and Blood Storage unit in test checked hospitals

Name of the Hospital	Blood Bank	Blood Storage Unit
MNJ Cancer Institute, Hyderabad	A	A
Osmania General Hospital, Hyderabad	A	A
Niloufer Hospital, Hyderabad	A	A
Area Hospital, Golconda	NA	NA
Area Hospital, Malakpet	NA	NA
CHC, Amberpet	Not required	NA
CHC, Wardhannapet	Not required	A
CHC, Badepally	Not required	NA

Source: - *Information furnished by the Hospitals* Code: A= Available; NA = Not available

Neither blood bank nor blood storage unit was available in the test checked Area Hospitals. Blood storage facilities were not available as per the norms in the CHCs Amberpet and Badepally.

Government in its response confirmed (August 2023) that, Blood Storage Centre was not available in CHC Badepally as it nearer to GGH, Mahabubnagar and whenever blood was required, the same was being obtained from GGH, Mahabubnagar. It was also stated that there was no need for establishment of Blood Storage Centre at CHC Amberpet as IPM was nearer to it. Government did not furnish any response regarding the non-availability of Blood Bank in AHs Golconda and Malakpet.

3.10 Delivery of auxiliary services

3.10.1 Bio-Medical Waste Management

The Bio Medical Waste (BMW) Rules required the hospitals generating BMW to obtain authorisation[20] from the State Pollution Control Board (SPCB). The category-wise quantity of BMW generated and their disposal were to be forwarded to SPCB in a prescribed format annually.

As per BMW (Management and Handling) Rules, 2016, it was the duty of every institution generating BMW to take all steps to ensure that such waste is handled without any adverse effect to human health and the environment. Further, no untreated BMW should be stored beyond a period of 48 hours. Hazardous and toxic BMW has to be separated for its safe transportation to a specific treatment facility. In terms of the BMW (Management and Handling) Rules, 2016, colour coded plastic containers of four different colours were to be used for collection of different types of hospital wastes.

Table 3.50- Bio Medical Waste Management services in test checked Health Institutions

Name of Service	DHs (14)	AHs (2)	CHCs (3)	UPHCs (3)	PHCs (6)
	Available	Available	Available	Available	Available
Authorisation for generating bio-medical waste was obtained by the hospital from State Environment Protection and Pollution Control Board	14	2	3	0	0
Availability of Waste Management Committee[21] under the Chairmanship of head of hospital	11	2	3	0	0
Waste Management Committee met regularly to review the performance of the hospital as regards waste disposal	11	2	3	0	0
Availability of proper system for disposal of bio-medical liquid waste	14	2	3	0	1
Plastics bags which contained bio-medical waste had been labelled as per guidelines i.e., symbols for biohazard and cytotoxic	14	2	3	3	2

[20] Permission granted by the prescribed authority for generation, collection, handling and disposal of Bio-Medical Waste in accordance with the Rules and Guidelines prescribed by the Pollution Control Board

[21] The Head of the Hospital shall form a Waste Management Committee under his Chairmanship. The Waste Management Committee shall meet regularly to review the performance of the waste disposal. This Committee should be responsible for making hospital specific action plan for hospital waste management and for its supervision, monitoring implementation and looking after the safety of the bio-medical waste handlers

Name of Service	DHs (14)	AHs (2)	CHCs (3)	UPHCs (3)	PHCs (6)
	Available	Available	Available	Available	Available
The hospital and healthcare authorities had ensured that personal protective equipment was provided to waste handlers	13	2	3	2	2
Availability of barcode system, for bags or containers containing biomedical waste that were to be sent out of the premises, was ensured by the hospital	9	2	1	3	0
Periodic medical check-up and immunisation of staff were carried out.	14	2	1	3	3

Source: *Information furnished by the Hospitals*

Colour code:

Services Available in 50% and more		Services Available in more than 25% and less than 50%		Services not available in more than 50%	

It was observed that 3 UPHCs and 6 PHCs had not obtained the requisite authorisation[22] from the authorities for generating Bio-Medical Waste. Waste Management Committees[23] were not available in 3 DHs, 3 UPHCs and 6 PHCs. Bar Code System[24] for bags or containers containing Bio-Medical Waste was not ensured by 5 DHs, 2 CHCs and 6 PHCs.

Government in its response stated (August 2023) that, authorisation certificate in respect of bio-medical management system had been obtained by all the TVVP hospitals. The Barcode system bags were being supplied from the concerned hospitals authority. However, documents in support were not furnished.

3.11 Observations in test checked hospitals

Scrutiny of test checked hospitals revealed the following:

Table 3.51 – Details of Availability of Authorisation from TPCB and Waste Management Committee in the test checked Hospitals

Name of the Hospital	Waste Management Committee	Authorisation from TPCB
MNJ Cancer Hospital	NA	A
Osmania General Hospital	A	A
Niloufer Hospital	A	A
AH Golconda	A	A
AH Malakpet	A	A
CHC Amberpet	A	A
CHC Wardhannapet	A	A
CHC Badepally	A	A

Source: *- Information furnished by the Hospitals*

A = Available	NA = Not available

[22] In all the test checked UPHCs and PHCs
[23] DHs: Medak, Narayanpet, Narsampet; in all the test checked UPHCs and PHCs
[24] DHs: Jogulamba Gadwal, Medak, Medchal Malkajgiri, Narayanpet, Peddapalli; CHCs Wardhannapet and Amberpet and in all test checked PHCs

Government did not furnish any specific response on the issue of non-availability of Waste Management Committee in some of the test checked hospitals.

- All the test checked hospitals are categorising the BMW following the colour-coded plastic containers for the collection of different types of hospital wastes.
- Regarding the formation of the Waste Management Committee, PCB authorisation in the test checked health institutions it was noticed that, Waste Management Committees were not formed in MNJ Cancer Hospital.

3.12 Mortuary Services

As per IPHS, there should be mortuary in a separate building in the hospital premises for keeping of dead bodies and conducting autopsy and there should be a mortuary van in the DH. In mortuary, there should be a post-mortem room having stainless steel autopsy table with sink, running water in sink for specimen washing, cleaning and cup-board for keeping instruments.

DHs[25] Hyderabad, Kondapur and Medchal Malkajgiri did not have the mortuary services. Except for DH Gajwel, other DHs did not have mortuary van. Similary, facilities for pathological post mortem were not available in any of the DHs except Gajwel and Tandur. In the test checked CHCs Wardhannapet and Badepally, mortuary van services were not available. None of the test checked AHs have the mortuary services. Out of three CHCs, mortuary facility was available in Badepally and Wardhannapet. Out of these two CHCs, facilities for pathological post mortem were not available in Wardhannapet.

Government in its response stated (August 2023) that mortuary van was to be provided as per need of hospitals and that it had provided free hearse vehicles at different health facilities across the State. Scrutiny of the information relating to availability of free hearse vehicles revealed that the Districts of Rangareddy (DH Kondapur), Medak (DH Medak), Medchal Malkajgiri (DH Medchal Malkajgiri), Mulugu (DH Mulugu), Narayanpet (DH Narayanpet), Peddapalli (DH Peddapalli), Vikarabad (DH Tandur) and Yadadri Bhuvanagiri (DH Yadadri Bhuvanagiri) were still not provided either a mortuary van or free Hearse service.

No response was furnished by Government regarding the non-availability of mortuary services in some of the DHs/AHs. As regards post-mortem facilities, it was stated that with advent of Medical College in every District, post-mortems were being conducted preferably at Medical Colleges only to ensure quality.

3.12.1 Water availability

As per IPHS Guidelines for DH, there should be uninterrupted water supply for 24 hours. Assessment of water requirement per bed per day after excluding requirements for fire-fighting, Horticulture and steam had not been done in 6[26] DHs, 2[27] CHCs, 3[28] UPHCs and

[25] These facilities are using mortuary services of other hospitals in Hyderabad
[26] DHs Jogulamba Gadwal; Kondapur; Medak, Mulugu, Utnoor and Yadadri Bhuvanagiri
[27] CHCs Badepally and Wardhannapet
[28] UPHCs Azampura; Gaganmahal and Niloufer

5[29] PHCs. AMCs for water purifiers were not available in any of the test checked AHs, CHCs, UPHCs and PHCs.

Government in its response stated (August 2023) that all the hospitals were provided water supply for 24 hours either by Mission Bhagirata or local Municipal water or by the Borewell.

3.12.2 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.

DHs Medchal Malkajgiri, Kondapur and Utnoor did not have the availability of 24-hour uninterrupted stabilised power supply. Although inverters and back up generators have been installed in CHC Wardhannapet, UPHC Azampura, Gaganmahal and PHC Geesugonda the same were non-functional. Generator or invertor facility was not available in CHC Amberpet, UPHC Niloufer and PHC Duggondi. As a result, the availability of 24-hour uninterrupted stabilised power supply in these health institutions cannot be vouchsafed.

Government in its response stated (August 2023) that, all the hospitals were provided with back-up generators that were installed and functional. As per the documentary evidence provided by the Government, DH Utnoor did not have uninterrupted power supply and the facility of back up generator was restricted to Dialysis unit and Blood Bank.

3.12.3 Grievance/Complaint Redressal

As per IPHS Guidelines, every facility should have a robust grievance redressal mechanism. Apart from any centralised system introduced by the State (*viz*., Call Centre), there should also be a method to lodge local complaints (*viz*., complaints box, receipt provided for a complaint letter or an opportunity to meet with the Medical Superintendent).

Table 3.52- Availability of Services related to Grievance/Complaint Redressal

Name of Service	DHs (14)	AHs (2)	CHCs (3)	UPHCs (3)	PHCs (6)
Availability of Grievance Redressal Cell or Complaint cell to register patients' grievances regarding quality of supplied food to them	10	1	1	0	0
Availability of mechanism for receipt of complaints and whether suggestion boxes had been placed at appropriate places	10	2	3	3	2
Formation of Grievance Redressal Committee and redressal of complaints in a timely manner	10	2	0	1	0

Source: *Information furnished by the DHs/AHs/CHCs/UPHCs/PHCs*

Colour code:

Services Available in 50% and more		Services Available in more than 25% and less than 50%		Services not available in more than 50%	

[29] PHCs Addakal; Edira; Rajapur; Duggondi and Geesugonda

Audit observed the following:

- Availability of Grievance Redressal Cell or Complaint cell to register patients' grievances regarding quality of supplied food to them was not there in 4 DHs (out of 14), 1 AH (out of 2 test checked), 2 CHCs (out of 3) and in none of the test checked UPHCs (3) and PHCs (6).
- Availability of mechanism for receipt of complaints and suggestion boxes had not been placed at appropriate places in 4 DHs and 4 PHCs.
- Formation of Grievance Redressal Committee and redressal of complaints in a timely manner was not ensured in 4 DHs, 3 CHCs, 2 UPHCs and 6 PHCs".

3.12.4 Other issues

Table 3.53 – Details of services available in Health Institutions

Name of Service	DHs (14)	AHs(2)	CHCs (3)	UPHCs (3)	PHCs (6)
Patient Satisfaction Survey (OPD)	8	1	0	0	3
Legibility of prescription slips	14	2	2	NF	6
Availability of Citizen charter at OPD	12	2	2	NF	5
Providing unique ID at the time of registration	11	2	2	NF	1

Source: *Information furnished by the DHs/AHs/CHCs/UPHCs/PHCs*

Colour code: **Blue – Not furnished**

Services Available in 50% and more		Services Available in more than 25% and less than 50%		Services not available in more than 50%	

Audit observed that Patient Satisfaction Survey (OPD) was not conducted by any of the test checked CHCs and UPHCs.

3.12.5 Infection Control Management

Infection control practices are important in maintaining a safe environment for both patients and staff in the hospitals by reducing the risk of potential spread of hospital associated infections. NHM Assessor's Guidebook recommends boiling, autoclaving, high level disinfection (HLD) and chemical sterilisation process for disinfection/ sterilisation in the DHs.

IPHS Guidelines provide that each hospital should constitute an Infection Control Team and develop Standard Operating Procedures (SOP) for septic procedures, culture surveillance and determination of hospital-acquired infections (HAI). Apart from safe injection administration practices, safe disposal of bio-medical waste, general cleanliness and adoption of hygienic practices are important tools in the prevention of infection.

Table 3.54- Availability of services related to Infection Control in District Hospitals

Particulars	Disrict Hospitals													
	BOD	GAD	GAJ	HYD	KDP	MDK	MED	MUL	NRY	NRS	PED	TDR	UT	YB
Checklist for Hygiene and infection control	A	A	A	A	A	NA	A	A	A	A	A	A	A	A
Hospital Infection Control Committee (HICC)	A	A	A	A	A	A	A	A	A	NA	A	A	A	A
Conducting meeting of HICC	A	A	A	A	A	A	A	A	A	NA	A	A	A	A
Pest control	A	NA	A	A	A	A	A	A	NA	NF	A	A	A	A
Rodent control	A	NA	A	A	A	A	A	A	NA	NF	A	A	A	A
Availability of anti-termite treatment	A	NA	A	A	A	A	A	A	NA	A	A	A	A	A
Installation of cattle trap	A	A	A	NA	A	NA	NA	A	A	A	A	A	A	NA
Procedure for Disinfection and Sterilisation														
Boiling	NA	NA	A	A	A	A	A	NA	A	A	A	NA	A	NA
High level disinfection	A	NA	A	A	A	A	A	A	NA	A	A	NA	A	NA
Chemical sterilisation	A	NA	A	A	A	A	A	NA	NF	A	A	NA	A	NA
Autoclaving	A	A	A	A	A	A	A	A	A	A	A	A	A	A

Source: *Information furnished by the DHs;* Code: A= Available; NA = Not available NF – Not furnished

Audit observed that DH Narsampet did not have Hospital Infection Control Committee (HICC). Pest and Rodent control activities were not taken up by DHs Jogulamba Gadwal, Narayanpet and Narsampet.

Scrutiny of test checked Super Specialty Hospitals revealed the following:

Table 3.55 – Availability of Services related to Infection Control in test checked Specialty Hospitals

Name of the Hospital	Infection Management Policy/ Strategy	Infection Control Committee
MNJ Cancer Hospital	Yes	No
Osmania General Hospital	Yes	Yes
Niloufer Hospital	Yes	Yes

Source :- *Information furnished by the Hospitals*

Audit observed that, Infection Control Committee was not available in MNJ Cancer Hospital, a Super Specialty Hospital in Hyderabad.

Table 3.56 - Availability of Services related to Infection Control in test checked AHs/CHCs/UPHCs/PHCs

Name of Service	Area Hospitals		CHCs			UPHCs			PHCs					
	Golconda	Malakpet	Amberpet	Badepally	Wardhanna pet	Azampura	Gaganmahal	Niloufer	Addakal	Edira	Rajapur	Alankanipet	Duggondi	Geesugonda
Checklist for Hygiene and infection control	A	A	A	A	A	NA	NA	NA	NA	NA	NA	A	NA	NA
Hospital Infection Control Committee (HICC)	A	A	A	A	A	NA	NA	NA	NA	NA	NA	NA	A	NA
Conducting meeting of HICC	A	A	A	A	A	NA	NA	NA	NA	NA	NA	NA	A	NA
Pest control	A	A	A	NA	A	NA	NA	NA	NA	NA	NA	A	A	NA
Rodent control	A	A	A	NA	A	NA	NA	NA	NA	NA	NA	A	A	NA
Availability of anti-termite treatment	A	A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	A	NA
Installation of cattle trap	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	A	NA	NA	A
Procedure for Disinfection and Sterilisation														
Boiling	A	A	A	A	A	NA	NA	NA	A	A	A	NA	A	NA
High level disinfection	A	A	A	A	A	NA	NA	NA	NA	NF	NA	NA	NF	NA
Chemical sterilisation	A	A	A	A	A	NA	NA	NA	NA	NF	NA	NA	NF	NA
Autoclaving	A	A	A	A	A	NA	NA	NA	A	A	A	A	A	A

Source: *Information furnished by the Health Institutions*
Code: A - Available; NA - Not Available NF - Not Furnished

Audit observed that, all the required services relating to Infection Control were not available in the test checked AHs/CHCs/UPHCs/ PHCs.

Thus, maintaining a safe environment for both patients and staff in the hospitals by reducing the risk of potential spread of hospital associated infections cannot be vouchsafed in these institutions.

Government in its response stated (August 2023) that, it had given instructions to form Hospital Infection Control Committees in all the Hospitals. It was also stated that it had provided air samplers which were used in OT complex as part of microbial surveillance. As a part of new policy of IHMS, pest control and rodent control activities were incorporated and that the amounts were released to the agencies based on their performance.

3.13 Patient Safety

The only rational manner in which Hospitals can be prepared for disasters is by increasing their resilience and reducing their vulnerability both structural and operational aspects of the Hospital such that they achieve reasonable degree of safety. For achieving this, the hospital authorities should have SOPs, periodic plans and a Monitoring Committee to evaluate the patient safety.

3.13.1 Availability of Patient Safety Services in DHs

Services for Patients safety were not available in DHs Jogulamba Gadwal, Medak, Medchal Malkajgiri and Narsampet. Standard Operating Procedures in respect of patient safety were not available in DHs Jogulamba Gadwal, Medak, Medchal Malkajgiri, Narayanpet, Narsampet and Tandur. Standard Operating Procedures in respect of Disaster Management Plan for patient safety and Monitoring Committees were not available in DHs Jogulamba Gadwal, Medak, Medchal Malkajgiri, Narayanpet, Narsampet and Yadadri Bhuvanagiri. In view of this, the hospitals were not in a position to prepare themselves for unexpected events.

Government in its response stated (August 2023) that, in all secondary level hospitals fire safety precautions were taken up in cooperation with Fire Department and gaps in respect of fire safety work and electrical safety equipment were identified and corrective measures taken. In these health facilities, training to staff of the hospitals have been provided along with SOPs by Telangana Academy for Skill & Knowledge (TASK). However, only documents in support of training to staff of hospital by Telangana Academy for Skill & Knowledge (TASK) was provided to Audit.

3.13.2 Fire Fighting Equipment

3.13.2.1 Availability of Fire-Fighting Equipment

National Building Code of India 2016, Part-4, Fire and Life Safety requires that fire extinguishers must be installed in every hospital, so that in case of any fire in the hospital premises, the safety of the patients/attendants/visitors and the hospital staff may be ensured.

Table 3.57: Availability of Fire Fighting equipment in the District Hospitals

Name of the Item	BOD	GAD	GAJ	HYD	KDP	MDK	MED	MUL	NRY	NRS	PED	TDR	UT	YB
Fire Hydrant	NA	NA	A	A	NA	Work in Progress	A	NA	NA	NA	NA	NA	NA	Work in Progress
Smoke detector	NA	NA	A	A	A	Work in Progress	A	NA	NA	NA	NA	A	NA	Work in Progress
Fire extinguisher	A	A	A	A	A	Work in Progress	A	A	A	A	A	A	A	Work in Progress
Sand buckets	A	NA	NA	A	A	Work in Progress	A	NA	A	A	NA	A	NA	Work in Progress

Source: *Data furnished by the DHs*

Available | Not Available | Work in Progress

As per the instructions of the Fire and Emergency Service Department, it is mandatory to install emergency and firefighting system in the hospital, for which water capacity system at the top of the building or in the nearby area and fire alarm and water sprinklers, mock drills must be made available in the Hospital. Further, as per the Guidelines of the IPHS

2012, "No Objection Certificate" has to be obtained from the Competent Fire Authority to protect the patients, attendants, Doctors and other staff and the properties of the hospital from any fire incidents.

Table 3.58 – Availability of mandatory requirements relating to Fire Safety

Name of the Hospital	Availability of firefighting equipment	No objection certificate	Fire control drill	Safety /hazard /caution sign
MNJ Cancer Hospital	No	No	Yes	No
Osmania General Hospital	Yes	No	Yes	Yes
Niloufer Hospital	Yes	No	No	Yes
DH King Koti, Hyderabad	Yes	No	No	Yes
AH Golconda	No	No	No	No
AH Malakpet	Partially	No	No	Yes
CHC Amberpet	Yes	Yes	Yes	No
CHC Wardhannapet	Yes	No	No	Yes
CHC Badepally	Yes	No	No	Yes

Source :- *Information furnished by the Hospitals*

Yes/Available | No/Not Available | Partially Work in progress

In the absence of fire-fighting equipment like fire hydrant and smoke detectors, the hospitals were non-compliant with the fire safety norms.

3.13.2.2 Non-completion of Fire Safety Systems at various Health Facilities

With a view to addressing the deficiencies pointed out by the Fire Services Department and to comply with the Fire Safety requirements in Health facilities, Government accorded (October 2021) administrative sanction for the completion of the 153 works in the Government Hospitals for ₹31.03 crore through TSMSIDC, the Executing Agency

Scrutiny of the works revealed the following:

- Out of 153 works, works in 104 Health facilities were completed by the end of October 2022 and handed over to the health facilities. The remaining 49 works are in progress.

  Government in its response stated (August 2023) that, out of the 153 works as on 15 July 2023, 134 works were completed, 17 works were in progress and two works were not feasible and not taken up but sufficient fire extinguishers and sand buckets were kept in place. However, documents in support of this was not furnished to Audit.

- Completion of the works in five major hospitals which were at different stages revealed the following:

Table 3.59 – Status of Works

(₹ in Lakh)

Sl. No.	Name of the Health Facility	ECV [30] value	Agreement Value	Present Stage of work
1	Osmania General Hospital, Hyderabad	169	--	Internal hydrant works completed. Commissioning of work in progress
2	Government Dental College and Hospital, Hyderabad	82	65.81	Work in progress
3	Modern Government Maternity Hospital, Petlaburz, Hyderabad	125	98.29	Fire Extinguishers installed. Alarm work in progress
4	Modern MNJ Cancer Hospital, Hyderabad	108		Fire Extinguishers installed. Alarm work in progress
5	Sarojini Devi Eye Hospital, Hyderabad	50.50	40.17	Work in progress

Source: *Information furnished by TSMSIDC*

Government in its response stated (August 2023) that, out of the works in five major hospitals, works were completed in two hospitals and were in progress in the remaining three hospitals. Government attributed the delay in installation of fire fighting equipment due to patient load during week days and the work could be carried out only in evenings and Sundays.

It could be seen from the above table, that some of major health facilities do not have full-fledged firefighting systems. In the event of any unforeseen event at any health facility, the consequences could be disastrous. Thus, there is an inherent need for early completion of firefighting systems in health facilities.

3.14 Results of Doctors' and Patients' Survey

Survey of 89 Doctors and 581 (206 IPD and 375 OPD) patients of the test checked health facilities was conducted and the results of the survey have been given in the ***Appendix 3.5*** of the Report. Further, Joint Physical Verification (JPV) of 15 test checked hospitals have also been conducted with regard to healthcare service deliveries and the results are given ***Appendix 3.6.***

3.15 Conclusion

Out of the total 3,206 HWCs that were converted into Palle Dawakhanas, 122 Palle Davakhanas were operating without the services of MOs.

Due to shortage of registration counters in four out of nine test checked hospitals, each counter per hour was faced with an increased patient load. Thus, the patients were forced to wait a longer time for registration.

Non-provision of some Specialist out-patient service was observed in the District Hospitals, Area Hospitals and Community Health Centres. Out of 394 health facilities where AYUSH facilities were available, AYUSH Medical Officer was not available in 204 health facilities.

[30] ECV – Estimated Contract Value

The post of Pharmacist was lying vacant in 124 health facilities. Thus, the provision of AYUSH services has not been done fully in the State.

Patient Satisfaction Survey for evaluation of the services provided in OPD through certain outcome indicators for Quality assurance was not done in all health institutions. In all the test checked health institutions MNJ Institute of Oncology and Regional Cancer Centre, Osmania General Hospital, Niloufer Hospital, AHs Golconda and Malakpet, CHCs Amberpet, Wardhannapet and Badepally the Bed strength for the Nurses was more than the required norm of six beds per Nurse. In Niloufer Hospital, the Bed strength per Nurse was almost four times the norm.

The performance of the State with regard to maternity services like ANC received in the first trimester and consumption of Iron Folic Acid tablets has improved in 2019-20 as compared to 2015-16, while it had not shown any improvement in respect of pregnant women receiving at least four ANC.

Of the 14 District Hospitals, none of the DHs had diagnostic services relating to ENT, Oesophagus, Stomach, Colonoscopy, Bronchoscopy, Arthroscopy, Hysteroscopy. Similarly, except in DH, Kondapur, Pulmonary function tests were not available in the remaining 13 DHs.

Imaging equipment available with District Hospital Bodhan, Hyderabad, Jogulamba Gadwal, Medak, Medchal Malkajgiri, Narsampet, Utnoor and Yadadri Bhuvanagiri did not have the requisite Licence from AERB authorities. Thermo Luminescent Dosimeter (TLD) badges, a protective device indicating permissible radiation levels were not provided to personnel working with X-ray unit in 10 DHs. Pathology services were also not available in 11 out of 14 DHs. Microbiology services were not available in any of the DHs except DH Narsampet.

Blood banks were not available in DHs Gajwel and Medchal Malkajgiri, AHs Golconda and Malakpet. DHs Hyderabad, Kondapur and Medchal Malkajgiri did not have the services of mortuary.

DHs Medchal Malkajgiri, Kondapur and Utnoor did not have the availability of 24-hour uninterrupted power supply.

In the absence of fire-fighting equipment like fire hydrant and smoke detectors, the hospitals were non-compliant with the fire safety norms.

3.16 Recommendations

- Government may ensure Medical Officers are posted in all Palle Dawakhanas so as to achieve the objective of providing healthcare services at the doorstep.
- Government may ensure that all District Hospitals are equipped with imaging equipment and services relating to endoscopy and blood banks in a time bound manner.

- Government may ensure adequate facilities like the availability of adequate fire fighting equipment at all health institutions to ensure safety of patients and uninterrupted power supply.
- Patient Satisfaction Survey Report may be maintained by every health institution to know the level of patient satisfaction and also to initiate remedial measures wherever necessary.
- Government may provide the protective Thermo Luminescent Dosimeter (TLD) badges to personnel working with X-ray unit to protect them from radiation.

Chapter 4

Availability of Drugs, Medicines, Equipment and other Consumables

CHAPTER 4
Availability of Drugs, Medicines, Equipment and other Consumables

4.1 Introduction

The Government had set up TSMSIDC Limited (Corporation), as a Centralised Agency in 2014 with the objective to procure and manage drugs & medicines and equipment & instruments at fair and reasonable prices for all the Government Medical Institutions. The Corporation was to procure all essential drugs, medicines and equipment & instruments, hospital supplies, reagents & spares and execute Annual Maintenance Contract (AMC)/Comprehensive Maintenance Contract (CMC), through e-procurement portal in compliance with the provisions of Procurement Policy, October 2009[1] and 2012[2] of erstwhile Government of Andhra Pradesh.

Ensuring uninterrupted availability of drugs in the public health system is one of the key parameters of a well-functioning health system. Spending on drugs constitutes a substantial proportion of OOPE on healthcare for patients. Free provision of essential drugs in public health facilities brings huge savings to the patients without much burden on the Government, since bulk procurement of generics costs only a small fraction of the cost of branded drugs. Free Drugs Service Initiative of Government of India (GoI) is not about drug procurement and provisioning alone but is also expected to ensure a responsive supply of quality drugs to Health Facilities (HFs) and promote rational drug use.

One of the targets of the Sustainable Development Goals 3 is to "achieve universal health coverage, including financial risk protections, access to quality essential healthcare services and access to safe, effective, quality and affordable, essential medicines and vaccines for all".

Government of Telangana had implemented a Supply Chain Management (SCM) Application called "e-Aushadhi", to address the process of online indenting, distribution and prescription audit of drugs and surgicals, from peripheral to State level. This system acts as a track-n-trace mechanism for each and every drug/surgical right from procurement to supply to end user (citizen).

The operationalisation of e-Aushadhi portal in Central Medicine Stores (CMSs) and Health facilities started at CMS level in June 2015 and in the health facilities in May 2016 respectively.

4.2 Procurement Policy for Availability of Drugs, Medicines and Consumables

The following objectives were sought to be achieved through this Procurement Policy Framework:

a) Only medicines essential for the effective delivery of medical and health services shall be procured.

[1] G.O.Ms.No. 1357, Health, Medical and Family Welfare (M1) Department, dated 19 October 2009
[2] G.O.Ms.No. 30, Information Technology & Communications Department, e-Procurement, dated 9 August 2012

b) The budget provided for procurement of medicines shall be apportioned equitably among the various health facilities.

c) The procurement shall be effected as per a prescribed calendar for ensuring timely availability.

d) The procurement procedure shall be efficient and transparent.

e) A significant emphasis shall be laid on quality of medicines procured.

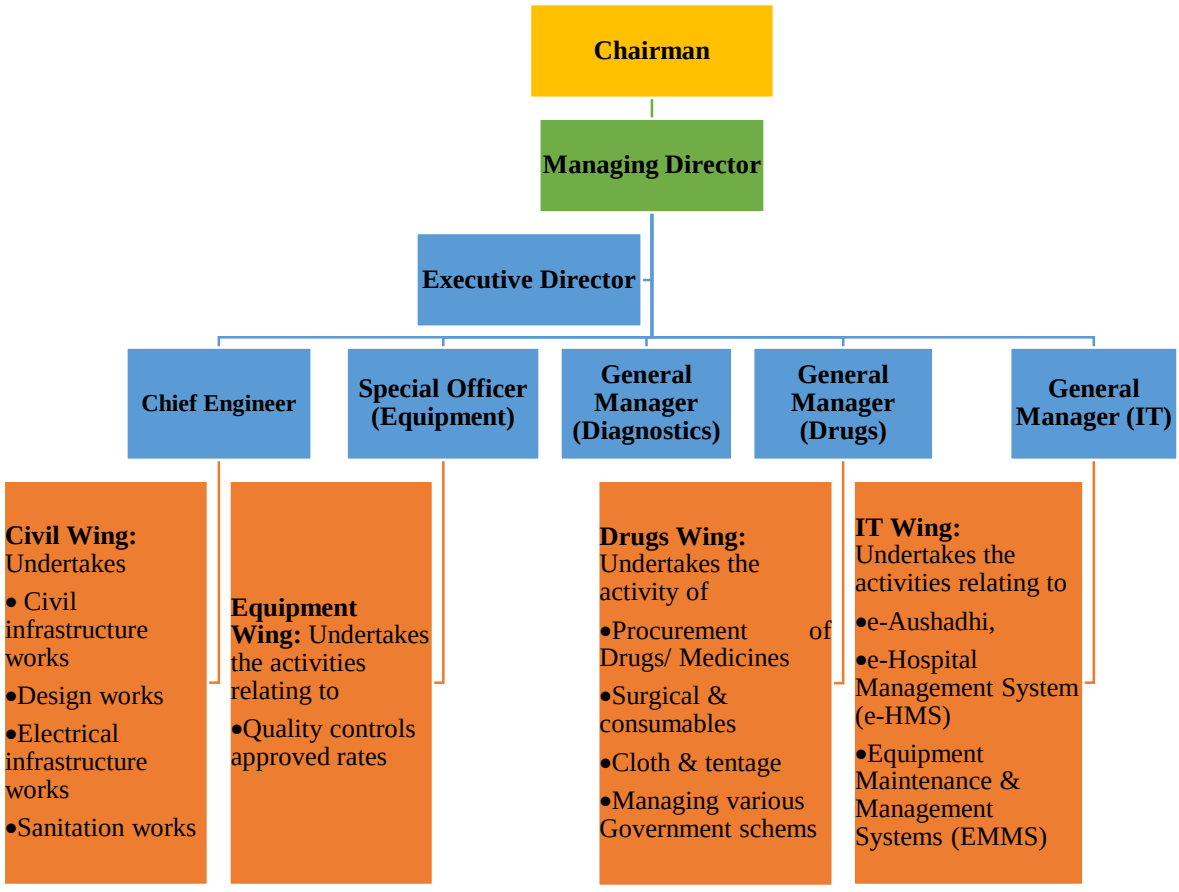
f) The medicines procured shall be stored in proper conditions, transported and delivered to health facilities systematically at their door step.

g) An environment is created for promoting the rational use of medicines.

h) A comprehensive information system for managing the entire cycle of procurement shall be established.

TSMSIDC undertakes its activities through Drugs Wing, Civil Wing, Equipment Wing, IT Wing, Establishment Wing and Finance Wing etc.

Chart 4.1 – Organisational Chart



Source: *TSMSIDC website*

The Budget available for Drugs and Medicines under various heads of the HM&FW Department under the State Budget shall be apportioned between the Head of Departments (HoDs) in the manner shown in **Table 4.1**:

Table 4.1 – Apportionment of Drugs and Medicines Budget between HoDs of the HM&FW Department

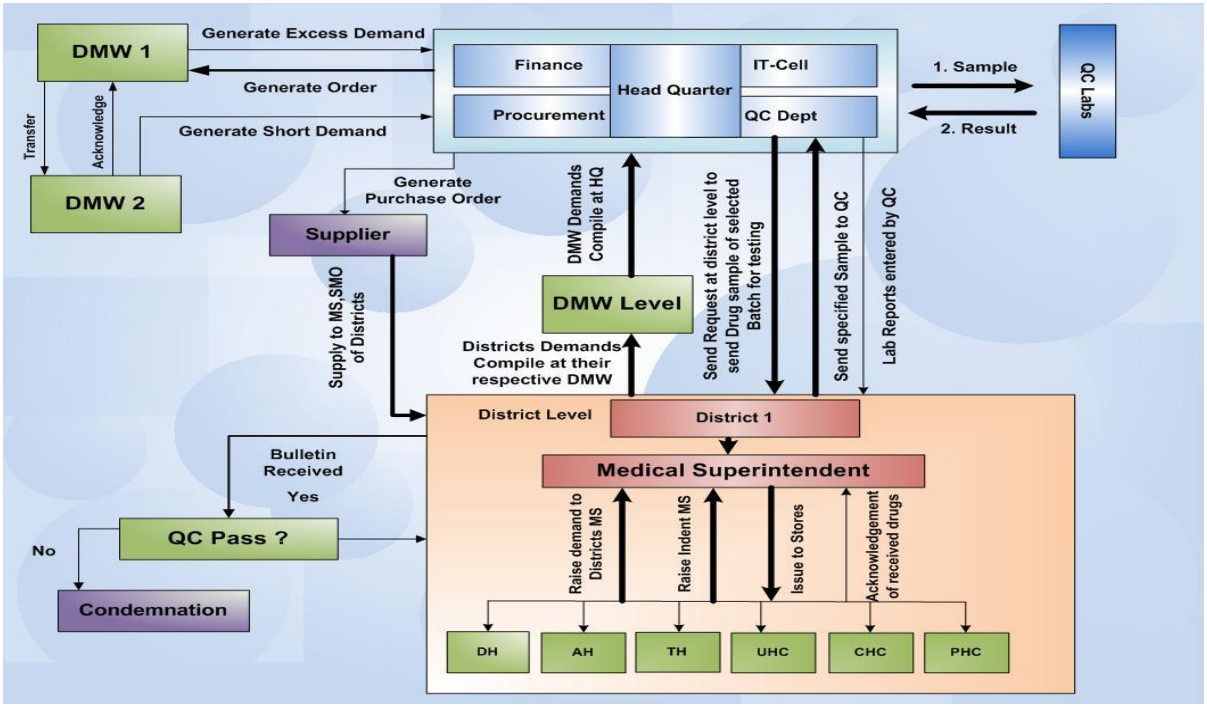
Name of the HoD	State budget available for drugs and medicines under HM&FW Department to be apportioned between HoDs upto 10-12-2019 in percentage terms	State budget available for drugs and medicines under HM&FW Department to be apportioned between HoDs from 11-12-2019 in percentage terms
Director of Medical Education	40%	39%
Director of Health	40%	38%
Commissioner, TVVP	18%	22%
Director, IPM	2%	1%

Source: *Procurement Policy of Government of Telangana issued vide G.O.Rt.No. 1357, Health, Medical and Family Welfare (M1) Department, dated 19 October 2009 and further orders issued vide G.O.Ms.No.88, Health Medical and Family Welfare (C2) Department dated 11 December 2019*

4.3 Procurement Process

The operations of the TSMSIDC as regards the procurement of Drugs and Medicines is depicted in the flow diagram below:

Chart 4.2 – Flow diagram of TSMSIDC procurement process



Source: *Gap analysis document of e-Aushadhi* ***DMW: District Medical Warehouse***

Para 4.1 to Para 4.2 of the Procurement Policy (2009 and 2012) prescribes the timelines for estimation and indenting. Procurement should be effected according to a prescribed calendar for ensuring timely availability. The Corporation should be formulating a bid document for procurement of medicines through the e-Procurement platform to cover both centralised and decentralised procurement with a view to enhancing the efficiency and transparency of procurement, to ensure an effective contract management and above all to guarantee quality of medicines procured.

During the period 2016-22, tenders were invited for procurement of drugs and medicines. After finalisation of the tenders, a rate contract was entered into with the firms/agencies for the supply of the quantity of medicines, surgical and consumable items, duly indicating the timelines within which it was required to be supplied.

4.3.1 Periodical Review of Essential Medicines List

The essential medicines must be available at all the health facilities as per need, in suitable quantities and dosage forms. Accordingly, the Standing Expert Committee[3] was constituted to finalise the list of Essential Medicines List (EML) and Additional Medicines List (AML) initially and to update it once in two years or more frequently as needed, keeping in view the WHO norms, Standard Treatment guidelines also through extensive consultations with specialists and super-specialists working in the public sector hospitals in Telangana State. The Committee shall also take into consideration the regional variations in the requirement of medicines based on the prevalence of certain diseases in specific areas of the State.

Accordingly, Government issued orders in July 2016 and the amended list was issued in January 2017 for 923[4] items of drugs. Further, the list was revised to 720[5] items in December 2019. Though the Corporation was to get the EML/AML reviewed and updated once in two years, it was observed that the review of EML/AML was done only twice i.e., in 2015 and 2019 till date.

Government in its response (August 2023) stated that, as per the latest procurement policy, periodical review of lists is decentralised, which is being done by a Standing Expert Committee and that the recent revision of the list happened in June 2022.

4.4 Procurement of Drugs and Medicines

4.4.1 Annual Indents

As per Para 4.1 of the Procurement Policy (2009), the Medical Officer or the Superintendent in-charge of the Health Facility should estimate the annual requirement of various medicines from the Essential Medicines List (EML) and Additional Medicines List (AML) as per the prescribed methodology and submit it to their respective HoDs *viz.*, Directorate of Public Health (DoPH), Telangana Vaidya Vidhana Parishad (TVVP), Director of Medical Education (DME) and Institute of Preventive Medicine (IPM) through CMS established in the Districts by 31st March of each year, in respect of the next procurement year (i.e. 1st July to 30th June of the next year). The individual indents of the Health facilities should be scrutinised and consolidated by the HoDs in the month of April every year to enable the Corporation to initiate the procurement process of the ensuing procurement year. The HoD should take steps to maintain the required proportion between the essential categories of medicines, based on the degree of essentiality, criticality for

[3] consisting of 19 members with the Director of Medical Education being the Chairman, Managing Director, TSMSIDC as Member Convenor and 16 other members and WHO/other Consultants nominated by TSMSIDC
[4] EML - 530, AML – 331 and Schemes – 62
[5] EML - 338, AML – 382

healthcare and disease burden. The HoD should also indicate a quarterly delivery schedule to enable effective inventory management at the Corporation level.

During the years 2017-18 to 2021-22, it was observed that in contravention to Para 4.1 of the Procurement Policy (2009), indents were submitted throughout the year instead of by 31 March every year. The number of health facilities that had not submitted their indents ranged between 160 (out of 1,300 health facilities amounting to 12 *per cent* for 2021-22) and 422 (out of 1,385 health facilities amounting to 30 *per cent* of total health facilities during 2018-19) (details vide ***Appendix 4.1***).

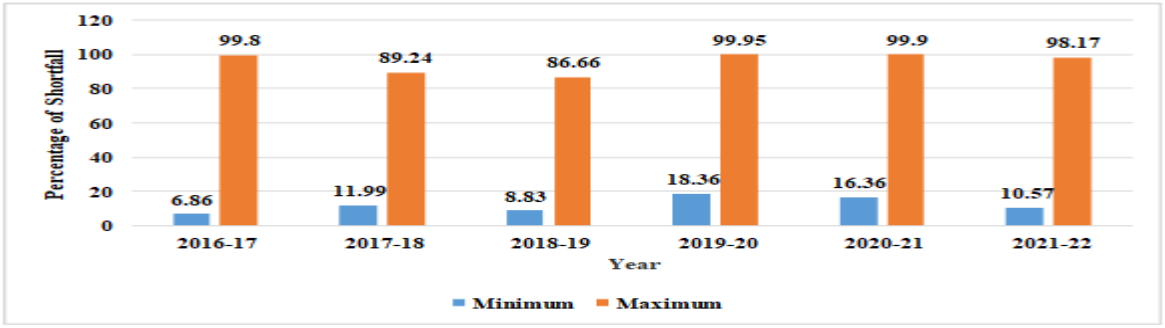
Government in its response stated (August 2023) that, as per the new Procurement Policy, "Essential Medicines List (EML)" items are centrally procured based on consumption and 3 month's stock is being maintained at CMS level. Audit however observed non-availability of medicines in CMS and non-supply to the health institutions as commented upon in para 4.4.9.

4.4.1.1 Non-receipt of Annual indents from the health institutions

During the years 2017-18 to 2021-22, it was observed that, either the indents were submitted throughout the year or not submitted by some of the health facilities.

This resulted in huge gap between indent and issue of Drugs and Medicines, Material and Supplies (M&S) and Cloth, Tentage and Stores (CTS) to Health facilities. The shortfall in the issue of the top 50 indented medicines by the Health facilities during the period from 2016-17 to 2021-22 are detailed below:

Chart 4.3– Minimum and Maximum percentage of shortage of top 50 indented medicines



Source: *e-Aushadhi database*

Government in its response stated (August 2023) that, as per the new Procurement Policy, "Essential Medicines List (EML)" items are centrally procured based on consumption and 3 month's stock is being maintained at CMS level. "Additional Medicines List-Centralised Procurement (AML-CP)" items are being procured by TSMSIDC which are specialty items and large quantities are required across all hospitals.

"Additional Medicines List-Decentralised Procurement (AML-DCP)" items are being procured at health facility level as they are required for fewer hospitals in smaller quantities, for which 20 *per cent*/20 *per cent* /5 *per cent* drug budget is sanctioned to the DME/TVVP/DH respectively.

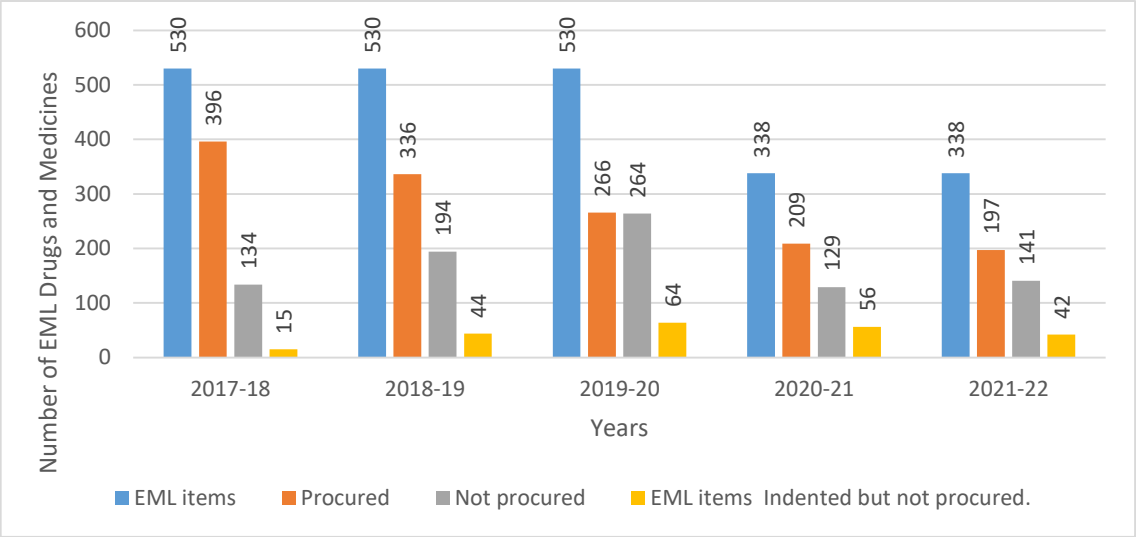
Audit observed that, the decentralised budget available to health facilities was meagre for procuring non supplied drugs and medicines by CMSs through decentralised purchase as commented upon in para 4.4.9.

4.4.2 Non-procurement of EML drugs by the Corporation

EML list had been reduced from 530 to 338 after December 2019. Corporation had not procured all the EML items, which resulted in the non-availability of items in the health facilities.

The details of EML items as per the approved list, procured and not procured, are given in the graph.

Chart 4.4 – Procurement and Non-procurement of EML Drugs and Medicines



Source: *e-Aushadhi database*

It is seen from the above chart that, 530 items are required to be procured as per the approved EML list 2015, while items procured are 396, 336 and 266 during 2017-18, 2018-19 and 2019-20 respectively and out of 338 items required to be procured as per the approved EML list 2019, items procured are 209 and 197 during 2020-21 and 2021-22 respectively. It was also observed that, although indents were received in respect of EML items i.e., 15 (2017-18), 44 (2018-19), 64 (2019-20), 56 (2020-21) and 42(2021-22) respectively, the same were not procured by the Corporation.

This resulted in the non-procurement of items ranging from 134 (25 *per cent* during 2020-21) to 264 (50 *per cent* during 2019-20) during these years.

Government in its response stated (August 2023) that, as per the revised list, there were 296 EML items and that currently rate contract was available for 294 items. Out of this, 283 items stocks are available, which worked out to 96 *per cent* items availability. Telangana currently stands at 3rd position in the Drugs & Vaccines Distribution Management System (DVDMS) Monthly State Rankings given by MoHFW, GoI.

No specific response has been furnished by the Government regarding non-procurement of all the approved EML drugs during the period from 2017-22.

4.4.3 EML medicines indented but not procured by the Corporation

There were indents of the drugs and medicines with indented quantities ranging from one lakh or more than one lakh, but the same were not procured by the Corporation.

Examples of EML medicines indented but not procured during the period 2017-18 to 2021-22 are given below.

Table 4.2 – Non-procurement of EML Drugs and Medicines

Year	Item Brand ID	Drug Name	Indented Quantity
2017-18	10100031	Diclofenac Sodium 100mg SR	1,56,10,600
	10100170	Cefixime Tablets 200mg	1,18,40,551
2018-19	10100031	Diclofenac Sodium 100mg SR	1,79,24,600
	10100349	Aluminium Hydroxide + Magnesium Hydroxide Tablets	2,19,38,505
2019-20	10100176	Ceftriaxone Injection 1gm	25,23,29,716
	10100536	Methyl Cobalamin Tablets	3,48,27,801
2020-21	10100529	B Complex therapeutic Tablets	21,21,45,017
	10101158	Ferrous salt (A) + Folic acid (B)	9,03,46,602
2021-22	10100529	B Complex therapeutic Tablets	13,77,26,182
	10107548	Aluminium Hydroxide + Magnesium Hydroxide Tablets (Each tablet contains, Acetyl salicylic acid-350mg, Aluminium Hydrochloride-90mg, Magnesium Hydrocloride-90mg)	1,22,22,726

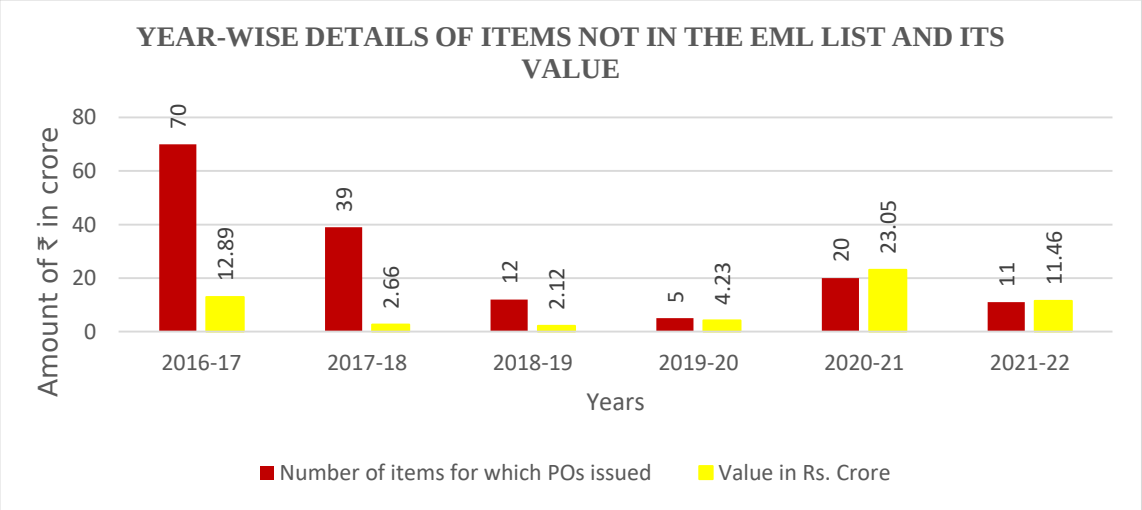
Source: *e-Aushadhi database*

The above table indicates that the top 10 indented medicines were not procured by the Corporation as requisitioned by the health facilities.

Government in its reponse stated (August 2023) that, currently, the EML items were being procured based on the consumption as per the new procurement policy.

4.4.4 Procurement of items by the Corporation that were not in approved EML list

Chart 4.5 - Procurement of Non-EML Drugs and Medicines



Source: *e-Aushadhi database*

The Corporation procured Non EML items (excluding COVID drugs) in contravention to the para 9(vi)[6] of Government orders of approved list of New Essential Medicines and Additional Medicines 2015. During the period 2016-17 to 2021-22, 157 POs valued at ₹56.41 crore were issued.

Government in its response stated (August 2023) that, in the same EML 2015 under para 6, the Government has permitted the TSMSIDC to procure the medicines other than the EML for National programs such as National Disease Control Programs, NTEP, NLEP, NHM and other requirements of State Departments like Rural Development, ICDS, EHS etc based on the requirement from HOD's.

Government response had not provided specific reasons in respect of non-EML items procured other than the National programme mentioned above.

4.4.5 Drugs and Medicines suppliers not blacklisted despite multiple quality failure

As per Para 12.7 read with Para 13.5.7 of the tender document[7], whenever a particular Drug of a particular batch is declared as Not of Standard Quality (NSQ), then that drug will be blacklisted against that firm. As per Para 12.8 of the tender document, if two or more drugs of any firm are blacklisted, then that firm will be blacklisted.

The Central Drugs Standard Control Organisation (CDSCO), Hyderabad and Drugs Control Administration (DCA), Hyderabad are the competent authorities to check the quality of drugs and randomly pick up certain samples from Government/Private Hospitals/Manufacturing Units/Wholesale and Retail Chemists and Unlicensed Dealers including CMSs. Results of analysis are sent or given to the respective institutions where the samples have been picked up.

Test-check of three[8] CMSs revealed that, during the period 2016-17 to 2021-22, 35 drugs and medicines received from 23 suppliers were picked up by the Drug Inspectors of CDSCO/DCA and declared as NSQ after testing by respective authorities. Out of 35 products to be blacklisted, only 20 products were blacklisted by the Corporation as detailed below.

Table 4.3 - Details of NSQ products and blacklisting of Firms involved

Number of drugs/products found to be NSQ	Number of products blacklisted	Number of products not blacklisted
35	20	15

Source: *Information furnished by the Department*

In addition to the above, CDSCO informed that another three drugs and medicines were declared as Not of Standard Quality received from another three[9] suppliers. However, only one drug was blacklisted (2018-19) by the Corporation.

[6] GO.Ms.No.9 dated 27.02.2016 of Health Medical and Family Welfare (C2) Department, Government of Telangana
[7] Pertaining to procurement of drugs and Medicines
[8] CMSs: Hyderabad, Mahabubnagar and Warangal
[9] Anod pharma Pvt Ltd, Greenland organics and Adroit Pharmaceuticals Pvt Ltd

Government in its response furnished the details of action taken in respect of 17 products.

Government response has been considered for 14[10] products. However, documents in support of three products (tender document in respect of two products and recovery particulars in respect of one product procured on nomination basis) were not furnished to Audit.

4.4.6 Non-execution of Purchase Orders by the Suppliers

As per Clause 4.2 of the Tender Document, if the vendor fails to deliver any or all the goods or perform the services within the time period(s) specified[11] in the Contract, Liquidated Damage should be imposed by the Corporation as per the conditions of the agreement.

Audit observed that as against 16,016 POs issued by the Corporation, drugs were supplied in respect of 13,950 POs and drugs were not supplied in respect of 2,066 POs. Further, noticed that the Corporation had not levied penalty of ₹42.87 crore on the suppliers as per the tender conditions.

Corporation replied (August 2022) that due to COVID-19 pandemic, Force Majeure clause in the tender document was not invoked to ensure the availability of stocks of some other drugs by the same suppliers, no action was initiated against suppliers.

Reply of the Corporation is not acceptable, as unexecuted Purchase Orders of 1,431[12] (₹205.14 crore) related to other than the COVID-19 period for which penalty of ₹20.51 crore was not levied.

Government in its response stated (August 2023) that, currently, the penalty for non-excecution of POs is being implemented as per tender conditions manually. However, CDAC has been requested to incorporate this provision in e-Aushadhi application on 12 September 2022. Documents in support of recoveries pointed out by Audit was not furnished.

4.4.6.1 Delayed Supply of Drugs by the Suppliers to the CMS

At the time of inviting tenders, a specific clause 4.2 was included for levy of penalty in case of supply of drugs and medicines beyond the timelines specified in the Purchase Order (PO). Penalty conditions regarding levy of penalty for the periods prior to October 2020 and after October 2020 are as follows.

Table 4.4 – Tender conditions for late delivery

Tender period	Timelines	Penalty conditions
Prior to October 2020	Beyond 75 days of issue of PO	Penalty of Liquidated Damages (LDs) at the rate of 0.5 *per cent* of the value of goods supplied late will be levied for each day of delay or part there of up to a maximum period of 15 days or until a maximum 7.5 *per cent* of Value of Late Delivered Goods

[10] Declared as Standard Quality - 5; Sub-judice - 4; New tender conditions -2; blacklisted - 3
[11] Prior to October 2020: -90 days, After October 2020:- 70 days
[12] Excluding 635 POs of value ₹223.55 crore from 1 Jan 2020 to 30 June 2021 (COVID-19 period)

	Goods not received at drug store within 90 days of issue of purchase order.	Deemed to have been cancelled. On the request of supplier may extend the time subject to levy of penalty of one *per cent* of the value of goods supplied beyond 90 days for each day of delay or part thereof. In case of failure to adhere the timelines, difference of the cost for which procured in the open market in addition to other penal action.
After October 2020	Beyond 45 days of Issue of the purchase order	Penalty at the rate of 0.25 *per cent* of the value of goods supplied late will be levied for each day delay up to a maximum period of 10 days and 0.5 *per cent* per day for next 15 days of Value of goods supplied late
	After 70 days	No amount shall be payable. However, on request may extend the timelines subject to levy of penalty of maximum 10 *per cent* of the value of goods supplied late

***Source**: Tender documents*

In e-Aushadhi the details *viz.*, date of receipt, quantity received etc., is captured. It was observed that 2,677 POs involving 12,898 batches of drugs and medicines attracted Liquidated Damages (LDs) of ₹28.66 crore as per the tender conditions.

When the issue of details of imposition of penalty on the suppliers was called for, Corporation stated (August 2022) that during the period from March 2020 to January 2022 due to the COVID pandemic, details of payments could not be updated in e-Aushadhi. Corporation had further furnished 7 cases where liquidated damages for an amount of ₹6.88 lakh were recovered for delayed supply leaving a balance amount of ₹28.59 crore. However, recovery particulars of liquidated damages for the balance 2,670 POs called for (September 2022) amounting to ₹28.59 crore was not furnished by the Corporation.

Government in its response stated (August 2023) that, the charges/penalties for supplies are being recovered from the suppliers bills as shown in Supplier Performance Detail Report (SPDR) under LDs clause as per tender condition. The amount shown in LD field under Consolidated Payment Details is being deducted. However, the LD deductions after processing of bills are not entered separately as there is no such provision in e- Aushadhi. The LDs recovered from 2016-22 was ₹25.68 crore. It was also stated that, requests had been placed to CDAC to develop the provision.

Government reply is not acceptable as details of the PO for which LD recoveries were made were not furnished.

4.4.7 Range of delays in supply of Drugs to CMS

Table 4.5 - Range of Delay in supply of Drugs to CMS

Delay in Days taken for supply of drugs	1-30 days	31-60 days	61-90 days	91-120 days	More than 120 days
Number of batches of drugs	8,798	2,078	752	359	911

***Source:** e-Aushadhi database*

Audit observed that 1270 batches of drugs were supplied with delays ranging more than 90 days in respect of which no amount needs to be paid as per the tender conditions for late delivery.

4.4.8 Non-supply of Drugs and Medicines by CMS due to non-availability

Audit observed that, there were indents for the supply of drugs and medicines from the Health Facilities which could not be supplied by the CMSs due to non-availability. The total quantity of drugs and medicines that could not supplied by the CMSs worked out to the extent of ₹771.75 crore[13] during the period 2019-22[14]. Out of 2,442[15] Drugs and Medicines in the database, only 720 items were procured during the period 2019-22. Further, it was also observed that, Corporation has not procured the required EML drugs prior to pandemic period also.

Government in its response stated (August 2023) that, TSMSIDC could not procure some items due to supplies by firms getting disrupted during the COVID-19 pandemic. RC could not be entered inspite of repeated tenders and certain items may be available in some CMS stores but not at the indented CMS. In such cases, diversions are being taken up.

However, currently 96 *per cent* items of total EML list and 94 *per cent* items of AML (CP) are available and ensuring the supplies in time.

4.4.9 Delayed Supply/Non-Supply of Drugs/Consumables to Healthcare Institutions by Central Medical Stores

Due to delays in receiving the drugs from the suppliers and non-execution of Purchase Orders, health facilities experienced non-supply of the indented items. In case of non-availability of drugs at CMS, the requirements are to be met from the decentralised budget allocated to the health facilities. Year-wise details of the indents received by CMS from the health facilities, number of indents for which the stocks were not available at CMS are as shown below.

Table 4.6 – Details of indents received and stocks not available at CMS

Year	No. of indents received	No. of indents where there was no supply by CMS	Non-availability of drugs at CMSs as on the date of issue	% of No. of transactions where drugs was not available at CMSs	Tentative cost of non-available drugs and surgical for which rates available (₹ in crore)	Decentralised budget provided (₹ in crore)
2016-17	3,72,160	57,838	49,280	13.24	344.62	Information not furnished by Corporation
2017-18	4,14,301	1,01,107	72,814	17.57	182.88	
2018-19	4,34,434	1,28,888	95,905	22.07	90.90	
2019-20	6,29,912	2,91,982	2,60,852	41.41	325.46	33.71
2020-21	5,89,347	2,53,678	2,22,609	37.77	341.93	17.88
2021-22	3,60,957	1,61,510	1,52,193	42.16	104.36	34.92

Source: *e-Aushadhi database*

[13] Calculated on the basis of Rate Contract available with the Corporation.
[14] Details of the local purchase budget were not made available for the period 2016-17 to 2018-19
[15] which includes EML/AML list, Essential Surgical List, Additional Surgical List, Surgical Instrument List, etc.

It can be observed from the above table that, the decentralised budget available to health facilities was meagre for procuring non supplied drugs and medicines by CMSs through decentralised purchase. The cost of drugs and medicines purchased through decentralised procurement will be much higher compared to bulk purchase of generic drugs made by the Corporation.

4.4.10 Discrepancy in Labelling and Packaging of Drugs and Medicines

A penalty at the rate of two *per cent* on the total value of goods supplied will be levied on packing and labelling deviations[16]. A penalty of ₹18.87 crore was attracted in respect of 7420 POs (excluding COVID period POs) towards labelling and packaging deviations. Year-wise details are as follows.

Table 4.7 – Penalty for Labelling and Packaging deviations

Year	Label defect POs	Amount of penalty (₹ in crore)
2016-17	543	1.59
2017-18	2,388	4.72
2018-19	1,827	5.39
2019-20	2,171	4.57
2021-22	491	2.60
Total	7,420	18.87

Source: *e-Aushadhi database*

Audit could not analyse the details of penalty charges (liquidated damages for deficiency in labelling and packing) imposed and recovery particulars during the period 2016-17 to 2021-22 due to the non-availability of data in e-Aushadhi software.

Government in its response stated (August 2023) that, the audit party calculated the packing deviation amount based on the initial remarks entered by CMS stores in e-Aushadhi which is not the correct procedure because it is to be calculated based on the final QC report given by GM (QC Wing), TSMSIDC as per the relevant tender conditions. It was also stated that, during the period 2016-2022, only an amount of ₹7.84 crore were to be recovered towards packing deviations and the same has been recovered.

However, details of the final QC report given by the GM (QC Wing) were not provided to Audit to verify the Government claim regarding recoveries. Further, recoveries PO-wise were not furnished as a result, Audit is constrained from verifying the recovery details.

4.5 Availability of Essential Drugs, Medicines & Consumables in District Hospitals

Essential drugs and medicines are those which address the priority healthcare requirements of a given population. Scrutiny of the availability of Drugs, Medicines, Consumables and Disposables in the District Hospitals revealed the following:

Table 4.8 - Availability of Drugs, Medicines, Consumables and Disposables in DHs as of May 2023

Drugs/Medicine / Surgical Group Name	Required	BOD	GAD	GAJ	HYD	KDP	MDK	MED	MUL	NRY	NRS	PED	TDR	UT	YB
Anaesthetics	10	3	2	5	3	1	7	3	1	2	2	4	2	4	1

[16] Clause 13.1 of the Tender document

Drugs/Medicine / Surgical Group Name	Required	BOD	GAD	GAJ	HYD	KDP	MDK	MED	MUL	NRY	NRS	PED	TDR	UT	YB
Analgesic, Antipyretic & Anti-Inflammatory Drugs	17	7	9	9	9	8	13	16	10	8	8	8	9	8	8
Anti Malarial	4	0	0	2	0	1	2	1	0	0	0	0	0	2	0
Anti Migraine	2	1	1	1	0	0	1	1	1	0	1	1	1	1	1
Anti Neoplastic and Immuno Suppressant Medicines	3	0	0	1	1	0	1	0	1	1	0	1	0	0	0
Anti Protozoal	1	0	0	0	1	1	0	1	1	1	0	1	0	1	0
Antiallergics & Drugs Used In Anaphylaxis	12	5	8	8	7	4	6	7	5	8	5	8	8	5	6
Antibacterials	7	2	5	5	5	6	6	7	6	4	7	5	5	4	6
Anticonvulsants/Antiepileptics	13	0	1	0	2	0	5	4	0	1	2	2	1	2	0
Antidotes And Other Substances used in Poisoning	1	0	1	1	1	0	0	1	1	1	1	1	1	1	1
Antiinfectives	48	3	3	10	9	7	22	14	5	6	8	10	3	4	3
Antipsychotic	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0
Antiviral	1	0	0	0	1	0	1	1	0	1	1	0	0	0	0
Cardiovascular	24	2	4	6	9	3	15	8	7	4	12	9	4	10	4
Dermatological (Topical)	18	1	1	9	8	5	8	8	11	9	9	11	1	7	7
Disinfectants & Antiseptics	7	3	4	3	3	4	3	6	2	3	5	6	4	2	4
Diuretics	5	0	2	2	2	1	5	2	0	1	2	2	2	2	2
Drugs for Gout & Rheumatoid Arthritis	1	0	0	0	1	1	0	0	0	0	1	0	0	0	0
ENT	19	4	14	12	17	12	18	15	13	17	16	19	14	14	12
Gastrointestinal	9	2	4	4	2	2	8	5	4	3	3	3	4	3	3
Hormones, Other Endocrine Drugs	16	2	8	9	7	9	12	13	12	9	10	9	8	6	7
Immunologicals	4	2	1	1	2	1	1	2	2	1	1	3	1	2	1
Medicines Acting on the Respiratory Tract	20	5	11	11	8	3	11	16	6	8	9	10	11	9	9
Medicines Affecting the Blood	13	2	7	7	5	6	10	6	5	6	6	7	7	9	5
Medicines used in diabetes mellitus	3	1	1	2	1	1	3	0	0	1	1	2	1	2	0
Miscellaneous	2	1	1	1	1	1	0	2	2	1	1	2	1	2	1
New EML group	1	0	0	1	1	0	1	0	0	0	0	0	0	0	0
Ophthalmological	19	2	1	5	3	2	10	1	0	1	1	1	1	1	2
Oxytocics and Antioxytocics	6	1	2	4	5	2	4	3	3	3	3	3	2	3	2
Peritoneal Dialysis Solution	8	4	3	4	4	2	5	4	7	4	6	4	3	3	2
Psycho Therapeutic	2	0	0	1	0	0	2	1	1	0	1	0	0	0	0

Drugs/Medicine / Surgical Group Name	Required	BOD	GAD	GAJ	HYD	KDP	MDK	MED	MUL	NRY	NRS	PED	TDR	UT	YB
Psychotropic Drugs	4	0	1	4	3	2	2	3	3	3	2	4	1	3	2
Radiology	3	0	2	2	3	1	2	2	3	2	2	3	2	1	2
Surgical and Consumables	6	1	5	4	5	5	5	5	3	1	4	6	5	2	2
Swine flu vaccine	1	1	0	1	1	1	1	0	1	1	1	1	0	0	0
Thyroid and antithyroid medicines	1	0	7	8	0	0	1	1	0	1	0	0	1	0	0
Vitamins And Minerals	17	3	1	8	9	9	12	15	13	8	9	11	7	12	7
Water, Electrolyte & Acid-Base Disturbances	9	0	7	0	8	7	6	7	7	7	5	9	7	8	6
Surgical and Consumables	462	76	95	97	198	68	217	157	96	130	84	171	95	83	79
TOTAL	800	134	213	49	345	176	426	338	232	257	229	337	213	216	185

Source: *Data furnished by test checked District Hospitals*

Colour code:

Available in 50% and more		Available in more than 25% and less than 50%		Not available in less than 75%	

It is evident from the table above that, out of 39 therapeutic medicine groups, in 20 groups, medicines were not available across 11 out of 14 District Hospitals.

Government in its response stated (August 2023) that, 96 *per cent* of total EML and 94 *per cent* of AML were available. However, Government had not furnished any specific reasons for the issue pointed out by Audit.

4.5.1 Availability of AYUSH Essential Medicines

The Essential Drugs List in respect of Homeopathy, Unani and Ayurveda finalised (March 2013) by the Department of AYUSH, Ministry of Health and Family Welfare prescribed the number of drugs, *viz.*, Ayurvedic (277 drugs) Unani (288 drugs) and Homeo (257 drugs) to be available in the AYUSH Health institutions. Actual availability of the drugs are indicated in the Table 4.9:

Table 4.9: Availability of AYUSH Essential Medicines in AYUSH Healthcare Institutions

Name of Unit	Number of AYUSH Drugs in EDL	Average Availability of AYUSH Drugs during 2016-21
Government Ayurvedic Hospital Erragadda, Hyderabad	277	109
Government Nizamia General Hospital, (UNANI) Charminar, Hyderabad	288	33
D.K. Government Homeo Hospital, Ramanthapur, Hyderabad	257	257

Source: *Data furnished by test checked Hospitals*

Colour code:

Available in 50% and more		Available in more than 25% and less than 50%		Not available in less than 75%	

It is evident from the table above that 61 *per cent* of Ayurvedic Essential Drugs and 89 *per cent* of Unani Essential Drugs were not available in Government Ayurvedic Hospital and Unani Hospital respectively.

4.5.2 Undue benefits to suppliers and loss to Corporation for issue of POs at higher rate than the agreed rate contract

Scrutiny of the Purchase Orders revealed that, contrary to the conditions of the agreement, Corporation had issued 87 Purchase orders in respect of 24 items and the excess payment was ₹2.55 crore more than the agreed Rate Contract (RC). The rate difference per each item ranged from ₹1.14 to ₹6,412.69.

The Corporation replied (August 2022) that, there is no price variation between RC rate and PO rate in respect of 75 Purchase Orders and in respect of the remaining 12 Purchase Orders it was stated that the rates of POs were revised and approved in different tenders for different periods.

The Corporation claim is acceptable to the extent of 68 Purchase Orders and the remaining 19 Purchase Orders pertaining to 09 suppliers amounting to ₹1.65 crore is contrary to the claim of the Corporation.

Government in its response stated (August 2023 and September 2023) that, there was no price variation between RC Rate and PO Rate in respect of 19 PO's. However, documents were not furnished in respect of 12 POs only without any details of the final payments made to suppliers in respect of these POs.

4.5.3 Loss due to non-replacement of expired medicines

As per the conditions of tender document (May 2016), the bidder should take back drugs which are not utilised by the Corporation with three months left over shelf-life period under proper acknowledgement and the value of such drugs would be deducted from the payment to be made to the supplier and for this purpose, the Corporation should submit the details in advance to the supplier. The CMSs/Corporation shall issue an Expiry Drugs Clearance Certificate for facilitating the release of the Performance Security Deposit.

On verification of the e-Aushadhi data for the period 2016-22, it was observed that, there were expired drugs valuing ₹390.26 crore at CMSs and health facilities as detailed below:

Table 4.10 – Expiry of Drugs and Medicines

S.No.	Location	Items	₹ in crore
1	CMSs	3,110	44.10
2	Health Facilities	2,51,882	346.16
Total		2,54,992	390.26

Source: *e-Aushadhi database*

- As per the tender conditions, the Corporation was required to monitor the near expiry drugs so as to ensure that they are returned to the supplier. However, Audit observed that, there was no mechanism for providing alerts about expiry of the drugs in e-Aushadhi application. The Corporation had created the alert only in April 2019. It was also observed that, by the time of creation of alert, drugs to the extent of ₹7.80 crore had already expired in the CMS.
- Even after creation of alert in April 2019, drugs worth ₹36.30 crore were allowed to expire to the end of March 2022 in the CMS.
- This shows that there was no proper monitoring mechanism for return of the expired drugs to the supplier which ultimately resulted in non-utilisation of the drugs.

Government in its response stated (August 2023) that out of the stated ₹390.26 crore, ₹346.16 crore is pertaining to the health facilities which was as per the information in e-Aushadhi. Due to high patient/OP load in the hospitals, it was impossible to enter the consumption details within the existing workflow of "Issue to Patient". Although those medicines were consumed, the data was not updated in e-Aushadhi and hence appearing as expired drugs. However, to address this, the system has been recently updated for hospitals to make bulk entries towards the end of the day. Remaining amount i.e., ₹44.10 crore is corresponding to CMS stores. The expired drugs worth ₹1.88 crore were replaced by concerned firms and ₹21.22 crore has been recovered from the payable bills (or) performance security of the concerned firm.

However, documents in support of the claim of replacement of ₹1.88 crore worth medicines and recovery of ₹21.22 crore related to expiry/near expiry drugs were not furnished PO-wise, Batch-wise. The above audit observation was about the expired drugs in respect of POs issued till March 2022 and the recovery particulars furnished by Government included both near expiry and expired drugs as of July 2023 without any specific mention of Batch or PO. As a result, Audit is constrained from verifying the facts stated in the Government response.

During the field visits, it was confirmed from the CMS and health facilities that there were expired drugs that were not replenished by the suppliers and were being disposed off through the Bio-Medical Waste agency.

There is an inherent need for Government to examine the issue of non-replacement of expired drugs and ensure that timely replenishment of near expiry/expired drugs is done by the suppliers as it causes huge monetary loss to the public exchequer.

4.5.4 Issue of near expiry medicines (shelf life up to 90 days) to health facilities

As per Para 12.11 (Near Expiry Drugs) of tender documents, the bidder should take back drugs under proper acknowledgement, which are not utilised by the Corporation with the 3 months left over shelf life period and the amount should be deducted from the Payment to be made to the supplier.

Drugs and Medicines (706 numbers) worth ₹17.13 crore[17] having leftover shelf life ranging from 1 to 89 days[18] were issued by Central Medicine Stores to 1,259 health facilities during the period 2016-17 to 2021-22.

Government in its response stated (August 2023) that, to monitor the expiry period of the drugs and consumables, it was included in the e-Aushadhi module to exhibit near expiry drugs which is having another 90 day's shelf life to return to the firm as well as to freeze the stocks in e-Aushadhi to avoid further issues. However, if no other batches of these items are available and hospital authorities request to issue these items inspite of lower shelf life due to emergency requirement, they were being issued.

The fact remains that had the department taken timely action to get near expiry drugs replaced with new supplies which would have enhanced shelf life of the drugs.

4.6 Quality Control Mechanism

The Procurement Policy (2009) emphasised that, ensuring the quality was one of its prime objectives. The samples of drugs from each batch should be sent for quality control (QC) checks through the QC wing of the Corporation. There are eight empanelled Laboratories for quality testing of drugs and medicines which are not part of the TSMSIDC.

4.6.1 Issue and consumption of drugs without mandatory testing

Table 4.11 – Issue and consumption of drugs without mandatory testing

Batches sent for QC	Batches returned by Labs without testing	Batches sent to another labs for testing (out of returned batches)	Batches not sent to another labs for testing out of returned batches	Batches issued to Health facilities without even testing (out of the 54) and consumed
32,828	370	316	54	47

Source: *e-Aushadhi database*

Audit observed that, out of 32,828 batches that were sent for quality testing, 370 batches were returned by the Labs without conducting the quality testing. Of these 370 batches, 316 batches were again sent for testing to other labs and 54 batches were not sent for testing. It was further observed that out of the 54 batches not tested, 47 batches were issued to the health facilities.

Government stated (August 2023) that, out of the 47 batches, 27 batches were sent for testing and were declared as of "Standard Quality". Out of the remaining 20 batches, no

[17] The amount pointed out by Audit in respect of drugs and medicines less than 90 days was ₹26.08 crore which was reduced to ₹17.13 crore
[18] Comprising of 12,617 transactions in the data base

test was conducted citing reasons *viz.,*. no testing facility available at empanelled laboratories for 04 batches and for remaining batches no testing was required to be done.

Reply of Government is considered in respect of 15 batches and not acceptable for remaining 32 batches. Out of the 32 batches not accepted, in respect of 11 batches the drugs were issued prior to receipt of QC report and in respect of 21 batches testing was not done even though they were required to be tested mandatorily as per e-Aushadhi provisions.

Issue of drugs without the mandatory testing is fraught with the risk of Not of Standard Quality (NSQ) drugs being consumed by the patients vide para 4.6.3.3.

4.6.2 Issue of Not of Standard Quality drugs to Health Facilities.

Table 4.12 - Issue of Not of Standard Quality drugs to Health Facilities

Authority	Samples sent for testing	Authority to whom sent	Samples declared as NSQ	No. of suppliers involved in drugs declared NSQ	No. of batches issued to health facilities out of NSQ batches
Sent by Corporation	818	DCA, Hyderabad	47	7	3
Collected by CDSCO/DCA	Not available	CDSCO/DCA	37	24	10

Source: *Information furnished by the Department*

Audit observed that 84[19] samples had been declared as NSQ by DCA/CDSCO of which 13 batches had been issued to the Health Facilities.

Government in its response stated (August 2023) that, whenever, an item is picked by Drugs Inspector and identified as NSQ, those batches will be recalled from the health facilities to CMS stores and destroyed at different site. However, these returned stocks were wrongly shown as "Active" in e-Aushadhi due to the above technical glitch in the application, the CMS stores have issued the batches. However, all the stocks were again recalled immediately and the technical glitch is resolved now.

Government response confirmed the audit observation of issue of Not of Standard Quality drugs to health facilities.

4.6.3 Drugs/Consumables not sent for testing and delay in testing in Laboratories

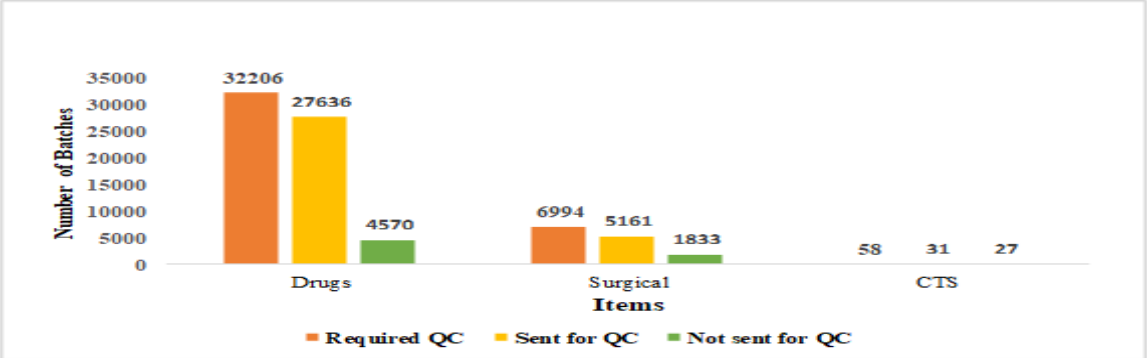
On receipt of the drugs and medicines from the suppliers by the CMS, the system (Quality Control Wing of the Corporation) automatically select the store and batch of medicine for quality check. Then, the Corporation sends the request to CMS In-charge for sending samples for Quality Check (QC). The CMS sends the samples to the Corporation for testing. Quality Control Wing of the Corporation compile all the samples as per batch details and convert each batch with secret number and sends the samples to the empanelled lab for QC testing. The concerned empanelled lab conduct QC testing and send the sample pass or fail report to the Corporation.

[19] involving 31 suppliers

4.6.3.1 Sending of batches for testing

Out of the 39,258 batches of Drugs/ Surgical/CTS items, the Corporation had sent 32,828 for Quality Check, leaving 6,430 batches (16 *per cent*) not being tested for their quality. The item-wise details are shown in the graph:

Chart 4.6 – Total Number of batches sent for QC testing and not sent for QC testing



Source: *e-Aushadhi database*

The Corporation replied that they have sent samples from all 6430 batches for quality testing either offline or online. On verification, the reply of the Corporation is not acceptable for 2,635 batches, in the absence of sufficient support documents.

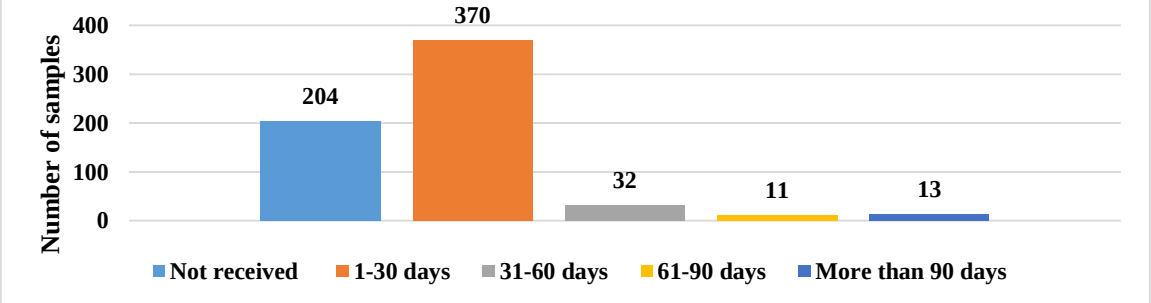
Government in its response stated (August 2023) that, out of 6,430 number of batches not sent for testing, 3,579 were sent to empanelled laboratories of TSMSIDC and 459 batches were sent to DCL Hyderabad. The balance 2,392 batches (6 *per cent*) were not tested for quality for various reasons like small quantity, cost of the testing is more than cost of procurement etc.

Government reply is not acceptable as testing of the samples from every batch is mandatory as per the Procurement policy.

4.6.3.2 Reports of QC not received/Delay in receipt of QC reports

As seen from the e-Aushadhi data, it was observed that 32,796 drugs and samples were sent for quality check for the drugs received[20] up to 21st October 2021. The delays in receipt of 426 reports ranged from 1 to 1,441 days. Details of reports received with delay and not received are as follows.

Chart 4.7 - Range of Delay in Sample Testing



Source:- *e-Aushadhi database*

[20] Excluding the required time period of 28 days for the testing from data dump of 2nd December 2021

Government in its response stated (August 2023) that, while migrating from manual process to e-Aushadhi application, the laboratories were not making entries in the application although they have submitted the physical reports in time. The labs were mandated to make the entries in the application and they made the entries at a later time. The original delays in receipt of QC reports range from 1 to 142 days only. The total amount deducted towards penalty during the period 2016-21 was ₹7.38 lakh. Currently, TSMSIDC is ensuring that all the laboratories submit their reports through e-Aushadhi in time.

Government had however not furnished any documentary evidence in support of the submission of reports physically.

4.6.3.3 Issue of Batches before receipt of QC Reports

In violation of the condition of keeping the batches prior to receipt of reports as quarantine, out of 204 batches of drugs for which reports were not received and out of which 158 batches of drugs were issued by CMSs to health facilities during the period April 2016 to November 2021. The balance 46 batches were retained in quarantine.

Government in its response stated (August 2023) that, these batches were issued to the health facilities based on the in-house analytical reports (Certificate of Analysis from manufacturer) due to the emergency requirement at health facility level. However, the analytical reports were received later.

Government response is accepted in respect of 66 batches and the remaining 92 batches were found to have been issued prior to receipt of the QC certificate.

Out of 92 batches issued prior to receipt of QC Reports, seven drugs were declared as NSQ.

Delayed receipt of QC Reports and issue of drugs on the basis of in-house analytical reports of the supplier had a possibility of issue of sub-standard quality medicines to the patients.

4.6.4 Deficiency in Infrastructure at Central Medicine Stores

4.6.4.1 Inadequate storage facilities

The Procurement Policy (2009) stipulates that, the Corporation should take steps to establish a scientific storage system by constructing professionally designed warehouses in all the Districts. It should also develop and adopt good warehouse management practices and an internal supervising system.

Table 4.13 – Inadequate Storage facilities in CMSs

Sl. No.	Provisions	CMS, Hyderabad	CMS, Mahabubnagar	CMS, Warangal
1	Adequate space	**No**	**Yes**	**No**
2	Availability of sufficient racks	**No**	**No**	**No**
3	Available and functioning Air conditioner	**Insufficient**	**Insufficient**	**Insufficient**
4	Available and functioning Refrigerator	**Insufficient**	**Insufficient**	**Insufficient**
5	Room temperature within the required limits	**No**	**No**	**No**
6	Medicines kept haphazardly at various locations	**Yes**	**Yes**	**Yes**

Source:- *Information furnished by test checked CMSs*

As per Appendix 14, Point no. 2 of National Formulary of India, Drugs must be stored under appropriate storage conditions to minimise deterioration, contamination or damage. To maintain appropriate storage conditions *viz.,* Temperature or humidity-controlled environment, storage places must be equipped with suitable indicators, recorders and/or failure warning devices. They must be checked at appropriate intervals and the results are to be recorded. Recording thermometers should be used. The temperature in uncontrolled storage products should also be monitored. Temperatures of the refrigerators, deep freezers and Relative Humidity in the humidity control area as well as general areas of storage at room temperature should be recorded on a daily basis.

Photographic evidence of poor storage of drugs in CMSs which were taken during the JPV is below:

Photos relating to CMS Hyderabad

Figure 4.1 –Insufficient racks (29 April 2022)

Figure 4.2 –Insufficient racks (29 April 2022)

Figure 4.3 – Non-functional AC (29 April 2022)

Figure 4.4 –Non-functional Refrigerator (29 April 2022)

Figure 4.5 –Medicines kept haphazardly (29 April 2022)

Photos relating to CMS Mahabubnagar

Figure 4.6 – Insufficient racks (19 May 2022)

Figure 4.7 – Non functional AC (19 May 2022)

Figure 4.8 – Recorded room temperature more than normal (19 May 2022)

Figure 4.9 – Medicines kept haphazardly (19 May 2022)

Photos relating to CMS Warangal

Figure 4.10 – Insufficient space (1 June 2022)

Figure 4.11 – Insufficient racks (1 June 2022)

Figure 4.12 - No AC in Mezzanine Chamber for storing drugs from 8^0 to 25^0 Centigrade

Figure 4.13 –N Recorded room temperature is 320 which is more than normal of 8^0 to 24^0 Centrigrade (1 June 2022)

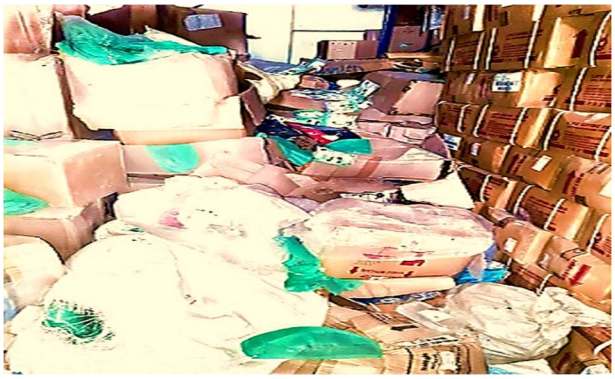


Figure 4.14 — Medicines kept haphazardly (1 June 2022)

In view of the above photographic evidence, the audit observed that storage of drugs in the test checked CMS was not conducive for orderly storage and as per norms, this type of storage making the drugs susceptible to damages, contamination, theft and risk to the patients.

Government in response stated (August 2023) that, 12 new CMS stores are being constructed. Upon completion of these works, more space and infrastructure will be available at the stores to store the drugs under required storage conditions.

4.6.5 Gaps noticed in e-Aushadhi Application

To address the issue of availability of requisite drugs and medicines in all health facilities at all times, Government of Telangana had implemented e-Aushadhi - Supply Chain Management System for Drugs and Medicines. Centre for Development of Advanced Computing (CDAC), Noida developed (28 July 2014) a comprehensive software solution

to automate the complete Supply Chain Management (SCM) system including Equipment Maintenance and Management System for implementation across the State.

4.6.5.1 Non-updation of payment details

Out of 17,236 Purchase Orders issued for ₹3,596 crore during the period 2016-22, the medicines were received only in respect of 12,641 Purchase Orders[21] (73 *per cent*) valued at ₹2,397.26 crore (67 *per cent*), of which payment of only ₹1,034.40 crore (43 *per cent*), leaving an amount of ₹1,362.86 crore (57 *per cent*) due to the contractor to the end of December 2021. The Corporation replied that the processing of bills was done manually and accepted that certain entries were not entered in the payment module of e-Aushadhi which in a way defeated the objective of implementation of the e-Aushadhi application.

Government in its response stated (August 2023) that, all the payments were made for the supplied value to the firms as per tender conditions but the data was not updated in e-Aushadhi due to lack of sufficient training during the initial days and excess workload during COVID-19 pandemic. However, Corporation will ensure that the necessary payment details are entered in the e-Aushadhi Application hereafter.

4.6.5.2 Issue of Drugs without acknowledgement

As per the Para 8.1 of the Technical document pertaining to e-Aushadhi, Acknowledgement, the process is used to acknowledge against the received drugs (indenting health facilities) to the issuing store. After acknowledgement of receipt, the current stock would be updated.

Unless the acknowledgement of the indenting health facility is updated in the Application, the e-Aushadhi database will not get reflected of the availability of the stock to the extent received in the stores of the indenting unit. As a result of this non-acknowledgement, the correct reflection of the available stock at various health facilities is not clearly known.

Government in its response stated (August 2023) that, the acknowledgement was to be done by the health institutions and it was being followed up regularly with health facilities for the acknowledgment after receipts of stocks. A Demi Official letter has also been addressed to the concerned HoDs that further issue of stocks will be stopped to the health facilities if they fail to acknowledge the receipt of stocks in e- Aushadhi.

4.6.5.3 Issue of drugs to patients in bulk quantity

Free provision of essential drugs in public health facilities would reduce the out of pocket expenses of patients to a greater extent. To ensure this, appropriate methods and practices are to be adopted which include rational prescription of drugs and free distribution at Public Health Facilities. Audit observed that, health facilities issued bulk quantities of drugs, injections, ointments and oral solutions to the patients as the controls regarding maximum limit of issue was not fixed in the package.

[21] Purchase Order detail table

Table 4.14 – Issue of Drugs and Medicines to patients in bulk

Type	Patients	Occasions	Items	Issued Quantity Range
Tablets & Capsules	13,76,438	21,06,893	285	46 to 1,030
Injections	4,05,009	6,16,334	61	2 to 900
Ointments	3,20,916	3,38,685	39	2 to 900
Oral Solution/ Syrup/Suspension	7,41,055	9,47,802	27	2 to 999
Eye Drops/Nasal Drops/Drops	1,56,224	1,59,175	30	2 to 999

Source: *e-Aushadhi database*

Government in its response stated (August 2023) that, the drugs and medicines disbursement was purely on the advice of Medical Officer and full course of follow up medicines were being issued at the time of discharge itself so that the patient need not come to hospital repeatedly for taking medicines. Document in support of this was not furnished to Audit.

4.6.5.4 Delayed verification and updation of the data of drugs and medicines received from Supplier in e-Aushadhi system

Due to the delay in updating the details of drugs received, the stock quantity procured was not reflected in the system, which defeated the purpose of procurement and consequent issues to the needy patients on time.

The Corporation accepted the observation and assured to avoid such delays in future. However, the need for timely updation of challan details in the system is emphasised as it is the starting point of input control in e-Aushadhi.

4.6.5.5 Non-implementation of e-Aushadhi application upto MDC Level

e-Aushadhi envisages the advantage of a top-down approach from headquarters to the Medicine Distribution Centre (MDC) at the health facility which distributes medicines to patients. However, all the health facilities are not implementing e-Aushadhi up to MDC level. The Corporation accepted that all the health facilities are not implementing the application.

Government in its response stated (August 2023) that, the existing provision i.e., "issue to patient" module in which the health facilities were mandated to update every patient detail, was time consuming.

4.6.5.6 Absence of inputs validation controls

In the absence of input validation controls regarding mandatory filling in of Manufacturing and Expiry dates in e-Aushadhi, the data fields of Manufacturing and Expiry dates were either left blank or equal or the manufacturing date is later than the expiry date in respect of 5,070 records/items. The Corporation replied that the manufacture date field will be updated as a mandatory field in future.

Government in its response stated (August 2023) that, at the beginning of implementation of e-Aushadhi, the validations were not available in the application and suppliers used to

commit errors while making entries. However, currently, the fields "Manufacturing date" and "Expiry date" are mandatory and necessary input validations are also in place.

4.7 Equipment

The Corporation (TSMSIDC) is the nodal agency for procurement of equipment and its maintenance. Corporation did not maintain a comprehensive database of the available equipment and its details, such as e-tendering, contract, Purchase Order details, date of acquisition of the equipment, its location, its value, installation date and working status at various health institutions, etc. In view of this, Audit is constrained in holistically analysing the activities taken up by the Corporation relating to procurement of equipment and its maintenance, deviations, etc.

4.7.1 Process followed for Procurement of equipment

Indents for the purchase of equipment were placed by the respective HODs as per requirements made by the field units. Specifications of the equipment were prepared by the HODs and submitted to the Corporation along with the necessary administrative approvals. Orders for supply were to be finalised and placed by Corporation and payments were made by it. Corporation invited tenders for procurement of the equipment and after scrutiny by the Technical Committee, the purchase was finalised and acceptance of tenders was issued to successful tenderers. Supply of equipment was made directly to the indenting units and payments were made by the Corporation on receipt of supply and installation reports from the indenting hospitals.

When details of the State wide picture of the equipment procured and expenditure incurred during the period 2016-22 were called for, the same were not provided by the Corporation. In view of this, Audit could verify only those Purchase Orders provided to it.

4.7.2 Non-procurement and Delay in procurement of Equipment

4.7.2.1 Gandhi Hospital, Secunderabad – Delayed installation of MRI machine

a) Director of Medical Education requested (October 2020) Corporation for immediate procurement of 3T MRI Machine for the Gandhi Hospital, Secunderabad as the only MRI Machine was not functioning since July 2020. Administrative sanction was issued in December 2020 by the Government.

Scrutiny revealed that the only MRI machine remained non-functional from April 2020 to May 2022. A new MRI machine was installed only in May 2022.

On this being pointed out, it was replied that, Gandhi Hospital being the COVID Nodal Centre for the entire State, the finalisation of the site for installation has taken a certain time for execution of civil and electrical works. Further, it was also stated that the finalised site must be inspected by the successful bidder for the feasibility to apply for AERB procurement permission. The delay in process of procurement and installation defeated the intended benefit to the patients.

Government in its response stated (August 2023) that the equipment was installed on 22 May 2022 with a delay of 38 days for which a LD of ₹40.41 lakh was imposed on the supplier.

b) Director of Medical Education (October 2020) requested to procure Mammography Machine (mandatory as per MCI norms) for the Gandhi Hospital, Secunderabad as the existing equipment was not functioning since 2018.

Scrutiny revealed that the Corporation had not procured the equipment even after two years as at the time of indenting the equipment, the specifications were not finalised by the User Department.

On this being pointed out, it was replied by Corporation that, the concerned hospital authorities informed that detailed specifications would be furnished in due course and the same was not received.

Superintendent of Gandhi Hospital (February 2023) replied that the machine was not working since 2018 and requisition was raised for new equipment. Approximately 100 - 150 cases were being done in a year and 900 - 1000 patients were referred to MNJ and Osmania General Hospital for mammography services.

Government in its response stated (August 2023) that, the Gandhi Hospital was designated as a COVID 19 Nodal centre due to which the requirement was kept on hold by the user department. Fresh indent with specifications was received in May 2023 and the equipment was supplied. Installation will be completed by 15 August 2023.

The non-functioning of the MRI and Mammography Machines was hampering patient care services and impacted teaching imparted to undergraduate and postgraduate students and also resulted in non-compliance to MCI norms.

4.7.3 Excess supply of Equipment

The Superintendent, Niloufer Hospital (May 2021) requested the Corporation to supply 40 Nos. of Multi-Channel Monitors (MCMs) and 10 Nos. of Transport Ventilators. Against the request of 40 Multi-Channel Monitors, Corporation had supplied 380[22] Multi-Channel Monitors valued ₹2.21 crore to Niloufer Hospital during June 2021 - August 2021. It was however observed that, 200 Multi-Channel Monitors were returned by the Hospital on the directions of the Corporation and the balance of 180 Multi-Channel Monitors were remaining with them. Corporation attributed the excess supply of the MCMs to urgency in view of the COVID-19 third wave. It was also stated that the excess MCMs were redistributed among various DHs, AHs, CHCs and other hospitals. Scrutiny of the utilisation of the 180 Multi-Channel Monitors supplied to Niloufer revealed that, 122 Multi-Channel Monitors were installed and were being utilised in various wards. Balance 58 Multi-Channel Monitors valued ₹33.73 lakh was retained in the stores without utilisation since August 2021.

Superintendent Niloufer Hospital confirmed (August 2022) that, 58 Multi-Channel Monitors out of the 180 Multi-Channel Monitors were not being utilised.

[22] May 2021: 30; June 2021: 150 and August 2021: 200

Transport Ventilators indented by Niloufer Hospital was not supplied. Regarding procurement and supply of Transport Ventilators, Corporation replied that, they have not been procured.

Government in its response stated (August 2023) that, anticipating the possible surge in paediatric cases during the 3rd wave of COVID 19, all the life saving/monitoring equipment were parked at Niloufer Hospital, as it was the Paediatric Nodal Centre. Subsequently, the equipment was redistributed as per HOD lists. Currently, all the Multi Channel Monitors in Niloufer Hospital are in use. However, details of the utilisation of the 58 Multi-Channel Monitors were not furnished.

Further, Government also stated (August 2023) that, during the pandemic, GoI had supplied 20 numbers of Transport Ventilators to Niloufer Hospital under pandemic international aid and that there was no need for the Corporation to procure.

4.7.4 Shortage of Equipment

The Minimum Standard Requirements (MSR) for the Medical College Regulations, 1999 of MCI prescribes a minimum requirement of equipment for various Departments of Medical Colleges.

On scrutiny of data relating to availability of equipment in non-clinical Departments of OMC, it is revealed that the non-availability/shortage of medical equipment against the prescribed norms in all Departments ranged between 30 to 100 *per cent* as detailed below:

Table 4.15– Shortage of equipment in various Departments of OMC

Sl. No.	Name of the Department	No. of Equipment			
		Required as per MCI norms	Available	Shortage	Shortage percentage
1	Microbiology	33	23	10	30
2	Physiology	84	39	45	54
3	Pathology	55	20	35	64
4	Anatomy	33	22	11	33
5	Biochemistry	30	7	23	77
6	Pharmacology	9	0	9	100
7	Forensic Medicine	80	15	65	81
8	Community Medicine	63	0	63	100
	Total	**387**	**126**	**261**	**67**

Source: *- Information furnished by OMC*

Colour code:

Available in more than 50%		Available in more than 25% and less than 50%		Not available in 50% and more	

Government in its response stated (August 2023) that, required equipment as per the NMC requirement was available in all the Non-Clinical Departments. Documents in support was not furnished to Audit.

4.7.5 Idle Equipment

Scrutiny of records in various Health Facilities revealed that the equipment procured was kept without utilisation due to various reasons. The observations noticed during the test-check are as follows.

4.7.5.1 Idling of equipment in the test checked Health facilities

Audit observed that equipment procured in the test checked Health Facilities were lying idle without installation which hampered the delivery of services. Details of the idle equipment are as follows:

Table 4.16 – Details of the idle equipment

Name of the Hospital	Name of the Equipment	Purpose of acquisition	Date of placing of orders by TSMSIDC	Cost of the Equipment	Date of receipt of equipment	Remarks
Niloufer Hospital	"Ethylene Oxide Sterilizer"	upgrading the Paediatric Centres across Telangana State	July 2021	₹16.99 lakh	August 2021	Superintendent, Niloufer Hospital replied (May 2022) that the machine was not installed due to ongoing construction works. Government in its response stated (August 2023) that the equipment would be put to use upon completion of construction works in August 2023.
GGH, Mahabubnagar	400 mA X-Ray Machines as		M/s MRF foundation	a part of CSR activity	January 2021	Superintendent attributed the non-installation to ❖ Technical issues. ❖ Non provision of financial assistance of ₹2.70 lakh for installation of the equipment by DME ❖ Non-calling of tenders for electrical works[23]. Government in its response stated (August 2023) that the equipment would be installed on provision of electrical works.
AH, Vanasthalipuram	Solar Ice Lined Blood Bank Refrigerators	To be supplied to Blood Storage Centres in the State for streamlining of blood services	February 2019	₹3.75 lakh	November 2020	Due to the breakdown of certain components the equipment could not be utilised. Government in its response stated (August 2023) that the equipment had been installed on 10 June 2023.
DH Medchal Malkajgiri	Remi Blood bank refrigerated centrifuge and 35 other equipment	For establishment of Blood Bank	Data not available	₹27.56 lakh	January 2018 to May 2022	Equipment lying idle for want of licence from Drugs Control Administration and No Objection Certificate from Telangana State Pollution Control Board. Government in its response stated (August 2023) that the equipment would be put to use after obtaining necessary licences/ NOC from respective authorities.
DH Bodhan	Deep Freezer -40 degree centigrade and 02 other equipment	For establishment of Blood Bank	Data not available	₹12.27 lakh	November 2018 to July 2019	The Licence authorities informed the Superintedent that the space is not enough for blood components preparation. Government in its response stated (August 2023) that the equipment would be put to use after obtaining necessary licences/ NOC from respective authorities.
DH Narsampet	Refrigerated centrifuge and 04 other equipment	For establishment of Blood Bank	Data not available	₹17.97 lakh	August 2018 to May 2022	Due to pending approval of competent authority for component license, the equipment are kept idle. Government in its response stated (August 2023) that the equipment would be put to use after obtaining necessary licences/ NOC from respective authorities.

Source: *information furnished by respective Hospitals*

[23] like 3 phase electrical supply, 4 pole MCB with 63 AMP, 35 sq.mm 4 core cable, dedicated earth to the unit etc.

Keeping the equipment idle for long time would make the equipment unfit for use and would deprive the beneficiaries of the intended healthcare services.

4.7.5.2 Area Hospital, Malakpet

During the COVID period, 25 ventilators were supplied to Area Hospital, Malakpet. Scrutiny of records relating to the utilisation of the 25 ventilators supplied revealed the following:

- Five ventilators supplied by the Corporation during May 2021 were not installed and were kept idle for a period of over 23 months from the date of supply. On this being pointed out, it was replied that, the technician had not attended to the work of installation since May 2021.
- Further, it was observed that 20 ventilators worth ₹33.28 lakh supplied in March 2022 were not installed until the end of October 2022. On this being pointed out, it was replied (November 2022) that due to a shortage of accessories the same were kept idle without installation.

Except for addressing a letter (April 2022) to the Corporation, the hospital authorities had not initiated any action to get the installation of all the 25 ventilators done.

Government in its response stated (August 2023) that, the ventilators were supplied by the GoI and there were less number of technicians causing delay in installation and that the ventilators were supplied for COVID preparedness. Ventilators were now in working condition and it was being used for emergency conditions as and when they were needed.

Audit observed that as of July 2023, 20 ventilator sensors were yet to be supplied by the supplier. This raises doubts about the installation of the ventilators. Further, installation reports for ventilators were not furnished to Audit.

4.8 Emergency Response and Health System Preparedness Package (ECRP)

4.8.1 Establishment of Dedicated Paediatric Care Units (DPCUs) & Centre of Excellence (COE) at Niloufer Hospital, Hyderabad

As per the ECRP Guidance Note (July 2021) issued by Ministry of Health and Family Welfare, each District should have at least one Paediatric Care Unit. Establishing Paediatric Care Unit in each District, was priority non-negotiable component of the sanction.

To establish 33 DPCUs and a Centre of Excellence (COE) at Niloufer Hospital, GoI had sanctioned ₹89.65[24] crore. The 33 DPCUs were to function as spokes to the Hub (COE) at Niloufer Hospital. State Government directed (October 2021) Mission Director, NHM to

[24] 33 DPCUs in State Government Hospitals: - ₹86.90 crore and Centre of Excellence (COE) at Niloufer Hospital: -₹2.75 crore

release an amount of ₹77.67 crore to the Corporation for procurement and supply of 31 items of equipment[25] for the establishment of 33 DPCUs with oxygen-supported beds, Intensive Care Unit (ICU) Beds and Hybrid High Dependency Unit (HDU) Beds and also for the establishment of COE at Niloufer Hospital.

4.8.2 Irregularities in Procurement of Equipment

State Government had approved (October 2021) the procurement of 31 categories of equipment for the DPCUs. The procurement was to be made through Government e Marketplace (GeM) using the resources under ECRP-II which was a mandatory condition that the States needed to adhere to. Out of 31 equipment to be procured, 10 equipment were procured through GeM, 20 through e-procurement platform which was confirmed by the Government in its response (August 2023).

An amount of ₹2.75 crore was earmarked for establishment of COE at Niloufer Hospital which included the amount for establishing the spokes for supporting the DPCUs and software development. As against this allocation, equipment worth ₹19.51 crore (22 *per cent*) was supplied to the COE at Niloufer Hospital, Hyderabad (details vide ***Appendix 4.2***) out of the total amount of ₹89.66 crore for establishment of DPCUs & COE.

While accepting the audit observations, the Corporation replied that equipment was supplied in excess or less to the hospitals for utilisation of the funds of ECRP-II and to complete the target within the due date.

Government in its response stated (August 2023) that, it had proposed to strengthen Niloufer Hospitals as a nodal centre for treatment of Paediatric cases anticipating that children would be affected during COVID 19 third wave. Since a component had been sanctioned by GoI under ECRP-II for establishment of DPCUs, the excess expenditure incurred from ECRP-II funds was sought to be justified.

Government in its response stated (August 2023) that, against the sanctioned 32 DPCUs, 31 were established till date and the remaining DPCU at Malkajgiri was proposed for integration with upcoming Super Specialty Hospital at Alwal. Thus, one of the minimum non-negotiable outputs of ECRP-II for the State had not been achieved.

4.8.3 Equipment in DPCUs

Equipment worth ₹14.65 crore[26] was supplied to 14 DHs, of which equipment costing ₹5.75 crore was kept unutilised in 8 test checked health facilities as detailed below:

Table 4.17 - Details of equipment supplied and kept idle in the DHs

Sl. No.	District Hospital	Cost of the equipment supplied	Cost of the equipment kept idle	Reply furnished
1.	BOD	1.34	1.23	Equipment *viz.*, Cots Fowler Paediatric ICU with IV stands, Paediatric Ventilators with NIV mode, Neonatal Ventilators with NIV mode, Paediatric Airvo (HFNC) Machine, Open Radiant Warmers,

[25] Sanctioned vide Memo.No.9196/C2/2021 of Health, Medical and Family Welfare (C) Department, dated 11 October 2021

[26] DH Bodhan: ₹1.34 crore; DH Jogulamba Gadwal: ₹0.95; DH Gajwel: ₹1.23; DH King Koti: ₹0.13; DH Kondapur: ₹1.39; DH Medak: ₹0.83; DH Medchal Malkajgiri: ₹1.40; DH Mulugu: ₹1.44; DH Narayanpet: ₹0.73; DH Narsampet: ₹1.28; DH Peddapalli: ₹0.04; DH Tandur: ₹0.79; DH Utnoor: ₹1.37 and DH Yadadri Bhuvanagiri: ₹1.73

				Infusion Pumps, Syringe Pumps, 3 Para Monitors, 5 Para Monitor, Oxygen hoods etc., lying idle in the storeroom/RMO quarters/ dilapidated Labour Room Complex without utilisation
2.	GAJ	1.23	0.24	11 Paediatric Airvo Machines not received
3.	MDK	0.83	0.03	3 Para Monitors (9 units not working)
4.	MED	1.40	1.38	Due to lack of space
5.	MUL	1.44	0.04	Cots Fowler Paediatric ICU with IV stands (15 Units) were kept idle due to lack of space
6.	NRY	0.73	0.21	2 Paediatric Airvo (HFNC) machines, 35 Syringe pumps and 12 Open Radiant Warmers kept idle
7.	NRS	1.28	1.20	Due to lack of space
8.	YB	1.73	1.42	Due to lack of space
TOTAL		**9.98**	**5.75**	

Source: *Information furnished by respective DHs*

4.8.3.1 Observations on utilisation of equipment supplied to DHs

Thirty oxygen-supported paediatric beds were supposed to be set up in the DPCU. However, these beds were not established. It was also noted that there was insufficient space available to accommodate all the equipment that was supplied to the DPCU. Additionally, some of the expensive equipment, such as Paediatric Ventilators with NIV mode and Neonatal Ventilators with NIV mode, were left idle. This could have led to potential damage to the equipment and also expiry of warranty period.


Figure 4.15: Paediatric ICU Cots lying at RMO Quarters at DH Bodhan (4 May 2023)


Figure 4.16: Paediatric ICU Cots lying in the dilapidated Labour Room Complex at DH Bodhan (4 May 2023)


Figure 4.17: Equipment lying idle in the Store-room at DH Bodhan (4 May 2023)

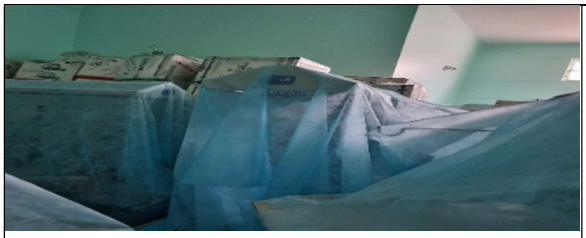


Figure 4.18: DPCU Equipment lying unutilised at DH Bodhan (4 May 2023)

Figure 4.19: DPCU Equipment lying idle at DH Medchal Malkajgiri (8 May 2023)

Government in its response stated (August 2023) that, DPCU beds were established and equipment supplied to DH Malkajgiri were also installed and are in working condition. In respect of DH Bodhan, it was stated that the building was under renovation due to which the equipment was not being used. However, upon completion of the renovation works, the equipment was being used.

In the absence of supporting documents, Audit could not verify the claim made in Government response.

High Dependency Unit (HDU) in DH Bodhan: As against the stipulated eight paediatric beds to be available, only four oxygen supported beds that too normal beds with Manifold & Copper Pipeline were made available. No other equipment was available in the HDU.

Figure 4.20: Availability of only four oxygen supported beds (other than paediatric beds) with manifold & copper pipeline against the stipulated eight

4.8.3.2 Establishment of 825 ICU Beds in 10 Medical College attached Hospitals

The Empowered Group[27] (EG) of GoI recommended[28] to scale-up simple COVID ICUs with threadbare basic requirements, leveraging available infrastructure with make-shift structures at the Medical Colleges, District Hospitals, SDHs, CHCs, etc., duly reserving 20 *per cent* for the Paediatric ICU beds.

Accordingly, under ECRP-II, GoI sanctioned the establishment of 825[29] ICU beds (including 200 beds in NIMS) with three sub-components, in 10 Medical Colleges attached Hospitals at a cost of ₹139.01 crore (@₹16.85 lakh[30] per bed).

[27] set up on Health System Preparedness on Emergency Management Plan and Strategy
[28] with a view to address the unique health challenges posed by peri-urban, rural and tribal areas to tackle the potential upsurge of pandemic in these vulnerable places
[29] NIMS: 200 ICU beds; Gandhi Hospital: 100; TIMS: 100; GGH, Mahabubnagar: 100; OGH: 75; GGH, Siddipet: 50; GGH, Nalgonda: 50; RIMS, Adilabad: 50; GGH, Nizamabad: 50 and GGH, Suryapet: 50
[30] Oxygen support bed with copper pipeline: - ₹0.80 lakh, Equipment, beds & accessories: - ₹15.50 lakh, Air handling Unit: - ₹0.50 lakh

A proposal was submitted (September 2021) by DME to Government wherein an amount of ₹138.84 crore[31] was estimated and Government was requested to issue necessary instructions to Corporation to take up civil works and supply of equipment.

State Government directed (October 2021) Mission Director, NHM to release an amount of ₹104.99 crore to the Corporation for the establishment of 625 ICU Beds in nine Medical College attached Hospitals and ₹33.85 crore in respect of 200 Beds in NIMS Hospital to Director, NIMS.

Scrutiny revealed that, as against 32 items of equipment to be procured, one equipment Extra Corporeal Membrane Oxygenation (ECMO) was not procured due to lack of response to the tenders.

Scrutiny of the procured equipment further revealed that, there was no provision for civil works in the Guidance Note. However, based on the proposal submitted (September 2021) by the DME, State Government (October 2021 & March 2022) sanctioned an amount of ₹12.05 crore for civil works in eight[32] Medical College attached Hospitals. Of these, works relating to seven[33] Medical Colleges attached Hospitals were completed and handed over during March – September 2022. In respect of NIMS for which an amount of ₹three crore was sanctioned, the works[34] were in progress as of March 2023. An amount of ₹8.33 crore was incurred towards all the civil works till date.

Audit observed that, as against 825 ICU beds to be established, 625 ICU beds were established in nine Medical College attached Hospitals. Work was in progress at Nizam's Institute of Medical Sciences (NIMS), Hyderabad for establishment of 200 ICU Beds.

4.8.3.3 Establishment of 90 ICU Beds at 3 District Hospitals – Non-utilisation of funds – ₹15.16 crore

To establish 30 additional ICU beds (including six paediatric beds) each in three[35] District Hospitals apart from the places where the DPCUs were established, an amount of ₹15.16 crore was sanctioned in August 2021 with a stipulation that the expenditure to be incurred on the approved items by March 2022.

Audit observed that no expenditure was incurred (as of March 2022) and that the additionally sanctioned beds were not provided at any of the locations.

Government in its response did not furnish any specific reply on the issue and stated (August 2023) that, sufficient ICU beds were already established in these three hospitals during COVID 19 pandemic and hence these works were not required anymore.

4.8.3.4 Non-establishment of Liquid Medical Oxygen (LMO) plants with Medical Gas Pipeline System (MGPS)

Under ECRP-II, GoI had sanctioned the establishment of LMO plants (with MGPS and at least one LMO facility per District) including site preparedness and installation in District

[31] Civil estimates: ₹12.05 crore; Equipment estimates: ₹110.79 crore and Others: ₹16.00 crore
[32] Gandhi Hospital, GGH Mahabubnagar, Osmania General Hospital, GGH Nalgonda, RIMS Adilabad, GGH Nizamabad, GGH Suryapet and NIMS, Hyderabad
[33] Gandhi Hospital, GGH Mahabubnagar, Osmania General Hospital, GGH Nalgonda, RIMS Adilabad, GGH Nizamabad, GGH Suryapet
[34] Civil works in Ward Nos. 1,3,4,6,7, P.S. Ward, General Medicine Department, painting works, roof repairs, toilet works were completed and work in ward 2 is in progress.
[35] DH, King Koti, DH, Karimnagar and DH, Khammam

Hospitals[36] at a cost of ₹26.40 crore (Unit Cost: ₹80 lakh). It was also mentioned in the sanction order that States may prioritise after appropriate gap analysis and propose both LMO plants with Medical Gas Pipeline System (MGPS) in the healthcare facilities where oxygen source is tied up or available through Pressure Swing Adsorption (PSA) plants.

Audit observed that, LMO plants were not established in any of the sanctioned 33 Hospitals. Since LMO plants were not established, an amount of ₹35.57 crore was utilised from ECRP-II funds towards procurement of Oxygen gas for the use of State-run hospitals and NIMS during 2021-22 to treat COVID patients.

Government in its response stated (August 2023) that, despite inviting tenders twice towards establishment of LMO tanks by Corporation on GeM platform, no bidders had participated. It was also stated that the 10 Liquid Oxygen Tanks procured during 2nd phase of COVID were shifted to 10 hospitals to be used as storage tanks.

Government had only enclosed the order detailing the Hospitals where the Liquid Oxygen Tanks were to be established. However, details of neither the hospitals where the tanks were moved nor the installation details were furnished.

One of the minimum non-negotiable outputs of ECRP-II for the State, *viz.*, "At least one LMO plant (with MGPS) in each District" was not complied with till date.

4.8.3.5 Non-utilisation of LMO tanks procured

It was observed that during COVID, Government of Telangana has mobilised 10 LMO empty tanks for transportation of liquid medical oxygen from other States. It was proposed (April 2022) to utilise the above LMO tanks as storage tanks for supplying medical oxygen in eight major hospitals. However, the same were lying idle in the premises of Container Corporation of India (CCI), Sanath Nagar till date.

Government had since accorded (November 2022) administrative sanction for installation of LMO tanks in 10 Government[37] hospitals. Pursuant to this administrative sanction, tenders were called (December 2022) for by the Corporation and the work was entrusted to an agency in February 2023.

Government in its response stated (August 2023) that, the existing LMO tanks in eight major hospitals were sufficiently catering to the needs of the patients and the above 10 LMO tanks were proposed for stand-by purpose only.

Thus the proposed objective of utilisation of LMO tanks as storage tanks for supplying medical oxygen in hospitals has not been fulfilled.

4.8.4 Strengthening of RT-PCR Labs

One of the key deliverables under the Resource Envelope approved in respect of the State under ECRP-II was strengthening of RT-PCR labs of all Districts.

[36] As per the proposals submitted to GoI, State Government had indicated 33 health facilities as DHs.
[37] GGH, Nizamabad; GGH, Mahabubnagar; GGH, Nalgonda; Mahatma Gandhi Hospital, Warangal; PMSSY Hospital, Warangal; NIMS, Hyderabad; Rajiv Institute of Medical Sciences, Adilabad; MNJ Hospital, Hyderabad; GGH, Siddipet and GGH, Khammam

Against the GoI sanctioned amount of ₹5.10 crore, expenditure of ₹24.05 crore was incurred towards establishment of 20 RT-PCR labs, thereby an excess expenditure of ₹18.95 crore was incurred under ECRP-II. Further, two new RT-PCR labs were established by incurring an expenditure of ₹1.83 crore by diverting NHM Interest funds subject to reimbursement from COVID funds.

As the State Government had not provided any funds against GoI sanctioned amount of ₹5.10 crore, the strengthening of RT-PCR labs was done by diversion of interest earned on NHM funds provided by GoI.

Government had not furnished any specific response on this issue.

Thus, one of the minimum non-negotiable outputs of ECRP-II for the State *viz.*, upgradation of the RT-PCR labs for covering all the 33 Districts of the State had been achieved but by incurring an additional expenditure of ₹18.95 crore from ECRP-II and ₹1.83 crore from NHM interest funds.

4.8.5 Functional Hospital Management Information System (HMIS) across all the District Hospitals

GoI sanctioned ₹51.00 crore (Unit cost: ₹50.00 lakh) for implementation of Hospital Management Information System (HMIS) in 102 health facilities of the State under ECRP-II.

For implementation of eHMIS, an agreement was concluded (December 2022) with a delay of 11 to 15 months from the date of sanction of GoI proceedings with Centre for Development of Advanced Computing (CDAC), Noida, Uttar Pradesh in respect of OPD Modules on the lines of eSushrut[38] software application (containing 21 modules[39]) which was customised for Telangana State requirements as part of the TS-eHMIS Pilot project implemented during 2014-17. It was proposed to execute the project in 2 stages. In the First Stage, C-DAC was to replicate 8 Out-Patient flow modules and associated services for one year and in the Second Stage the In-Patient flow modules of the customised eSushrut software would be implemented across the identified 102 hospitals.

Out of 8 O.P. modules of 1st Phase, 2 modules i.e., OP and Emergency Modules were only implemented in 29 DME health facilities from 6th March 2023 and information in respect of implementation of the modules in other Health institutions was not furnished.

Procurement of hardware for eHMIS: C-DAC (March 2022) furnished the requirement of 8 categories of hardware[40] for 102 health facilities for eHMIS usage. Government (March 2022) issued orders for procurement of hardware equipment through Corporation and released ₹22.09 crore (April 2022) to Corporation for the procurement of equipment through Telangana State Technology Services Limited (TSTSL). It was observed that, except procurement of 1,200 Tabs, none of the other required hardware was procured. Even

[38] e-Sushrut C-DAC's Hospital Management Information System is a major step towards adapting technology to improve healthcare. HMIS incorporates an integrated computerised clinical information system for improved hospital administration and patient health care. It also provides an accurate, electronically stored medical record of the patient.
[39] Containing 8 OPD modules and 13 IPD modules
[40] Desktops, UPS, Tablet PC, Laser Printer, Multi-Function Printer (MFP), Barcode Printer, Bar/QR code Reader and Wi-fi Dongle/adapter

with respect to Tabs, against the indented[41] requirement of 433 Samsung Tabs, 1,200 Tabs were procured thereby resulting in excess procurement of 767[42] Tabs than indented.

Government had not furnished any specific response on this issue.

4.8.6 Utilisation of funds for healthcare personnel during Covid

Under ECRP-II, an amount of ₹40.35 crore was allocated for the enhancement of Human Resources for utilisation of manpower during the COVID period from 01 July 2021 to 31 March 2022 (9 months). An amount of ₹36.39 crore was incurred towards stipends in respect of 1,119 Medical PG Residents, 270 GNM Nursing students and 380 B Sc Nursing students towards resources for the enhancement of healthcare services in Telangana.

4.8.7 Activities taken up by State Government during the COVID period

4.8.7.1 Availability of Hospitals and Beds

For the treatment of COVID patients, Government of Telangana has identified some hospitals as COVID-19 hospitals and some of the beds in various hospitals for the treatment of patients. Details of number of Beds provided for the treatment of patients are given below.

Table 4.18 - Details of Hospitals and Beds in the State for COVID Patients

Sl.No.	Head of Department	COVID Beds	ICU Beds with Oxygen	ICU Beds with ventilator	ICU Beds without ventilator	Total Beds
1	DME	9,540	7,733	1,413	394	9,540
2	TVVP	5,684	5,266	204	214	5,684
Total		15,224	12,999	1,617	608	15,224

Source :- *Information furnished by the Department*

Table 4.19 - Details of Beds in the two dedicated hospitals for COVID patients

Sl. No.	Name of the Hospital	Regular beds	ICU Beds with Oxygen	ICU Beds with ventilator	ICU Beds without ventilator	Total Beds
1	TIMS	281	843	137	0	1,261
2	Gandhi Hospital	0	597	622	650	1,869
Total		281	1,440	759	650	3,130

Source :- *Information furnished by the Department*

4.8.7.2 COVID Tests conducted

Details of COVID-19 tests conducted during the period 2020-21 and 2021-22 are as follows.

Table 4.20 - Details of the COVID tests conducted

Year	RT PCR Tests	RAT Tests	Total Tests
2020-21	15,54,715	85,56,504	1,01,11,219
2021-22	44,00,919	1,95,95,910	2,39,96,829
Total	59,55,634	2,81,52,414	3,41,08,048

Source :- *Information furnished by the DOPH*

[41] As specified in the Government Memo No. 2550/C2/2022-2 of Health, Medical and Family Welfare Department, dated 23 March 22

[42] 400 Tabs for Basti Dawakhanas and 367 for health institutions

4.8.7.3 Details of Inpatients and Outpatients treated in two Major dedicated COVID Hospitals

In response of COVID-19 pandemic, Government of Telangana established Telangana Institute of Medical Sciences (TIMS) as an exclusive COVID-19 hospital in April 2020. Subsequently, TIMS was proposed to be converted into a Multi Specialty Hospital and Medical Education Research Institute of National eminence from April 2020 with 1,261[43] beds. In addition to this Gandhi Hospital, Hyderabad was also declared as a dedicated COVID nodal centre and referral hospital. These two hospitals were declared as dedicated COVID centres for the State.

Table 4.21 - Details of Outpatients and Inpatients who have taken treatment during the period in two dedicated hospitals

Name of the Hospital	Outpatients		In patients		Discharged	
	2020-21	2021-22	2020-21	2021-22	2020-21	2021-22
Gandhi Hospital	1,79,590	2,11,735	71,691	48,084	71,691	48,084
TIMS	1,691	4,502	4,215	6,620	3,987	5,323

Source: *Information furnished by the Hospitals*

In addition to the above, 59,775[44] patients were admitted as inpatients for Isolation in Gandhi Hospital.

4.8.7.4 Details of equipment received during COVID by TIMS and Gandhi Hospitals

Details of equipment received including under PM Cares donations and supplied to the above two COVID hospitals are as follows.

Table 4.22 - Details of equipment received during the period April 2020 to March 2022

(₹ in crore)

	TIMS		Gandhi Hospital		Transferred to other hospitals by TIMS	
	Quantity	Value	Quantity	Value	No.of Items	Value
Equipment	-	7.20	-	7.69	77	0.80
Ventilators	218	7.15	486[45]	20.83	0	0
Oxygen Cylinders	370	0.42	600	0.37	0	0

Source: *information furnished by respective Hospitals*

Of the above, the details of equipment not installed and not in working condition are as follows.

[43] Regular beds:- 281 , Oxygen beds :- 843 , ICU beds with ventilator :- 137
[44] 2020-21 :- 41,691; 2021-22 :- 18,084
[45] 437 ventilators: - ₹18.03 crore

Table 4.23 - Details of equipment supplied but not installed

Sl.No.	Name of the equipment	Date of supply	Quantity	Cost of each item (in ₹)	Cost of the equipment (in ₹)
1	Fixed X-Ray Machine (400 MA)	16.2.21	1	3,59,500	3,59,500
2	Alpha Beds	23.3.22	50	2,788	1,39,400
Total			51		4,98,900

Source: *Information furnished by the Hospitals*

Table 4.24 - Details of equipment supplied but not in working condition as on March 2023

Sl.No.	Name of the Hospital	Name of the equipment	Date of installation	Quantity	Cost of the equipment (₹ in lakh)
1	Gandhi Hospital	Ventilators	June 2020 & May 2021	71	199.60
	Gandhi Hospital	ECG Machine	October 2021	4	4.04
2	TIMS	5 Para Monitors		3	1.56
Total					205.20

Source: *Information furnished by the Hospitals*

Table 4.25 - Details of equipment remaining without utilisation in TIMS

(₹ in lakh)

Sl.No.	Name of the Equipment	Quantity	Date of Installation	Cost of equipment
1	Ultrasound Portable Echo machine	1	20-05-2020	12.74
2	CT Machine	1	24-06-2021	186.10
3	Ultrasound machine	1	05-08-2021	18.45
4.	ECG Machine	2	23-08-2021	18.74
5.	Paediatric Video Laryngoscopes	1	13-03-2022	10.08
6.	Intra-Aortic Balloon Pump	1	19-03-2022	35.62
7	Transesophageal Eco Cardiogram	1	23-03-2022	32.00
8.	DVT Pumps	48	19-04-2022	19.20
9.	Visonex Transcranial System (Dolphin/4D)	1	31-03-2022	20.72
	Total			353.65

Source: *Information furnished by the Hospitals*

Audit observed that 51 equipment worth ₹4.99 lakh were not installed. Equipment worth ₹205.20 crore were not in working condition. In TIMS, equipment worth ₹3.54 crore remained without utilisation.

4.9 Other issues

4.9.1 Pressure Swing Adsorption (PSA) plants provided under PMCARES Fund

With a view to ensure the adequate availability of oxygen in hospitals during COVID-19, GoI supplied (June 2021) 50 PSA plants under PMCARES[46] to be established in Telangana through different agencies[47] with a condition to install them by 15th August 2021.

Accordingly, the PSA Plants were supplied by the agencies directly to the designated health facilities. Administrative sanction was issued by State Government (September 2021) for ₹13.68 crore for execution of civil, electrical and oxygen pipeline extension works for establishment of PSA plants. Further administrative sanction was issued (December 2021) for ₹5.46 crore for establishing of higher capacity DG sets at the places suggested by the three identified agencies who were entrusted with the responsibility of the PSA plants

Audit observed that, despite the specific instructions of GoI to provide DG sets by August 2021, the installation of DG set was completed within the GoI stipulated timeline in only one hospital while the installation of DG sets in remaining hospitals was completed by October 2022.

Government in its response stated (August 2023) that, as and when PSA plants were established, DG sets were installed and commissioned and currently all the 50 PSA plants were in working condition.

4.9.2 PSA plants provided under Corporate Social Responsibility (CSR)

During COVID, 35 PSA plants with different capacities were received under CSR and were installed at different health facilities.

Audit noticed that Corporation authorities requested (January 2022) for a provision of ₹7.20 crore to provide adequate power supply in four locations and DG sets in 20 locations. Administrative sanction was not received till November 2022 from the Government.

Specific date of installation of the PSA plants and other details were not furnished by the department when called for. In the absence of such information, Audit could not verify as to whether PSA plants are installed and functional.

Government in its response stated (August 2023) that PSA plants established under CSR could be run using the existing DG sets of hospitals and that all the PSA plants were functional. The specific reason for the Corporation authorities requesting for a provision of ₹7.20 crore for the purpose of providing adequate power supply in four locations and for DG sets in 20 locations was not forthcoming from the Government response.

4.9.3 PSA Plants in Government Hospitals under ECRP-II

State Government (June 2021) accorded administrative sanction[48] for ₹103 crore to Telangana State Industrial Infrastructure Corporation (TSIIC) towards procurement of

[46] PM's Citizen Assistance & Relief in Emergency Situations Fund
[47] Defence Research & Development Organisation (DRDO: 35), Central Medical Services Society (CMSS: 4), Others: 11
[48] G.O.Rt. No. 406 Health, Medical & Family Welfare, Dated 23 June 2021

132[49] PSA Plants (which was finally revised to 64[50] PSA plants) together with Annual Maintenance Contract of these PSAs in 129 identified Government Hospitals for a period of 3 years to meet the oxygen requirements for patients.

Of the 64 PSA plants sanctioned, 32[51] plants were installed but were not commissioned due to want of requisite power supply. The remaining 32 plants were not taken up.

Government had not furnished any specific response on this issue.

Thus, the intended objective of establishment of PSA Plants in the health facilities was not achieved.

4.9.4 Non-functional Computed Tomography (CT) Scan equipment

Scrutiny of the information relating to CT Scan equipment available at nine hospitals[52] revealed the following;

Although the machines suffered a breakdown after September 2017 and subsequent periods, new machines were supplied to only two[53] health facilities in August / September 2021. In the remaining other facilities, no action was taken to get it either repaired or to replace the old machines with new CT machines. The existing machines were very old and needed frequent repairs. Thus, the patients of the remaining seven hospitals were deprived of CT Scan facilities during the period of breakdown in these hospitals.

Government in its response stated (August 2023) that, out of the seven hospitals new CT Scan machines were procured and installed at six hospitals except Jangaon. It was also stated that as the DH Jangaon is being upgraded as GGH Jangaon in view of sanction of GMC at Jangaon, necessary equipment required for Teaching Hospital would be provided accordingly. Government had not furnished information about the supply of CT Scan equipment in AH Malakpet.

Government had not provided any documentary evidence of the installation of the CT Scan machines in the six hospitals.

4.9.5 Non-taking up of Civil Works (Storage Godown) under Revised National Tuberculosis Control Programme (RNTCP)

A key deliverable for RNTCP was to ensure an uninterrupted supply of drugs and to ensure the same stocking norms have been developed by Central TB Division (CTD), with a view to meet this end objective. It was planned that, drug stocks equivalent to 10 months of utilisation were to be maintained with implementing States.

At present two[54] drug storage buildings with a capacity of 600 Sq. ft each are located at State T.B.Training and Demonstration Centre, Erragadda, Hyderabad catering to drug supplies to

[49] PSA of 1000 LPMs (Litres per Minute): 51; 500 LPMs: 61 and 250 LPMs: 20
[50] 500 LPMs: 44 and 250 LPMs: 20
[51] 500 LPMs: 15 and 250 LPMs: 17
[52] DHs: Nalgonda, Khammam, Karimnagar, Tandur and Sangareddy; AHs: Jangaon, Malakpet; Teaching Hospitals: Nizamabad and Mahabubnagar
[53] DHs Karimnagar and Sangareddy
[54] normal drugs (first line), temperature-controlled drugs (2nd line drugs)

entire State needs, which was not sufficient for stocking the buffer stocks as TrueNaat and CBNAAT chips and other costly drugs are to be kept at low room temperature control.

Government in its response stated (August 2023) that, the State has two State level drug stores for the NTEP drugs where stocks of first and second line TB drugs, Truenaat chips and CBNAAT cartridges and other consumables are stored. Presently transportation and stocking of drugs was given to TSMSIDC and there was no space constraint for drug stocking.

Audit raised concern about the stocking of costly drugs in inappropriate temperatures that may affect the quality of the drugs. Government response on this issue was however not furnished to Audit.

4.10 Conclusion

TSMSIDC did not maintain a comprehensive database of the available equipment and its details.

Although the Corporation was to get the EML/AML reviewed and updated once in two years, it was observed that the review of EML/AML was done only twice i.e., in 2015 and 2019 till date.

As against 530 items required to be procured as per the approved EML list-2015, items procured were 396, 336 and 266 during 2017-18, 2018-19 and 2019-20 respectively. Similarly, out of 338 items required to be procured as per the approved EML list-2019, items procured were 209 and 197 during 2020-21 and 2021-22 respectively.

There were also gaps and inadequate validation controls in e-Aushadhi application. All the health facilities are not implementing e-Aushadhi up to the Medicine Distribution Centre (MDC) level.

Essential drugs and medicines are those which address the priority healthcare requirements of a given population and our scrutiny in the District Hospitals revealed that out of 39 therapeutic medicine groups, medicine related to 20 groups were not available across 11 out of 14 District Hospitals.

Out of 16,016 POs issued by the Corporation, drugs were supplied for 13,950 POs leaving 2,066 POs unsupplied. However, penalty on the suppliers were not levied by the Corporation as per tender conditions.

Drugs and Medicines (706 numbers) worth ₹17.13 crore having leftover shelf life ranging from 1 to 89 days were issued by Central Medicine Stores to 1,259 health facilities during the period 2016-22.

Contrary to the agreement conditions, the Corporation issued 19 Purchase Orders beyond the agreed Rate Contract (RC) resulting in an excess payment of ₹1.65 crore to nine suppliers.

As per e-Aushadhi data, expired drugs valued ₹390.26 crore were not got replaced timely with the suppliers causing huge monetary loss to the Government.

Out of the 39,258 batches of drugs/ surgical/ CTS items, the Corporation had not sent 2,392 batches for Quality Check, (6 per cent) not being tested for their quality.

CMS issued 32 batches of drugs without the mandatory testing to Health institutions. It was observed that 84 samples had been declared as NSQ by DCA/CDSCO of which 13 batches had to been issued to the Health Facilities.

In violation of the condition of keeping the batches prior to receipt of reports as quarantined, out of 204 batches of drugs for which reports not received, 158 batches of drugs were issued by CMSs to health facilities during the period April 2016 to November 2021. Delays were also observed in receipt of 426 QC reports with delays ranging from 1 to 1,441 days.

Deficiencies in drugs storage facilities were observed in all the three test checked Central Medical Stores, Hyderabad, Mahabubnagar and Warangal making the drugs susceptible to damages, contamination and theft and risk to the patients.

Emergency COVID Response Package (ECRP)

Against the Minimum Non-Negotiable Outputs of ECRP-II, which required the establishment of 33 DPCUs and LMO Plants, 31 DPCUs have been established so far, with no Liquid Medical Oxygen (LMO) Plants being established. As LMO plants were not established, an amount of ₹35.57 crore was utilised from ECRP-II funds towards procurement of Oxygen Gas for use in State-run Hospitals and NIMS during 2021-22 to treat COVID patients. Upgradation of the RT-PCR labs had been achieved by incurring an additional of ₹18.95 crore.

4.11 Recommendations

- Government may ensure implementation of e-Aushadhi application at all levels as envisaged and efforts may be made to strengthen validation controls in e-Aushadhi system.
- Government may ensure that storage of drugs in CMS stores and health facilities are done appropriately to protect the drugs from deterioration.
- Government may ensure that rules regarding near expiry drugs and its return to supplier timely for replacement of stock are followed by CMSs strictly.
- Essential Medicines List (EML) and Additional Medicines List (AML) should be reviewed and updated at least once in two years or more frequently as needed.

Chapter 5

Healthcare Infrastructure

CHAPTER 5

Healthcare Infrastructure

5.1 Introduction

Public Sector Hospitals play a crucial role in promoting and maintaining the health and well-being of the population. The adequate availability of Public Sector Hospitals is extremely important in ensuring universal health coverage, which is a fundamental goal of public health. These hospitals are essential for providing accessible and affordable medical services to everyone, regardless of their socio-economic status. They are particularly vital for vulnerable population who may lack access to private healthcare facilities. By ensuring universal health coverage, Public Sector Hospitals contribute significantly to the overall well-being of the population. In addition to accessibility and affordability, Public Sector Hospitals also fulfil critical roles in community health promotion, disease prevention and control, emergency care and disaster response. Furthermore, they facilitate Medical Education and Research, extending their impact beyond individual patient care to benefit the entire population they serve.

Indian Public Health Standards (IPHS) are a set of guidelines established by the Ministry of Health and Family Welfare in India. These standards aim to enhance the quality of public health services across the country by ensuring standardised and uniform healthcare services in public health facilities. The implementation of IPHS plays a crucial role in improving the overall healthcare system in India and promoting better health outcomes for the population. This chapter addresses the status of availability of Public Sector Hospitals and other related institutions in the State.

5.2 Availability of CHCs, PHCs and SCs *vis-à-vis* prescribed norms

5.2.1 Availability of healthcare facilities

Primary-level healthcare service delivery is provided through various healthcare facilities, namely Community Health Centres (CHCs), Primary Health Centres (PHCs) and Sub-Centres (SCs). The Indian Public Health Standards (IPHS) Guidelines outline the required availability of these hospitals based on the population, as indicated below:

Table 5.1 - Norms regarding health facility with reference to population

Name of the Health Facility	Population Requirement	
	Plain area	Tribal areas
Community Health Centre	1,20,000	80,000
Primary Health Centre	30,000	20,000
Sub Centre	5,000	3,000

Source: *IPHS norms*

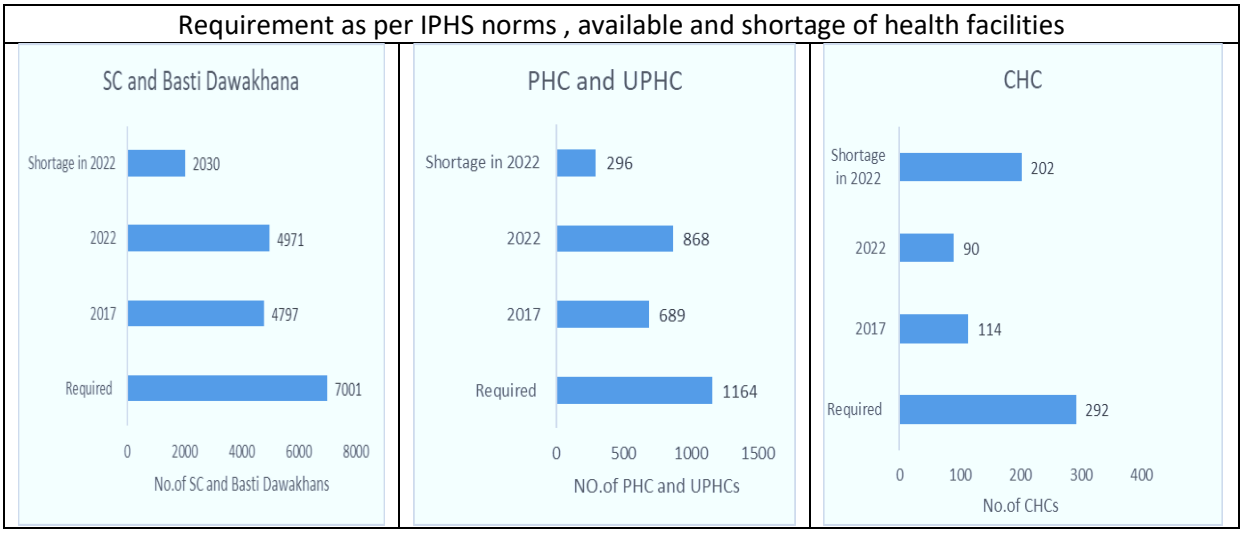
The requirement has been calculated based on the census 2011 and the projected population for 2021. Shortage of health facilities compared with the population of 350.03 lakh of Telangana is as follows:

Table 5.2 – Status of availability of Health Facilities as per norms

S. No.	Type	Required	Available 2017	Available 2022	Shortage	Shortage (percentage)
1	CHC	292	114	90	202	69
2	PHC and UPHC	1,164	689	868	296	25
3	SC and Basti Dawakhana[1]	7,001	4,797	4,971	2,030	29

Source: *Rural Health Statistics 2016-17 and Telangana State Statistical Abstract 2021*

Chart 5.1 – Details of Required, Available and Shortage of Health Facilities



Source: *Information furnished by the Department.*

As seen from the table, the number of available CHCs falls significantly short of the required number of 292, with only 90 CHCs actually being available. This shortage amounts to nearly 69 *per cent*. Similarly, the number of available PHCs and UPHCs was far below the required norm of 1164, with only 868 actually available. This represents a shortage of approximately 25 *per cent*. Furthermore, in the case of Sub Centres and Basti Dawakhanas, the available number of facilities falls short of the required 7001, with only 4,971 being available, resulting in a shortage of 29 *per cent*.

Table 5.3 - District-wise number of persons per CHC/PHC/SC

Name of the District	Population as per 2011	CHC	Average No. of persons per CHC	PHC	Average No. of persons per PHC	SC	Average No. of persons per SC
Adilabad	708972	1	708972	27	26258	126	5627
Bhadradri Kothagudem	1069261	4	267315	33	32402	267	4005

[1] "Basti Dawakhanas" means hospital of a small area. Each "Basti Dawakhana" caters to a population of 10,000. Basti Dawakhanas provide a defined package of services as close to home as possible for urban population and will act as the first point of contact between the community and the health system

Hyderabad	3943323	10	394332	86	45853	134	29428
Jagtial	985417	3	328472	23	42844	151	6526
Jangaon	534991	0	0	17	31470	112	4777
Jayashankar Bhupalpally	416763	2	208382	16	26048	90	4631
Jogulamba Gadwal	609990	1	609990	13	46922	91	6703
Kamareddy	972625	6	162104	23	42288	170	5721
Karimnagar	1005711	3	335237	27	37249	139	7235
Khammam	1401639	3	467213	30	46721	226	6202
Kumuram Bheem Asifabad	515812	1	515812	22	23446	108	4776
Mahabubabad	774549	2	387275	21	36883	173	4477
Mahabubnagar	905660	2	452830	20	45283	129	7021
Mancherial	807037	3	269012	21	38430	121	6670
Medak	767428	2	383714	19	40391	156	4919
Medchal Malkajgiri	2460095	2	1230048	27	91115	155	15872
Mulugu	294671	2	147336	12	24556	89	3311
Nagarkurnool	861766	4	215442	27	31917	178	4841
Nalgonda	1618416	1	1618416	39	41498	257	6297
Narayanpet	566874	2	283437	13	43606	88	6442
Nirmal	709418	2	354709	20	35471	102	6955
Nizamabad	1571022	8	196378	37	42460	225	6982
Peddapalli	795332	2	397666	24	33139	104	7647
Rajanna Sircilla	552037	0	0	17	32473	89	6203
Rangareddy	2426243	7	346606	52	46659	269	9019
Sangareddy	1527628	2	763814	35	43647	249	6135
Siddipet	1012065	2	506033	34	29767	193	5244
Suryapet	1099560	2	549780	27	40724	171	6430
Vikarabad	941383	4	235346	25	37655	154	6113
Wanaparthy	577758	2	288879	15	38517	102	5664
Warangal Rural	737148	2	368574	17	43362	143	5155
Warangal Urban (Hanumakonda)	1062247	0	0	28	37937	81	13114
Yadadri Bhuvanagiri	770833	3	256944	21	36706	129	5975
Total	**35003674**	**90**		**868**		**4971**	

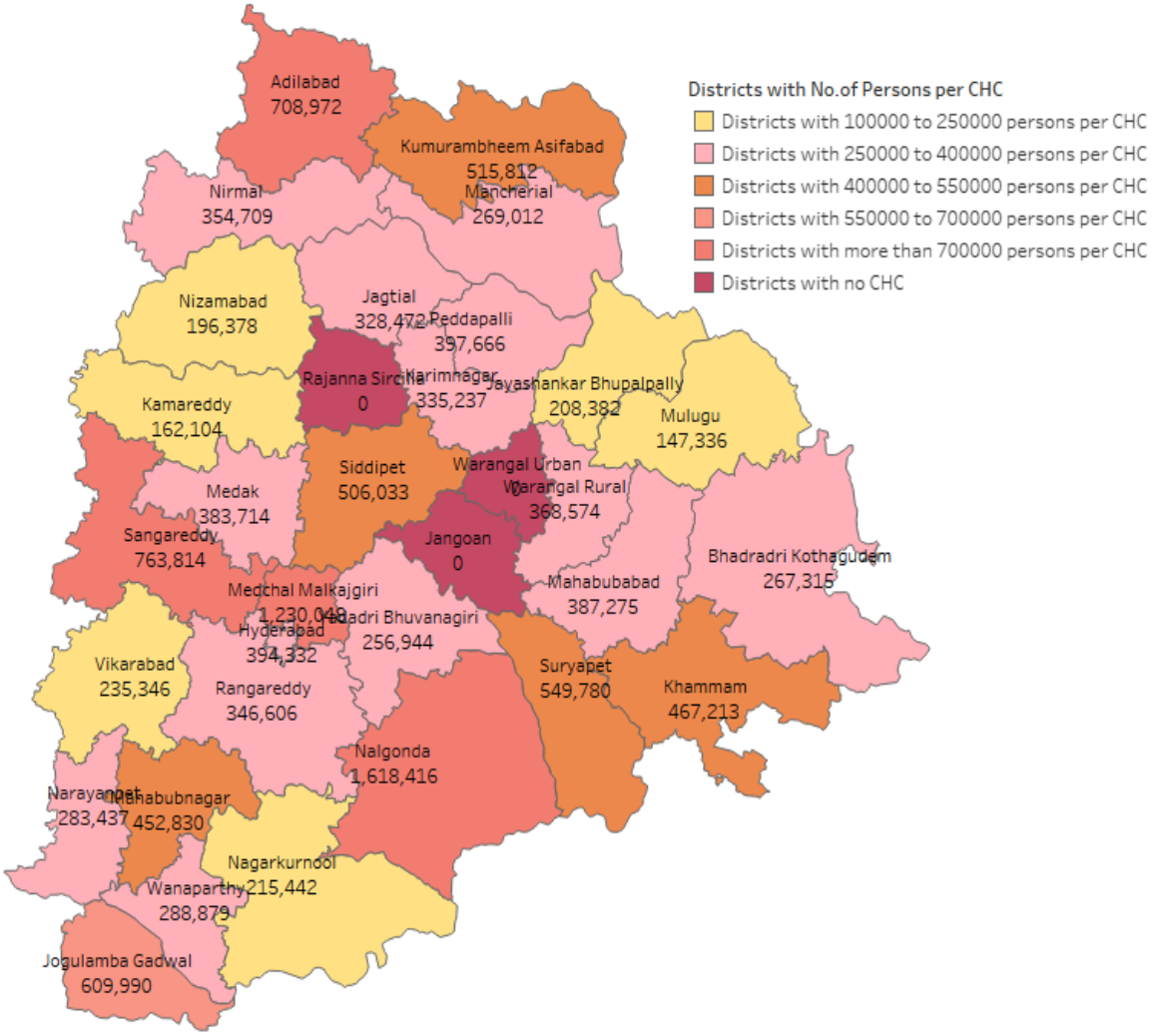
Source : *Telangana State Statistical Abstract 2021*

Note: *Red colour denotes average number of people above the actual norm. Green colour denotes average number of people below the actual norm. Light orange indicates non-availability of CHC in the District*

As seen from the above, out of 33 disticts, no CHCs were available in three Districts *viz.*, Jangaon, Rajanna Sircilla and Hanumakonda. Average population being catered to by each CHC is more than the norm of 1.2 lakh. In five Districts, *viz.*, Adilabad, Jayashankar Bhupalpally, Kumuram Bheem Asifabad, Mulugu and Siddipet, average persons per PHC was less than 30 thousand and in the remaining 28 Districts the average population being catered to by each PHC was more than the norm of 30 thousand per PHC. In eight Districts, *viz.*, Bhadradri Kothagudem, Jangaon, Jayashankar Bhupalpally, Kumuram Bheem

Asifabad, Mahabubabad, Medak, Mulugu and Nagarkurnool average population per SC was less than five thousand and in the remaining 25 Districts the average population being catered to by each SC was more than the norm of five thousand per SC.

Chart 5.2 - District-wise number of persons per CHC as of August 2023

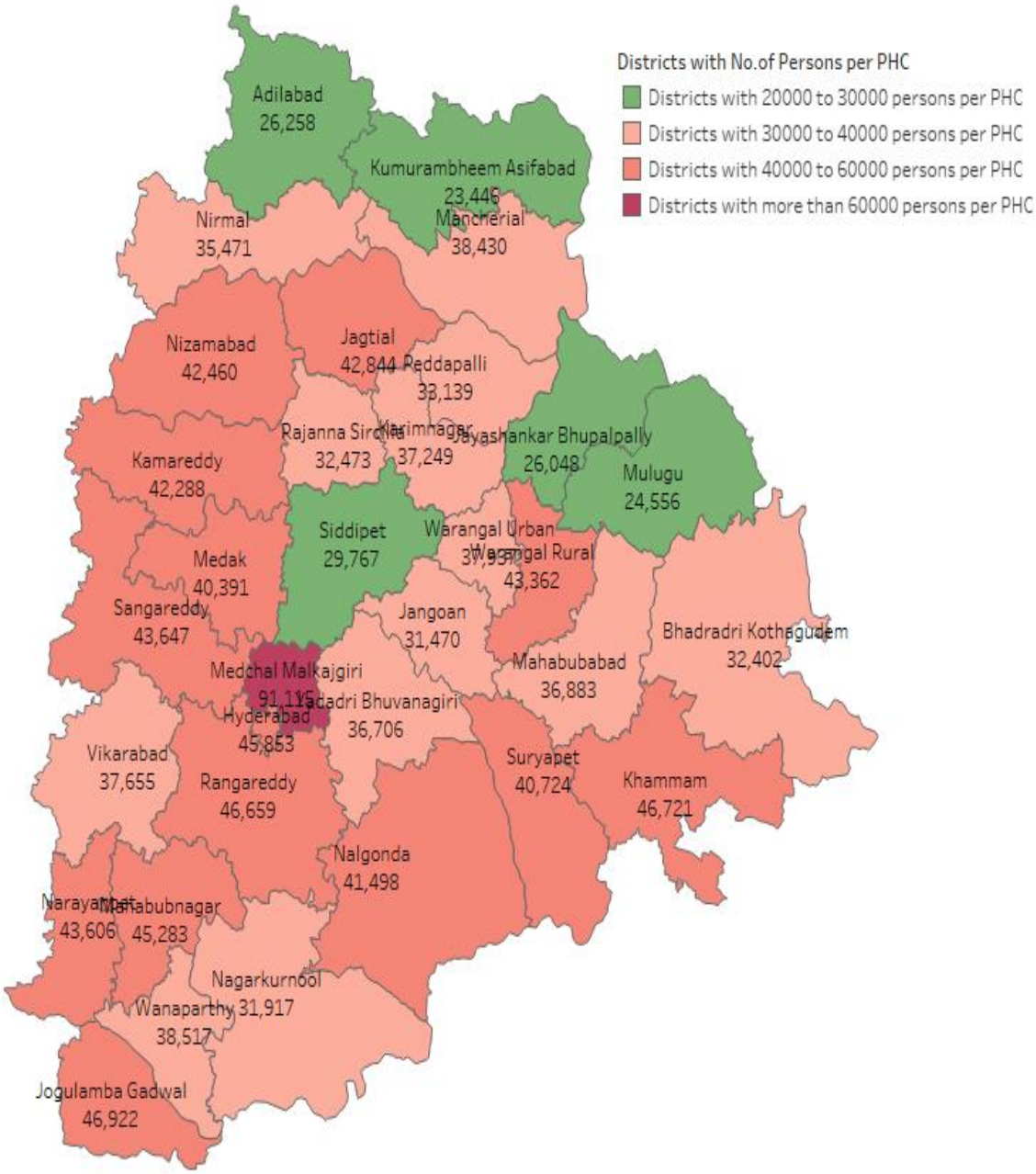


Source : *Telangana State Statistical Abstract 2021*

Government in its response (August 2023) while enumerating the various health facilities available in Telangana stated that these health facilities cater to population ranging from four to ten PHCs and that they were adequate to cater to the entire population of the State. Furthermore, the setting up of a Medical College in each District has taken tertiary care to the doorstep of people. It was stated that, healthcare of different levels was within easy access for people of the State considering the dense network of publicly run ambulances in excess of population norms.

Further, Government in its response stated that the Districts of Jangaon was served by three CHCs *viz.*, CHC Station Ghanpur; Palakurthy and Jaffurgadh, Rajanna Sircilla was served by two CHCs *viz.*, Gambiraopet; Yellareddypet and Hanumakonda had one CHC at Kamalapur. Thus all the Districts were covered by CHCs.

Chart 5.3 - District-wise number of persons per PHC as of August 2023

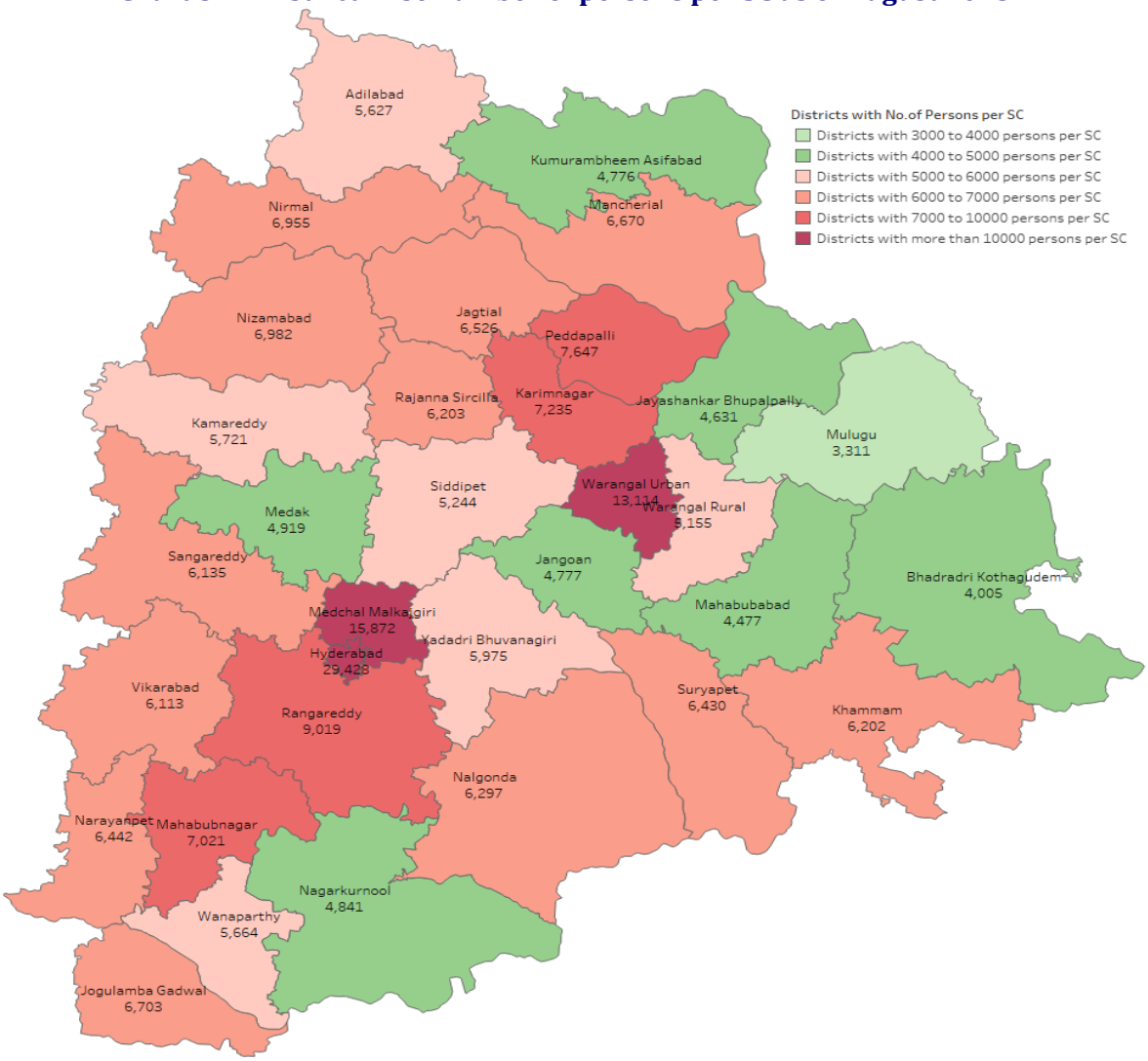


Source : *Telangana State Statistical Abstract 2021*

Government in its response (August 2023) stated that there were 706 rural PHCs for a population of 2.13 crore which is working out to an average of 30,000 population per PHC which was as per norms.

However, it was observed that, only five Districts, *viz.*, Adilabad, Jayashankar Bhupalpally, Kumuram Bheem Asifabad, Mulugu and Siddipet were compliant with population norm of 30,000 per PHC and all the remaining Districts were catering to a population over and above the norm.

Chart 5.4 - District-wise number of persons per SC as of August 2023



Source : *Telangana State Statistical Abstract 2021*

Government in its response stated (August 2023) that there were 4,745 Sub Centres catering to a population of 2.13 crore in rural area.

5.2.2 Availability of Super Speciality, Government General and District Hospitals

According to IPHS Guidelines, Districts with a population of less than five lakh and a functional DH are not required to have a Sub District Hospital (SDH), which is designated as an Area Hospital in the State. However, Districts with population between 5 to 10 lakh can have one SDH in addition to the District Hospital. Furthermore, for every additional 10 lakh population, the provision of comprehensive secondary care health services may include one SDH.

At the time of the formation of the State of Telangana, out of the original 10 Districts, DHs were available in eight Districts, while the remaining two Districts of Adilabad and Medak, did not have a DH. However, the District of Adilabad was being served by Rajiv Gandhi Institute of Medical Sciences (RIMS), Adilabad. In the subsequent reorganisation of the State's Districts, wherein the number of Districts increased to 33 Districts, Government

proposed (May 2018) to establish DHs in remaining 25 Districts including Adilabad and Medak. This involved upgrading 17 AHs and eight CHCs into DHs.

Out of the proposed 25 DHs, one DH, which was to have been established by upgrading CHC Hasanparthy, was not established and the remaining 24 DHs were established which resulted in availability of 32 DHs in 32 Districts. Subsequently, during the period of 2017-23, 18 of these DHs were converted into Government General Hospitals (GGHs) (Teaching Hospitals) and were attached to the newly established Medical Colleges. As a result, the State of Telangana currently has 14 DHs and 18 GGHs available.

In some of the Districts, in addition to the DHs, there are Super Speciality Hospitals or GGHs *viz.*, Osmania General Hospital, Nizam's Institute of Medical Sciences, Gandhi Hospital in Hyderabad, RIMS in Adilabad, whereas in Siddipet where DH is functional at Gajwel and GGH is functional at Siddipet, Peddapalli District is being served by DH at Peddapalli and GGH at Godavarikhani, etc.

Although Hanumakonda District is not served by a DH, it is being served by Mahatma Gandhi Memorial (MGM) Hospital situated in Warangal. Thus, every District of Telangana is either served by DH or GGH or Super Speciality Hospitals.

Details of the Super Speciality Hospitals, DHs and GGHs District-wise are given in the map below:

Chart 5.5 - District-wise availability of Health Institutions

Source : *Information furnished by the Department*

5.3 Availability of Beds in the Government health institutions

5.3.1 Availability of Beds against Norms

The National Health Policy (NHP) 2017 aims to ensure a minimum of two beds per thousand population. According to the Indian Public Health Standards (IPHS) Norms for Sub-District hospitals and District hospitals, it is crucial to have at least one bed per thousand population in each District.

The required number of beds deemed "Essential" in a District should be distributed across the public health system, including Tertiary care facilities such as Medical Colleges, Secondary Care facilities like District hospitals, Sub-District hospitals and selected CHCs, as well as Primary care facilities such as PHCs and the remaining CHCs.

5.3.1.1 Availability of Beds in Government Health Institutions

Audit observed that, against the requirement of 35,004 beds for the population as per Census 2011, available beds were only 27,996 beds which resulted in shortage of 7,008 beds. Further, it was also observed that against the requirement of one bed per 1,000 population, only 0.80 beds were available.

Scrutiny of the availability of beds in the Districts also revealed that, except three[2] Districts, there was a shortage of beds ranging from 7 *per cent* (Rangareddy) to 91 *per cent* (Medchal Malkajgiri).

Table 5.4: District-wise status of Beds in Government Hospitals

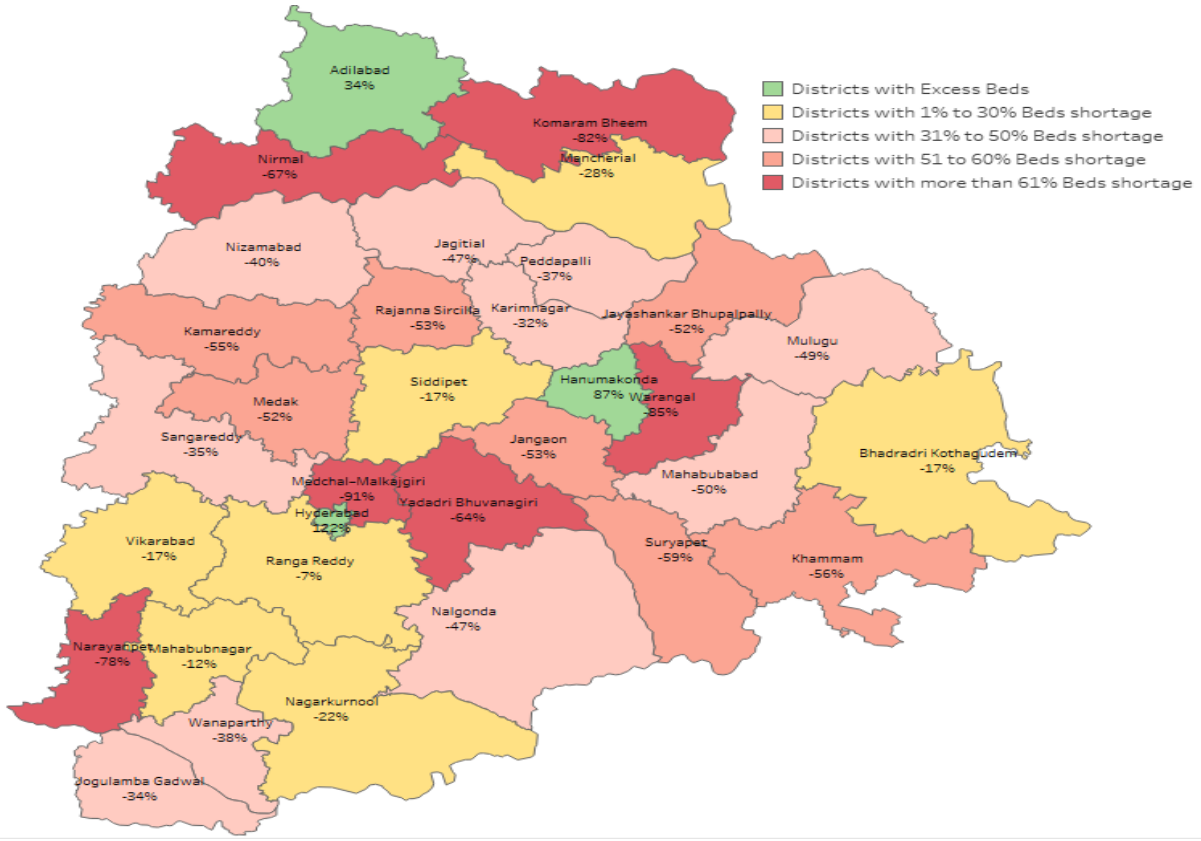
Sl. No	District Name	Population as per Census 2011	Required @ 1 bed per 1000	Available	(-) Shortage/ (+) Excess	% of shortage (-)/ Excess
1	Adilabad	708972	709	950	241	34
2	Bhadradri Kothagudem	1069261	1069	890	-179	-17
3	Hyderabad	3943323	3943	8773	4830	122
4	Jagtial	985417	985	525	-460	-47
5	Jangaon	534991	535	250	-285	-53
6	Jayashankar Bhupalpally	416763	417	201	-216	-52
7	Jogulamba Gadwal	609990	610	400	-210	-34
8	Kamareddy	972625	973	438	-535	-55
9	Karimnagar	1005711	1006	682	-324	-32
10	Khammam	1401639	1402	620	-782	-56

[2] Adilabad, Hanumakonda, Hyderabad

11	Kumuram Bheem Asifabad	515812	516	95	-421	-82
12	Mahabubabad	774549	775	391	-384	-50
13	Mahabubnagar	905660	906	800	-106	-12
14	Mancherial	807037	807	580	-227	-28
15	Medak	767428	767	368	-399	-52
16	Medchal Malkajgiri	2460095	2460	210	-2250	-91
17	Mulugu	294671	295	151	-144	-49
18	Nagarkurnool	861766	862	670	-192	-22
19	Nalgonda	1618416	1618	865	-753	-47
20	Narayanpet	566874	567	122	-445	-78
21	Nirmal	709418	709	233	-476	-67
22	Nizamabad	1571022	1571	950	-621	-40
23	Peddapalli	795332	795	505	-290	-37
24	Rajanna Sircilla	552037	552	260	-292	-53
25	Rangareddy	2426243	2426	2263	-163	-7
26	Sangareddy	1527628	1528	998	-530	-35
27	Siddipet	1012065	1012	835	-177	-17
28	Suryapet	1099560	1100	446	-654	-59
29	Vikarabad	941383	941	783	-158	-17
30	Wanaparthy	577758	578	360	-218	-38
31	Warangal Rural	737148	737	110	-627	-85
32	Warangal Urban (Hanumakonda)	1062247	1062	1991	929	87
33	Yadadri Bhuvanagiri	770833	771	281	-490	-64
	Total	**35003674**	**35004**	**27996**	**-7008**	**-20**

Source: *Telangana State Health at a glance 2021*

Chart 5.6 - District-wise status of Beds in Government Hospitals



5.4 Appearance and up-keep/planning

Table 5.5 - Appearance and up-keep in test checked Health Institutions

Selected Health Institutions	Environmentally friendly features			Circulation areas					Disaster Prevention Measures	
	Rain Water Harvesting (RW)	Solar Energy (SE)	Horticulture Services (HG)	Corridors	Lift	Ramps	Stair case	Floor-Antiskid	Earth quake Proof Measures (EQ)	Fire fighting Equipment
DH, King Koti, Hyderabad	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No (old building)	Yes
AH, Malakpet	Yes	No	Yes	Yes	No	Yes	Yes	Yes	No (old building)	Yes
AH, Golconda	Yes	Yes (Not working)	Yes	Yes	No	Yes	Yes	Yes	No (old building)	Yes
OGH	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Niloufer Hospital	No	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
MNJ Institute of Oncology and Regional Cancer Centre	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes

Source:- *Information furnished by the Health facilities*

The following observations are made on issues relating to appearance and up-keep of test checked Health Institutions:

- Rainwater Harvesting facilities were not available in Niloufer Hospital and MNJ Institute of Oncology and Regional Cancer Centre.
- Devices for utilising Solar Energy were not available in AH Malakpet, Niloufer Hospital and MNJ Institute of Oncology and Regional Cancer Centre. Although available in AH Golconda, the same was not functional.
- Lifts were not available in AHs Malakpet and Golconda.
- Disaster Prevention Measures, *viz.*, Earthquake proof measures were not available in any of the test checked Health institutions.

5.5 Health and Wellness Centres

Ministry of Health and Family Welfare (MoHFW) decided in 2017-18, to transform the existing SCs, PHCs and UPHCs across the country into Ayushman Bharat - Health and Wellness Centres (AB-HWCs) by December 2022. The primary healthcare team at the Sub Centre level HWCs is headed by a Community Health Officer (CHO) - who is a B.Sc./ General Nursing Midwifery (GNM) Nurse or an Ayurveda Practitioner trained and accredited in an approved certificate programme in Community Health. The HWCs were to deliver comprehensive healthcare services namely, maternal, child health services, free essential medicines and diagnostic services to address communicable and non-communicable diseases, etc.

In accordance with the decision made by the MoHFW, GoI, the following health facilities in Telangana have been converted into HWCs as of March 2022.

Out of the total 4,745 SCs in Telangana, a significant number of 3,206 SCs have been successfully converted into HWCs.

Table 5.6 – Health facilities converted as Health Wellness Centres

	SCs	PHCs	UPHCs	Total
Existing	4,745[3]	636	232	5,613
HWCs	3,206	636	232	4,074

Source: *Telangana State Statistical Abstract 2021 and Information furnished by Department*

5.5.1 Operationalisation of HWCs

District-wise Sub Centres converted as HWC as of March 2022 was as follows.

Table 5.7 - District-wise conversion of SCs into HWCs

Name of the District	Existing SCs	Converted as HWC	Not converted as HWC	% not converted
Adilabad	126	69	57	45
Bhadradri Kothagudem	249	153	96	39
Hanumakonda	106	63	43	41

[3] Does not include Basti Dawakhanas in Hyderabad District

Jagtial	151	102	49	32
Jangaon	107	62	45	42
Jayashankar Bhupalpally	91	65	26	29
Jogulamba Gadwal	91	67	24	26
Kamareddy	172	106	66	38
Karimnagar	139	97	42	30
Kumuram Bheem Asifabad	108	74	34	31
Khammam	225	161	64	28
Mahabubabad	177	139	38	21
Mahabubnagar	129	87	42	33
Mancherial	127	100	27	21
Medak	153	98	55	36
Medchal Malkajgiri	103	70	33	32
Mulugu	89	51	38	43
Nagarkurnool	179	124	55	31
Nalgonda	257	195	62	24
Narayanpet	87	59	28	32
Nirmal	106	73	33	31
Nizamabad	225	141	84	37
Peddapalli	104	66	38	37
Rajanna Sircilla	89	61	28	31
Rangareddy	236	158	78	33
Sangareddy	246	183	63	26
Siddipet	194	108	86	44
Suryapet	171	122	49	29
Vikarabad	155	112	43	28
Wanaparthy	98	59	39	40
Warangal	118	82	36	31
Yadadri Bhuvanagiri	137	99	38	28
Total	4,745	3,206	1,539	32

Source: *Information furnished by the Department*

Government in its response stated (August 2023), that 3,206 HWCs were sanctioned and currently 3,084 MLHPs were in position.

5.5.1.1 Upgraded HWCs and Non-operational HWCs in test checked Districts

Mahabubnagar District

In Mahabubnagar District, all six test checked Sub Centres were converted into Health Wellness Centres. Except, SC Addakal all the other five Health Wellness Centres were provided with the services of Medical Officer (MO).

Warangal District

In Warangal District, out of six test checked Sub centres, only one Sub Centre was converted into Health Wellness Centre. Medical Officer was not posted to the converted HWC.

5.6 AYUSH Health & Wellness Centres

Ministry of AYUSH is establishing AYUSH Health & Wellness Centres as part of the Ayushman Bharat Scheme, in collaboration with State/UT Governments. This initiative falls under the Centrally Sponsored Scheme of the National AYUSH Mission (NAM), which is modelled on the National Health Mission (NHM). The AYUSH Health & Wellness Centres are being developed by upgrading existing AYUSH dispensaries and Sub Centres.

5.6.1 Upgradation of AYUSH Health & Wellness Centres

Details of the upgradation of AYUSH Health & Wellness Centres under Ayushman Bharat Scheme are as follows:

Table 5.8 - Upgradation of AYUSH HWCs under the Ayushman Bharat Scheme

Year	Total	No. proposed for upgradation	No. approved for upgradation	No. upgraded	Funds due to be released (₹ in lakh)		Funds released (₹ in lakh)		Funds utilised (₹ in lakh)	
					Central	State	Central	State	Central	State
2021-22	440	421	421	421	3036.25	2024.17	3036.25	0	3036.25	0

Source: *Information furnished by Department*

Based on the information above, it has been observed that the State Government has not released its share for the upgradation of AYUSH Health & Wellness Centres. Additionally, according to the proposal approved by the GoI, the upgraded AYUSH HWCs were supposed to be provided with the services of both male and female Yoga Instructors, which has not been done. Furthermore, IT Networking facilities have not been provided to any of the 421 upgraded AYUSH HWCs. In relation to the provision of diagnostic equipment, an MOU was signed with the Commissioner of Family Welfare to provide diagnostic services through T-Diagnostic hubs and the process is currently underway. The upgraded HWCs had not been provided the full complement of ASHA workers. Infact, in 18 out of 421 HWCs upgraded, no ASHA workers were provided against the norm of five ASHA workers to be provided to each of the upgraded AYUSH HWC.

However, due to the non-release of the State's share and the failure to provide these necessary requirements in the upgraded AYUSH HWCs, the claim of upgradation of the 421 AYUSH HWCs is questionable.

5.7 New Construction and Upgradation Works

State Government is involved in various projects concerning the construction of new buildings, upgrading old buildings and carrying out civil works to enhance health facilities.

The Telangana State Medical Services and Infrastructure Development Corporation (TSMSIDC) serves as the nodal agency responsible for overseeing all construction and upgradation activities. However, TSMSIDC has not maintained a Comprehensive Database related to construction activities since 2019.

Instead of having a Comprehensive Database system, TSMSIDC relies solely on a Work Monitoring System Dashboard. Unfortunately, even this dashboard fails to provide crucial details such as the start and end dates of projects, the handover date of the designated location to the contractor, any delays encountered during the completion process, the amount of liquidated damages to be imposed and the handover date after completion. As a result, the Audit was unable to conduct a thorough analysis of the construction activities carried out by the Department and determine specific reasons for non-completion, delays, deviations from approved conditions, cost and time overruns and other related factors.

The observations made regarding these works are based on the review of files provided by TSMSIDC during the field audit. Furthermore, the progress report submitted by the TSMSIDC only provides details of ongoing projects as of January 2022, excluding any information on completed works.

Table 5.9 - Details of works taken up, completed and in progress for the period 2016-22

Details of works taken up , completed and in progress for the period 2016-17 to 2021-22		
No. of works taken up	1544	Percentage (%)
No. of Works completed	372	24
No. of works under progress	756	49
No. of works under Tender Stage	258	17
No. of works not Started/Site problem	158	10

Source: *Information furnished by TSMSIDC*

Government in its response stated (August 2023) that a Comprehensive Database Application was not mandatory and that TSMSIDC had necessary systems in place to regularly monitor the status of all the works. It was also stated that the data was being effectively maintained in the form of excel sheet which was updated from time to time.

Detailed observations regarding the status of works in test checked Districts are commented upon at appropriate places of the Report

5.7.1 Sub Centres sanctioned in the State during 2016-22

Status of the construction of SCs building works sanctioned during the period 2016-22:

Table 5.10 - Status of construction of sanctioned SCs

Year of sanction	Funds sanctioned under	No. sanctioned	Completed	In progress	Not taken up	Site problems	Tendering
2016-17	Tribal Sub Plan (TSP) & NHM	224	184	11	27	-	2
2019-20	NHM	889	147	443	76	77	146
Total		**1,113**	**331**	**454**	**103**	**77**	**148**

Source: *Information furnished by TSMSIDC*

Under the Tribal Sub Plan (TSP) & NHM, the State Government granted an Administrative sanction of ₹21 crore in May 2016 for the construction of 99 Sub-centres. Additionally, an Administrative sanction of ₹17.50 crore was granted in August 2016 for the construction of 125 Sub-centres in Tribal Areas under the NHM scheme in Integrated Tribal Development Agency (ITDA). These projects were assigned to various executive agencies, including the ITDA, Panchayat Raj Engineering (PR) Department, Roads & Buildings (R&B) Department and TSMSIDC.

Similarly, the Government of India approved the construction of buildings for 889 SCs (HWCs) in all Districts under the NHM during 2019-20. The State Government granted Administrative sanction of ₹142.24 crore in July 2020. Out of these projects, the TSMSIDC undertook 433 works, while the remaining 456 works were assigned to various executive agencies between January 2021 and January 2022.

Of the 1,113 SC works sanctioned, 331 (30 *per cent*) have been completed, 454 (41 *per cent)* are in various stages of completion, 148 (13 *per cent*) are in the tendering stage and 180 (16 *per cent*) have not been taken up.

Government in its response (August 2023) stated that out of 1,113 Sub Centre works, 738 works were taken up by other Departments and that TSMSIDC had taken up 375 works only. Government attributed the delay in execution of works to increase of GST rate from 12 *per cent* to 18 *per cent*, delay in allotment of site, increase in unit cost from sanctioned year (2016) to 2020-21 and lack of response to tenders. It was also stated that Government had sanctioned an additional amount of ₹four lakh/centre which would help in expediting these works and that the works would be completed by December 2023.

Government response that 375 works were taken up by TSMSIDC is factually not correct as Audit has information about taking up of 433 works by TSMSIDC provided by NHM authorities.

5.8 Infrastructure created not put to use in test checked Districts

5.8.1 Completed PHCs not put to use

Analysis of the construction and upgradation of PHCs that were undertaken but not yet completed until the end of March 2022 in the Districts under review revealed the following findings:

Government had granted administrative sanction for the construction of five PHC buildings and the upgradation of existing 6-bedded PHCs into 30-bedded hospitals in Mahabubnagar between May 2015 and May 2018. These projects commenced between February 2016 and September 2018, with a stipulated completion timeline of 12 months. The details of the works undertaken are as follows:

Table 5.11 - Completed PHCs not put to use

Sl. No	Name of the work	Due date for completion	Actual date of completion	Delay in completion	Date of handing over	Delay in handing over	Remarks
1	PHC Veepangandla	August 2017	February 2018	5 months	June 2020	27 months	Delay occurred due to want of inauguration

Sl. No	Name of the work	Due date for completion	Actual date of completion	Delay in completion	Date of handing over	Delay in handing over	Remarks
2	PHC Maddur	October 2017	December 2019	25 months	June 2022	29 months	-do-
3	PHC Avancha	September 2017	August 2018	10 months	February 2020	17 months	-do-
4	PHC Veltoor	October 2019	April 2021	17 months	October 2021	5 months	-do-
5	PHC Magnoor	September 2019	February 2020	4 months	Not handed over	NA	Not handed over as of July 2022 even after 30 months for want of inauguration.

Source: *Information furnished by TSMSIDC*

Out of the five completed PHCs, there were delays in handing over of PHCs ranging from 5 months (PHC Veltoor) to 29 months (PHC Maddur). Due to delays in the inauguration of the completed facilities, the completed facilities could not be put to use. The fifth PHC at Magnoor had not been handed over to the Department.

Government in its response stated (August 2023) that, the PHC building at Magnoor had been handed over to the user Department on 1 November 2022.

5.8.2 Delay in completion/handing over of CHCs sanctioned in the State

With a view to provide new buildings for the CHCs which were in dilapidated condition, the Government accorded administrative sanction (November 2015) for the construction of 10[4] CHCs for ₹50.00 crore[5] under the scheme NABARD – RIDF XXI (2015-16). Agreements were entered into with the contractors between April 2016 and January 2017 with a condition to complete the works within a period of 18 months from the date of the agreement.

Out of the ten CHCs, the construction of nine CHCs was completed between January 2018 and October 2018 with delays ranging from two to six months. Further, the completed buildings were handed over to the Department between March 2019 and November 2020 with delays ranging from 5 months (Ramayampet) to 21 months (Narnoor).

In respect of the construction of CHC, Kagaznagar, work was entrusted (May 2016) to the contractor for ₹3.03 crore. The work was not completed within the stipulated time due to non-availability of funds, site problem, COVID-19, etc.

The contract was finally terminated in January 2022 due to lack of response from the contractor after incurring an expenditure of ₹2.70 crore.

Figure 5.1 - CHC, Kagaznagar (6 August 2022)

[4] **Adilabad**: - Sultanabad, Kagaznagar, Narnoor; **Karimnagar**: - Jammikunta; **Khammam**: - Garla; **Medak**: - Ramayampet; **Mahabubnagar**: - Koilkonda; **Nalgonda**: - Marriguda **Nizamabad:** - Bichkunda **Rangareddy**: - Parigi

[5] Loan component of ₹42.50 crore (under NABARD RIDF XXI) and matching share of State Government (₹7.50 crore)

Government in its response stated (August 2023) that, during COVID period the partially completed building was used as an isolation centre and subsequently the agency had not commenced balance work. The contract was terminated duly forfeiting the value of work done and deposits. The balance work entrusted to another agency had been completed and handed over to the user Department on 4 February 2023 and that the hospital bulding was functional.

5.8.3 Delay in Upgradation of Government Civil Hospitals

The administrative sanction was accorded (September 2015) by the Government for the upgradation of Government Civil Hospitals at Kosgi (10 bedded to 50 bedded) and Kodangal (30 bedded to 50 bedded) for ₹5.50 crore and ₹4.70 crore respectively. Details of the works are as given below.

Table 5.12 – Details of non-upgraded Government Civil Hospitals

Sl. No	Name of the work/ (Date of Agreement)	Agreement Amount (₹ in crore)	Due date of completion	Actual date of completion	Delay in completion	Expenditure incurred (₹ in crore)
1	Government Civil Hospital, Kosgi (20.01.2017)	3.22	20.07.2018 (18 months)	30.06.2021	35 months	1.57
2	Government Civil Hospital, Kodangal (16.09.2016)	3.39	16.03.2018 (18 months)	31.03.2021	36 months	2.92

Source: *Information furnished by TSMSIDC*

As seen above, it was observed that there was approximately three years delay in the completion of the buildings. Further, the upgraded Government Civil Hospital, Kodangal was handed over to the concerned authorities only in June 2022 with a delay of 15 months. Government Civil Hospital, Kosgi was not handed over to the concerned authority till July 2022. Thus, although an expenditure of ₹1.57 crore was incurred on the construction of building, non-handing over of the building rendered the expenditure unfruitful besides also resulting in non-achievement of the objective of provision of upgraded facilities to the patients.

Government in its response stated (August 2023) that, work of the Government Civil Hospital, Kosgi was nearing completion and that the hospital building would be handed over by the end of July 2023. Regarding Government Civil Hospital, Kodangal it was stated that the work was hampered due to paucity of funds and that, although the work was completed in March 2021, the building could not be taken over by the user Department due to delay in inauguration. Minister for Medical & Health had since inaugurated the building in March 2022 and the building had been taken over by the user Department.

5.8.4 Construction of Mother and Child Health (MCH) Buildings

With a view to provide integrated facilities for providing quality Obstetric and Neonatal care, Government sanctioned construction of buildings for MCH at 26 different locations (details vide ***Appendix 5.1***) of the State under NRHM in different phases[6].

Scrutiny of the information revealed that, though the construction of the MCH building at GGH, Nizamabad was completed in October 2017, the same was not put to use since October 2017 due to non-completion of additional works.

Figure 5.2 - MCH, Nizamabad 5 September 2023

Government in its response (August 2023) stated that, originally the MCH was planned suitable for a DH, but as per the request of the user Department, it was later revised to suit the requirements of Medical College with a provision for G+7 floors which led to increase in foundation cost. As a result, the building could not be completed in full shape with the allocated budget. It was also stated that in November 2021, Administrative Sanction had been issued for the construction of 2nd floor for a Critical Care Block. The pending MCH works were integrated with this work and will be completed by November 2023.

The intended purpose of constructing the MCH building was not achieved, depriving patients of essential healthcare facilities and rendering an amount of ₹11.48 crore unfruitful.

5.9 Failure in setting up of 50 bedded Integrated AYUSH Hospitals

Department of AYUSH Telangana proposed to establish three 50 bedded Integrated AYUSH Hospitals under the National AYUSH Mission during 2016-18 in the State Annual Action plans. Details of the proposals and the approvals accorded by GoI were as follows:

[6] Phase 1: - 9 (October 2015), Phase 2: - 4(July 2017), Phase 3: - 6 (February 2018), Phase 4: - 2 (July 2020), Others: - 5

Table 5.13 - Details of 50 bedded Integrated AYUSH Hospitals proposed under NAM during 2016-18

(₹ in lakh)

Proposed at	Proposed in SAAP	Funding pattern	Funds approved by GoI	Funds released by GoI	Expenditure incurred	Whether completed	Remarks
Vikarabad	2016-17	60:40	600	360	0	Not completed	State share not released and land not allocated
Siddipet	2017-18	60:40	300	180	0	Not completed	Alienated land not transferred to Dept of AYUSH
Jayashankar Bhupalpally	2017-18	60:40	300	180	0	Not completed	Construction not taken up as land was not alienated

Source: *Information furnished by TSMSIDC*

Scrutiny revealed that the State Government had not released its share of funding for the 50 bedded Integrated AYUSH Hospitals. Although the Department had released the amounts received from GoI to the extent of ₹7.20 crore to the TSMSIDC towards these construction activities, the same could not be completed as land identified in respect of 50 bedded Integrated AYUSH Hospital at Vikarabad was not handed over to the Department as the identified land was found to be unsuitable. Similarly land was not alienated in respect of 50 bedded Integrated AYUSH Hospitals of Siddipet and Jayashankar Bhupalpally. As a result, none of the three sanctioned 50 bedded Integrated AYUSH Hospitals had been established in the State.

Since the construction activity could not be completed, GoI instructed the State Government to return the amount of ₹7.20 crore released towards Central share during the period from 2016-17 to 2017-18. The entire amount was returned to Government of India in the month of April 2023 without utilisation.

The envisaged 50 bedded Integrated AYUSH Hospitals had not materialised in any of the three Districts and also resulted in the loss of central funding to the extent of ₹7.20 crore.

5.10 Establishment of Medical Colleges

During the period 2017-22, construction of four new Government Medical Colleges (GMCs) were taken up. Of these, the construction of three GMCs, *viz.*, GMC Mahabubnagar, GMC Siddipet and GMC Suryapet were completed. Although construction of GMC Suryapet was completed, the same could not be put to use as inauguration of the completed building was not yet done. The construction of GMC Nalgonda was under progress.

Government in its response stated (August 2023) that construction of GMC Suryapet was completed in all respects within the stipulated time and that Hostels and part of the main block were being utilised.

In addition to the above, construction of building works in respect of eight New Government Medical Colleges was taken up through R&B Department during 2022-23.

Due to non-provision of complete data such as details of agreement, timeline for completion, sanctioned cost, actual expenditure incurred, deviations to the original sanctioned work, actual date of completion and handing over, etc, Audit was constrained in holistically analysing the construction activities of these sanctioned Medical College buildings.

5.10.1 Observations on Osmania Medical College (OMC)

5.10.1.1 Central Library of OMC

As per the Minimum Standard Requirement Regulations for Medical Colleges, 1999, there should be an air-conditioned Central Library (4,000 Sq.mt) with seating arrangement for at least 500 students for reading with good lighting, ventilation and space for stocking and display of books and journals. There should be one room inside for 250 students and one room outside for 250 students. The Central Library should have not less than 20,000 text and reference books.

Scrutiny revealed the following:

- Against the required area of 4,000 Sq.mt, the available library space was only 1,393 Sq.mt (35 *per cent*). Though the Academic Block was constructed, due to non - availability of required infrastructure like racks for storing books, tables and chairs, etc. the Library was not shifted to the Academic Block even after five years.
- Against the requirement of 20,000 books only 7,138 books (36 *per cent*) were available.

Government in its response (August 2023) stated that, the Academic block was being used by the Students which provides adequate space for reading rooms and library. E-library facility with access to online journals and 12,438 books were available in the library. However, supporting documents were not furnished.

5.10.1.2 Shortage of Hostel facility to the students of OMC

As per the provisions of Minimum Standard Requirement Regulations for Medical Colleges, 1999, each college/institution should have the provision of a student hostel for at least 60 *per cent* of the total intake of students at a given time. Each hostel room shall not have more than three occupants. The size of the room shall be 9 Sq.mt./student. Each student shall be provided with independent and separate furniture which shall include a chair, table, bed and full-size cupboard. Each hostel shall have a Visitors' room and a Study room with Computer & Internet facilities. Both these rooms shall be air-conditioned. There shall be a recreational room having TV, Music, Indoor games and messing facilities.

- Out of the four blocks available to accommodate 312 girl students as per the norms, one block of the hostel is in dilapidated condition.
- As against the norm of accommodating three students in a room specified in Minimum Standards Requirement Regulations for Medical Colleges, 1999, 511 students were accommodated in the hostels of OMC which resulted in accommodating four to five students in a room.

Figure 5.3 - Inadequate space and furniture in Girls Hostel of OMC (29 March 2022)

- Four students are accommodated in one room with the provision of only one study table and one chair was provided.
- No study rooms are available in any of the Girl's hostels. Though two study rooms were available in the Boy's hostels, they do not have any Computers, Internet and Air conditioning facilities.

On this being pointed out, it was replied by the Principal, OMC that, a request would be sent to the Government for sanctioning new hostel buildings, furniture and study rooms.

Government in its response (August 2023) while furnishing the details of the rooms available and its allocation to students stated that study rooms were available in the Academic block which was adjacent to the Hostel Buildings.

Government response is against the provisions of Minimum Standard Requirements Regulatios for the Medical College circulated by Medical Council of India which stipulates that each hostel should have a study room.

5.10.1.3 Non-utilisation of Academic buildings at OMC

In view of the enhancement of MBBS seats and based on the proposals submitted by the DME for the creation of infrastructure facilities, Administrative sanction was accorded (November 2012) for ₹23.20 crore by the erstwhile Government of Andhra Pradesh for the construction of an Academic Block. After the finalisation of tenders by the TSMSIDC (erstwhile APMSIDC), the work was entrusted to the contractor and an agreement was entered (July 2013) into, with a condition to complete the building in 18 months i.e., January 2016. The work was completed in August 2016 after incurring an expenditure of ₹17.35 crore and handed over to the College authorities in October 2016. Though the building was handed over in October 2016, equipment, furniture for the Library and for Lecture Halls was procured in November 2020, i.e., after four years. The Academic Block was not put to use as of April 2022.

Figures 5.4 & 5.5 - Academic Building at Osmania Medical College (6 April 2022)

Government in its response stated (August 2023) that the Academic block at OMC, Library and Lecture halls had been occupied and put to use from August 2022.

Thus, the expenditure of ₹17.35 crore incurred on the construction of the Academic Block remained unfruitful till August 2022, as the concerned User Department could not use it for long period.

5.10.2 Availability of Infrastructure in Medical Colleges in test checked Districts

As per the provisions of Minimum Standard Requirement Regulations for Medical colleges, 1999, each college/institution should have the provision of a student hostel for at least 60 *per cent* of the total intake of students at a given time. Each hostel room shall not have more than three occupants. The size of the room shall be 9 Sq.mt. /Student. Each student shall be provided with independent and separate furniture which shall include a chair, table, bed and full-size cupboard. Each hostel shall have a Visitors' room and a Study room with Computer & Internet. Both these rooms shall be air-conditioned. There shall be a recreational room having TV, Music, Indoor games and Mess facilities.

Table 5.14 - Availability/ non-availability of facilities in test checked Medical Colleges

Name of facilities	Osmania Medical College	Kakatiya Medical College	Mahabubnagar Medical College
Hostel room	Inadequate	Available	Available
Toilet and bathroom	Available	Available	Available
Recreation	Available	Available	Available
Visitor's Room	Available	Partially available	Available
Kitchen & Dining hall	Available	Available	Available
Pantry	Available	Available	Available
Washing & Ironing Room	Available	Partially available	Available

Source: *Information furnished by Medical Colleges*

Note: *Facilities which are available are shaded in Green, facilities not available or available but not as per norms are shaded in Red colour and where the requisite facility was partially available is shaded in Yellow.*

5.11 Construction of Nursing School, Nizamabad and Nursing College, Jagtial

5.11.1 Non-utilisation of the New Nursing School at Nizamabad

For "Construction of New Nursing School at Nizamabad (intake capacity of 240 students), Administrative sanction was accorded (April 2015) for ₹17.85 crore and the work was entrusted and agreement entered (February 2016) into with the contactor for ₹13.06 crore with a condition to complete the work by August 2017. A supplementary agreement was also concluded (June 2017) with the same contractor for ₹1.55 crore for additional quantities and new items of work. The work remained incomplete as of February 2022 in respect of additional items entrusted through supplementary agreement even though an amount of ₹14.44 crore was incurred. The completed Nursing School building (other than the additional items) was not handed over to the user Department till April 2022.

Figure 5.6 - Nursing School, Nizamabad (13 April 2022)

Government in its response (August 2023) stated that the work was completed and the building was taken over by the user Department on 14 June 2022.

Thus, non-utilisation of the buildings till June 2022 resulted in an unfruitful expenditure of ₹14.44 crore besides the intended objective of providing hostel facilities to about 240 Nursing students could not be achieved till June 2022.

5.11.2 Functioning of Nursing College, Jagtial in incomplete building

For the construction of buildings for College, Hostels for B.Sc. (Nursing) College in Area Hospital, Jagtial in erstwhile Karimnagar District, Administrative sanction was accorded (December 2013) by the Government for ₹17.85 crore. The work was entrusted to the contractor for ₹12.21 crore and an agreement was entered into in April 2015 with a condition to complete the work by October 2016. Further, a Supplementary Agreement was entered into (June 2021) with the same contractor for the excess quantities and variations in the agreement for an amount of ₹2.23 crore. However, the work was not completed within the time schedule due to delays in payments, non-availability of sand and due to non-payment of an amount of ₹2.61 crore since July 2019, the contractor stopped the work for more than two years.

Figure 5.7 - Nursing College, Jagtial (19 September 2022)

Nursing College is functioning since July 2019 in an incomplete building without any provision of hostel facilities for students. Government in its response stated (August 2023), that on allocation of budget, work of hostel building has been restarted and will be completed by August 2023.

5.12 Non-availability and non-maintenance of residential accommodation

As per the desirable conditions relating to residential quarters, all the essential medical and paramedical staff were to be provided with residential accommodation so that they are available to attend to emergencies. Scrutiny of the availablility of residential accommodation in the Speciality, DHs revealed that accommodation were not available in any of the Hospitals except DH King Koti, Hyderabad. Even the available quarters in DH King Koti, Hyderabad were not occupied by staff due to pendency of some civil works which were currently in progress.

Government in its response stated (August 2023) that with rise in HRA, functionaries have been showing preference for own/rented accommodation within vicinity of healthcare facilities. Furthermore, the officers on night duty are available in hospital premises itself for catering to emergency services.

5.13 Conclusion

Shortage in the number of Community Health Centres (CHCs), Primary Health Centres (PHCs/UPHCs) and Sub-centres/Basti Dawakhanas (SCs) available in the State, as against the prescribed population norms was nearly 69 per cent, 25 per cent and 29 per cent respectively. There were no CHCs in the Districts of Jangaon, Rajanna Sircilla and Hanumakonda. In majority of the Districts, the number of persons who are being served by PHCs and SCs were not as per norms.

Against the requirement of 35,004 beds for the population as per Census 2011, available beds in Government hospitals were only 27,996 beds which resulted in shortage of 7,008 beds. Except for the Districts of Adilabad, Hyderabad and Hanumakonda, shortage of beds was noticed in all the other Districts.

Of the 1,113 Sub-Centre works sanctioned during 2016-22, 331 (30 per cent) have been completed, 454 (41 per cent) are in various stages of completion, 148 (13 per cent) are in the tendering stage and 180 (16 per cent) have not been taken up. TSMSIDC has not maintained a Comprehensive Database of the construction activities since 2019 and as a result, it could not ensure effective monitoring.

The envisaged 50 bedded Integrated AYUSH Hospitals had not materialised in any of the three Districts, viz., Vikarabad, Siddipet and Jayashankar Bhupalpally and the State also lost central funding of ₹7.20 crore.

The Academic building at Osmania Medical College (OMC) constructed and handed over in October 2016 was not put to use as of April 2022, for want of required equipment and furniture. Thus, the expenditure of ₹17.35 crore incurred on the construction remains unfruitful.

The completed Nursing School building at Nizamabad (other than the additional items) was not handed over to the user Department till June 2022, resulting in unfruitful expenditure of ₹14.44 crore. Due to non-completion of the work of Nursing College,

Jagtial, Nursing College is functioning in an incomplete building, since July 2019 and also without providing hostel facilities to the students.

5.14 Recommendations

- Government may take necessary steps for establishment of CHCs, PHCs and SCs as per norms.
- Government may take necessary measures to increase beds in Government hospitals and provide necessary equipment in accordance with IPHS norms in all the health facilities.
- Government may take steps to maintain a holistic realtime database to monitor all construction related activities.
- Government may ensure availability of land, funds and Human Resources while sanctioning new or upgrading existing health facilities.
- Government may take measures to upgrade all PHCs/SCs as HWCs by providing necessary Human Resources and infrastructure as per norms.

Chapter 6

Financial Management

CHAPTER 6
Financial Management

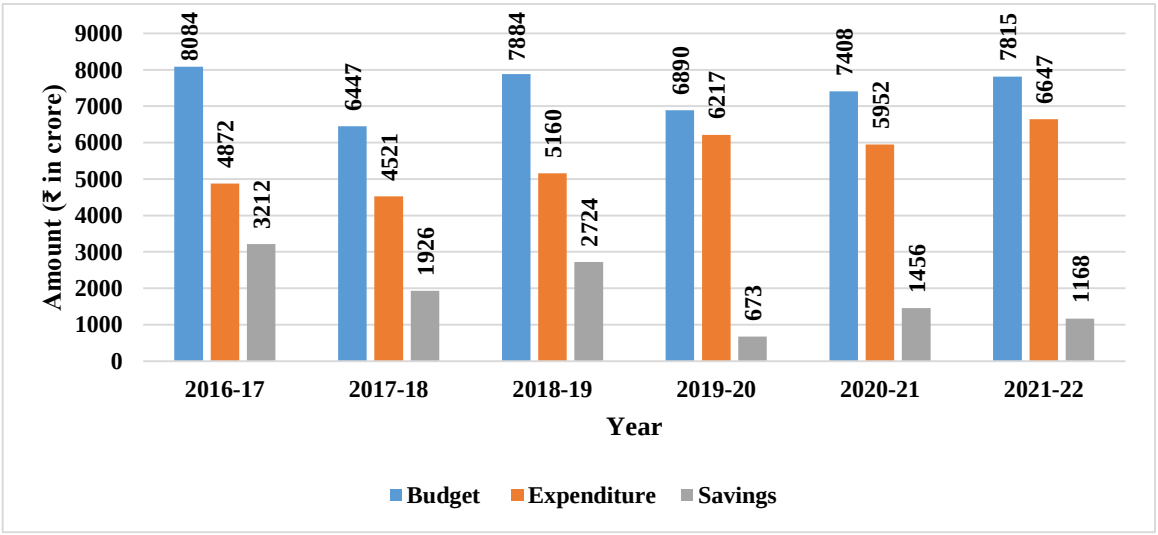
6.1 Introduction

A key requirement for any healthcare system is to ensure that adequate funds are provided and the available funds are directed to organisations in line with health system objectives. Such funding seeks to give Government and health authorities, both the financial capacity and the incentive to fulfill their objectives. Details of the planning and adequacy of funding of the healthcare sector by the State Government are discussed below:

6.2 Financial Management

The main aim of financial management is to operationalise an effective and accountable system for budgeting, release, monitoring and utilisation of funds. The State Government allocates funds under various heads from the State Budget for the proper functioning of the Department. The overall budget allocation, expenditure and savings in respect of the HM&FW Department[1] for the last six years, are given in the chart below.

Chart 6.1 – Details of Budget provisions, Expenditure and Savings during 2016-22



Source: *VLC information of A&E*

Audit noticed that, for the years 2016-17 to 2021-22, the budget had not been released fully. Even the budget released was not utilised in full thereby resulting in savings ranging from 10 to 40 *per cent*. Even during the COVID-19 years of 2020-21 (19.65 *per cent*) and 2021-22 (14.95 *per cent*) significant savings were there. Department did not furnish any response for savings.

[1] under the Heads of account 2210 for Infrastructure, Drugs & Medicines, Equipment, Consumables, Colleges, Construction and 2211 for maintenance of Buildings, etc.

6.3 Planning and Financial Assessment

6.3.1 Planning

6.3.1.1 Comprehensive Health Policy

The National Health Policy, 2017 (NHP, 2017) seeks to reach everyone in a comprehensive integrated way and to achieve universal health coverage and deliver quality healthcare services to all at affordable cost.

When the issue of the formulation of any specific Comprehensive Policy/ Comprehensive Plan by the State Government with reference to NHP, 2017 was called for, the Department did not furnish any response on this issue.

6.3.1.2 Allocation of budget and expenditure with reference to State Budget and Outlay

As per the NHP 2017, Health sector spending by the State should be increased to more than 8 *per cent* of their budget by 2020. NHP 2017, proposes a potentially achievable target of raising public health expenditure to 2.5 *per cent* of the Gross Domestic Product in a time-bound manner. It envisages that the resource allocation to States will be linked with State Development Indicators, Absorptive capacity and financial indicators. The States would be incentivised for an incremental increase of State resources for public health expenditure. Funds available under Corporate Social Responsibility (CSR) would also be leveraged for well-focused programmes aiming to address health goals.

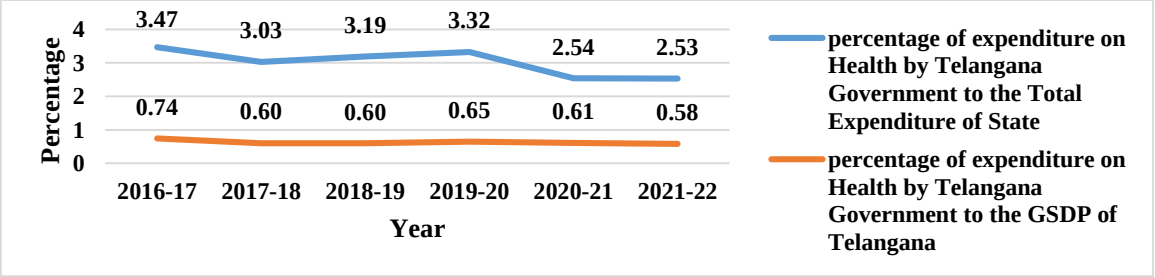
Table 6.1 – Year-wise details of budget allocation, expenditure of State and Health sector

(₹ in crore)

Year	Total State Budget	State Health Budget	% of State Budget	Total State Expenditure	Health Expenditure	Percentage to total Expenditure	State GSDP	% of Expenditure w.r.t GSDP
2016-17	1,72,269	8,084	4.69	1,40,606	4,872	3.47	6,58,325	0.74
2017-18	1,79,571	6,447	3.59	1,49,127	4,521	3.03	7,50,050	0.60
2018-19	1,99,051	7,884	3.96	1,61,570	5,160	3.19	8,57,427	0.60
2019-20	1,71,805	6,890	4.01	1,87,256	6,217	3.32	9,50,287	0.65
2020-21	2,09,090	7,408	3.54	2,34,087	5,952	2.54	9,61,800	0.62
2021-22	2,55,017	7,815	3.06	2,63,092	6,647	2.53	11,48,115	0.58

Source: *- Appropriation Accounts (2016-22)*

Chart 6.2: Expenditure on Health by Telangana Government to the Total Expenditure of State/GSDP



Source: *Appropriation Accounts (2016-22)*

From the above, the following were observed:

- During the period 2016-17 to 2021-22, the percentage of budget allocation in respect of the health sector showed a decreasing trend. Except for 2016-17 and 2019-20, in the remaining years the allocation was less than four *per cent*.

- Though as per the NHP, 2017, the spending on the Health sector in the State should be more than 8 *per cent* of the total State budget by 2020, during the period 2016-17 to 2021-22, the expenditure in respect of the Health sector ranged between 2.53 to 3.47 *per cent*, which was less than 50 *per cent* of the specified norm. Thus, the envisaged spending on the health sector had not achieved the required target in any of the years. The scheme-wise non-utilisation/short utilisation of expenditure are explained in the subsequent paragraphs. As seen from the above, the expenditure on Health Sector remained less, i.e., less than one *per cent* w.r.t Gross State Domestic Product (GSDP) as against the norm of 1.15 *per cent* to be achieved by 2025 as envisaged in the NHP 2017. Though it was observed that the expenditure in Health Sector was increasing during 2016-17 to 2021-22 (except in the years 2017-18 and 2020-21), it was also observed that the percentage of expenditure with reference to GSDP is also showing a declining trend during the period 2016-17 to 2021-22.

Government in its response while furnishing the Health Budget allocation for the period from 2016-17 to 2023-24 stated (August 2023) that per capita State Health budget was ₹3,532.67 which was highest among the States with population greater than three crore.

6.3.2 Budget allocation and expenditure on Health Sector

The overall budget allocation, expenditure and savings in respect of the HM&FW Department[2] for the last five years, with share of GoI and State Government are given in the chart below.

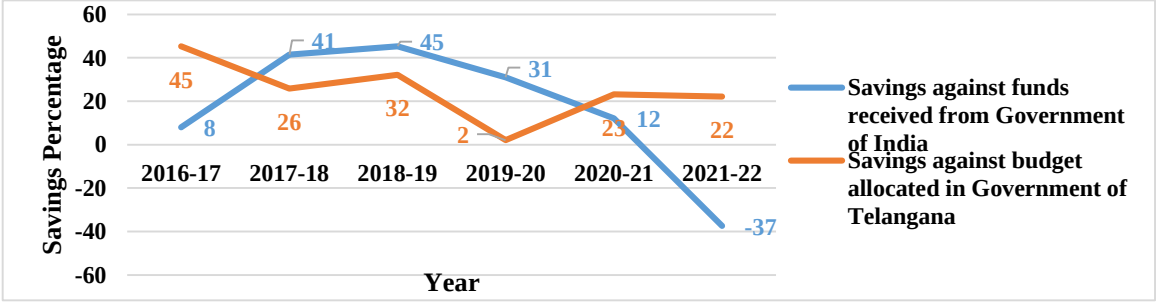
Table 6.2: Budget allocation and expenditure on Health Sector

(₹ in crore)

Year	Total Health Budget allocation	Total Expenditure	Government of India			Government of Telangana		
			Total Budget allocation	Expenditure (% of total expenditure)	Savings (%)	State Health Budget	Expenditure (% of total expenditure)	Savings
2016-17	8,084	4,872	1201	1106 (23)	95 (8)	6883	3766 (77)	3117 (45)
2017-18	6,447	4,521	1660	972 (22)	688 (41)	4787	3549 (78)	1238 (26)
2018-19	7,884	5,160	1466	802 (16)	664 (45)	6418	4358 (84)	2060 (32)
2019-20	6,890	6,217	1839	1268 (20)	571 (31)	5051	4949 (80)	102 (2)
2020-21	7,408	5,952	2310	2032 (34)	278 (12)	5098	3920 (66)	1178 (23)
2021-22	7,815	6,647	939	1290 (19)	-351 (-37)	6876	5357 (81)	1519 (22)

Source: *- Appropriation Accounts (2016-22);*

Chart 6.3: Savings against Total Budget Provision (*per cent*) of State Health Budget



Source: *- Appropriation Accounts (2016-22)*

[2] under the Heads of account 2210 for Infrastructure, Drugs & Medicines, Equipment, Consumables, Colleges, Construction and 2211 for maintenance of Buildings, etc.

From the above, it is evident that, the expenditure from both GoI and State Government funds are showing an increasing trend and savings had reduced.

6.4 Annual Health Surveys and Participation of Community

6.4.1 Health Survey

As per the NHP 2017, health, demographic and epidemiological surveys would be extended to capture information regarding costs of care, financial protection and evidence-based policy planning and reforms. The policy recommends rapid programme appraisals and periodic disease-specific surveys to monitor the impact of public health and disease interventions using digital tools for epidemiological surveys. When the details of the health surveys conducted were called for, Mission Director, NHM stated that the disease survey had been conducted by the State through Accredited Social Health Activists (ASHAs). Details of the health, demographic surveys were, however, not furnished to Audit.

6.4.2 Village Health, Sanitation and Nutrition Committee (VHSNC)

One of the key elements of the National Rural Health Mission is the VHSNC. The Committee has been envisaged to take leadership in providing a platform for improving health awareness and to improve the access of community to health services, to address specific local needs and to serve as a mechanism for community based planning and monitoring. The Committee is to be formed at the revenue village level and it should act as a sub-committee of the Gram Panchayat.

A community level campaign "Village-based Initiative to Synergizing Health Water and Sanitation" (VISHWAS) with guidance for VHSNC was launched by GoI in 2017 to strengthen the 'local level action' of the VHSNCs.

As per the VHSNC scheme guidelines, in Telangana, 10,431 VHSNCs had been formed at every Gram Panchayat and Revenue Village level. However, it was observed that no mandatory trainings[3] were imparted to the VHSNCs during the period 2017-22 as stipulated in Section 8 of Guidelines relating to Community Processes 2014.

Department replied (December 2022), that no trainings were provided to the VHSNCs throughout the State due to the non-provision of funds. However, orientation was given to the members during the monthly meetings of VHSNCs.

Government in its response stated (August 2023) that the VHSNC Committee Members were trained alongwith ASHAs at the concerned PHC level about their roles and responsibilities in the year 2018-19.

6.4.3 Untied funds

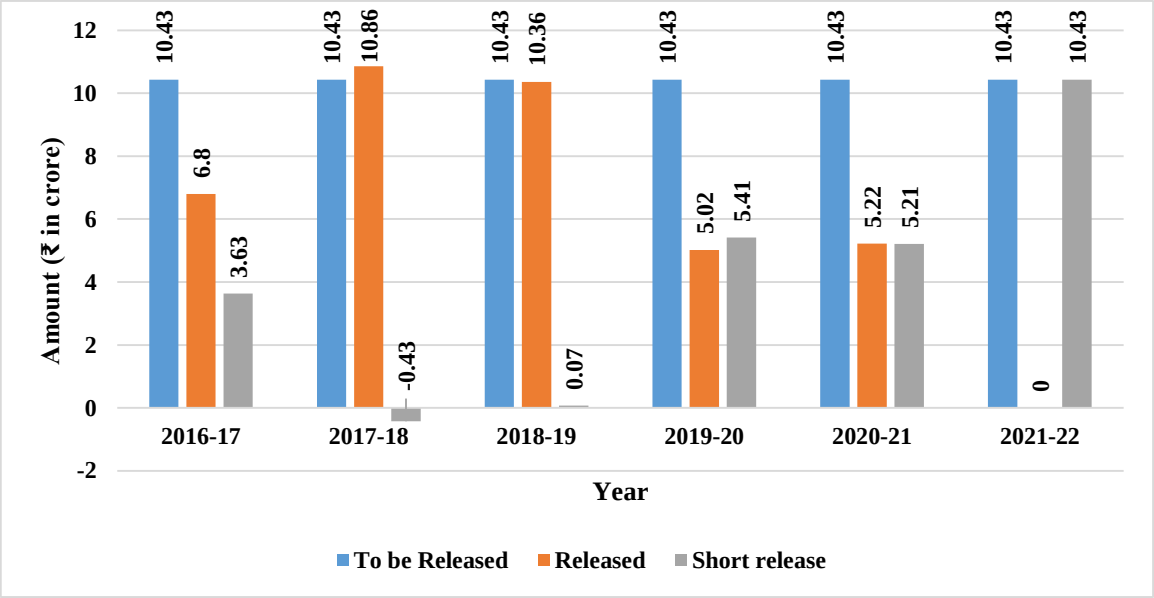
An Untied fund of ₹10,000 is given[4] annually to the VHSNC by State Health Society. The VHSNC can use these funds for any purpose aimed at improving the health of the village,

[3] As per Section 8 of guidelines relating to community processes 2014, two to three days training was required to be given to the members of the VHSNCs. Further, one-day training was required at least once in six months
[4] As per Village Health Fund under Guideline 3 relating to orientation and training

viz., nutrition, education, sanitation, environmental protection and public health measures, etc.

Year-wise details of funds released for VHSNCs during the period 2016-22 are as follows:

Chart 6.4 - Year-wise details of funds released for VHSNCs during the period 2016-22



Source: *Information furnished by the Department*

Scrutiny revealed that, no amount was released to VHSNCs during the year 2021-22 and during the years 2019-20 and 2020-21 only part releases were made. Against the requirement of ₹62.58 crore due to be released, during the years 2016-17 to 2021-22, only an amount of ₹38.26 crore was released resulting in a short release of ₹24.32 crore to the VHSNCs. Expenditure particulars in respect of funds released to VHSNCs were yet to be furnished by the Department.

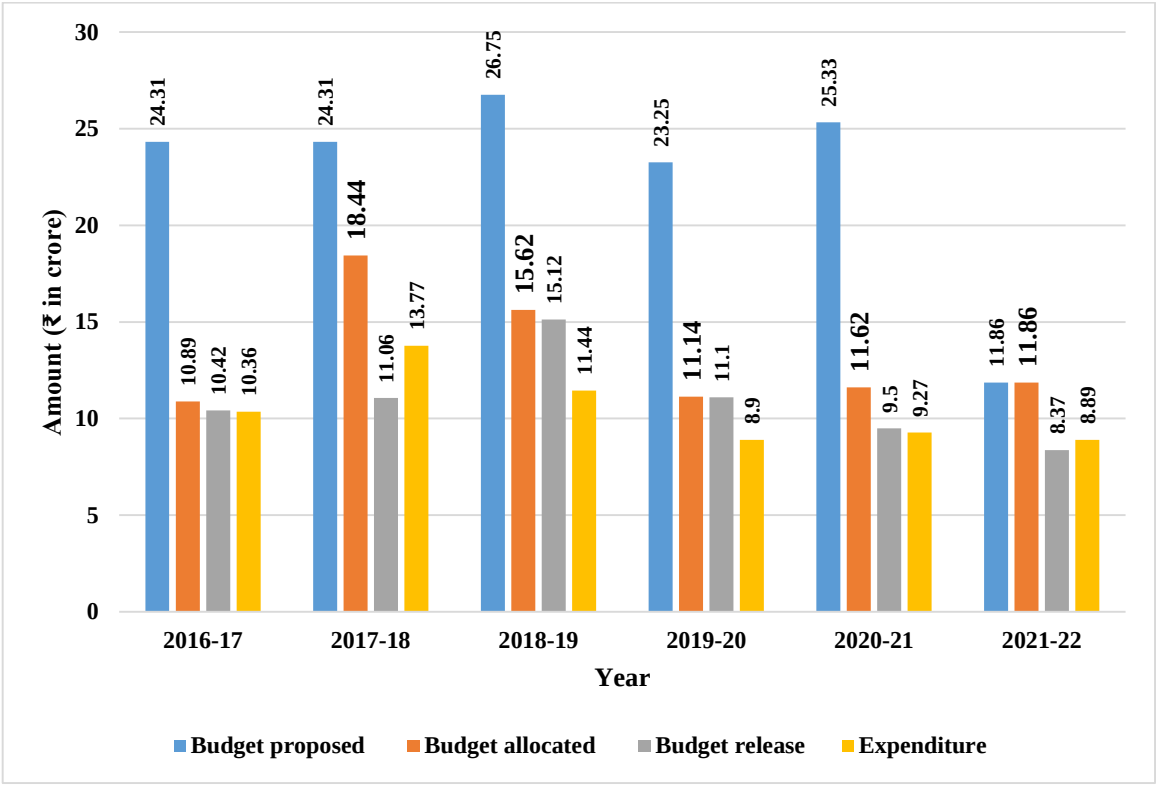
Government in its response stated (August 2023) that, the objectives envisaged in VHSNC were already being implemented through Palle Pragathi programme. Safe drinking water was ensured through Mission Bhageeratha and nutrition activities were covered under Poshan Abhiyan by Woman & Child Welfare Department. It was also stated that, since 2022, VHSNC budget was not proposed in the Programme Implementation Plans.

6.4.4 Allocation of budget to Health facilities

An amount of ₹10,000 to Sub centres, ₹25,000 to PHCs and ₹50,000 to CHCs is also paid annually towards Annual Maintenance Grant.

Year-wise details of funds released to and utilised by SCs, PHCs and CHCs during the years 2016-22 are given in Chart 6.5.

Chart 6.5 – Year-wise details of funds released to and utilised by SCs, PHCs and CHCs during the years 2016-22



Source: *Information furnished by the Department*

From the above, the following was observed

- During the year 2021-22, the entire proposed budget was allocated. In the remaining years, against the budget proposals, budget allocations ranged from 45 *per cent* (2016-17) to 76 *per cent* (2017-18).
- Similarly, during the period 2016-17 to 2021-22, out of the budget allocation, releases ranged from 60 *per cent* (2017-18) to 99 *per cent* (2019-20).

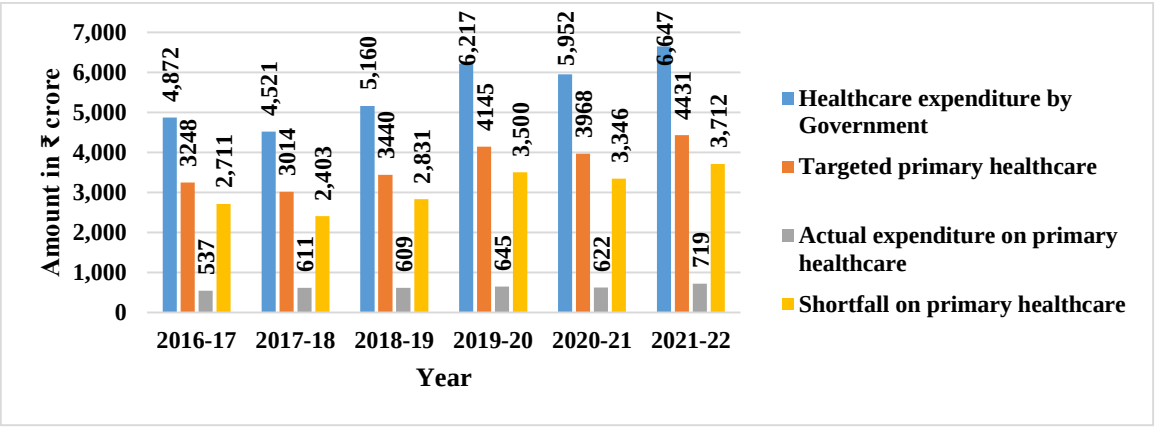
When the specific reasons for the short allocation of funds, the short release of amounts and the impact of the short release were called for from the Department, no response was furnished.

6.5 Allocation of budget for Primary Healthcare

As per NHP 2017, two thirds (66.67 *per cent*) of the total health budget should be allocated for primary healthcare. National Health Policy also stipulates that the allocation of resources in the budget is to be made based on differential financial ability, developmental needs and high priority Districts etc., to ensure horizontal equity through targeting specific population subgroups, geographical areas, healthcare services and gender related issues.

However, Audit observed that the health budget had not been prepared considering this aspect during 2016-22.

Chart 6.6 Health Care Expenditure by State Government



Source: *Data extracted from VLC, PAG (A&E) as the Department has not provided the expenditure figures*

The details of Government expenditure on healthcare along with the actual expenditure on primary healthcare during 2016-22 are given in Table below.

Table 6.3 - Statement showing target vis-à-vis actual expenditure during the period 2016-17 to 2021-22

(₹ in crore)

Year	Total healthcare expenditure by State Government	Targeted primary healthcare[5]	Actual expenditure on primary healthcare		Shortfall on primary healthcare	
			Amount	Percentage	Amount	Percentage
1	2	3	4	5 (4x100/3)	6 (3-4)	7 (6x100/3)
2016-17	4,872	3,248	537	16.54	2,711	83.46
2017-18	4,521	3,014	611	20.27	2,403	79.73
2018-19	5,160	3,440	609	17.70	2,831	82.30
2019-20	6,217	4,145	645	15.56	3,500	84.44
2020-21	5,952	3,968	622	15.68	3,346	84.32
2021-22	6,647	4,431	719	16.23	3,712	83.77

Source: *Data extracted from VLC, PAG (A&E) as the Department has not provided the expenditure figures*

- From the above, it was evident that the actual expenditure on primary healthcare out of the targeted 66.67 *per cent* of healthcare budget in the State ranged between 15.56 *per cent* (2019-20) to 20.27 *per cent* (2017-18) which was far below the set target.
- Shortfall in respect of primary healthcare during the period 2016-22 was ranging between 79.73 (2017-18) and 84.44 *per cent* (2019-20).

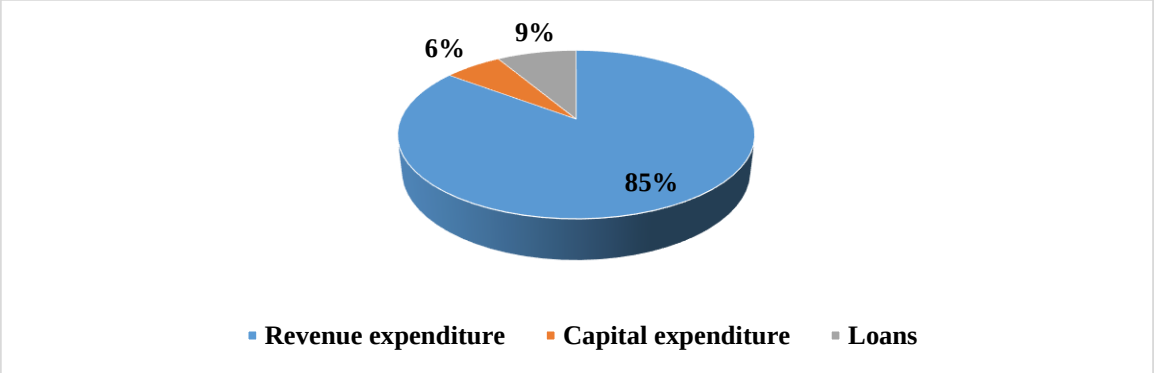
The targeted expenditure on primary healthcare of the State during the period 2016-17 to 2021-22 are not as per the NHP 2017 norms.

6.6 Component-wise Expenditure

Expenditure incurred under Revenue, Capital Heads and the Loans extended to Aarogyasri Health Care Trust (AHCT) during the period 2016-22 are given in Chart 6.7.

[5] As per NHP 2017 (2/3rd of total expenditure)

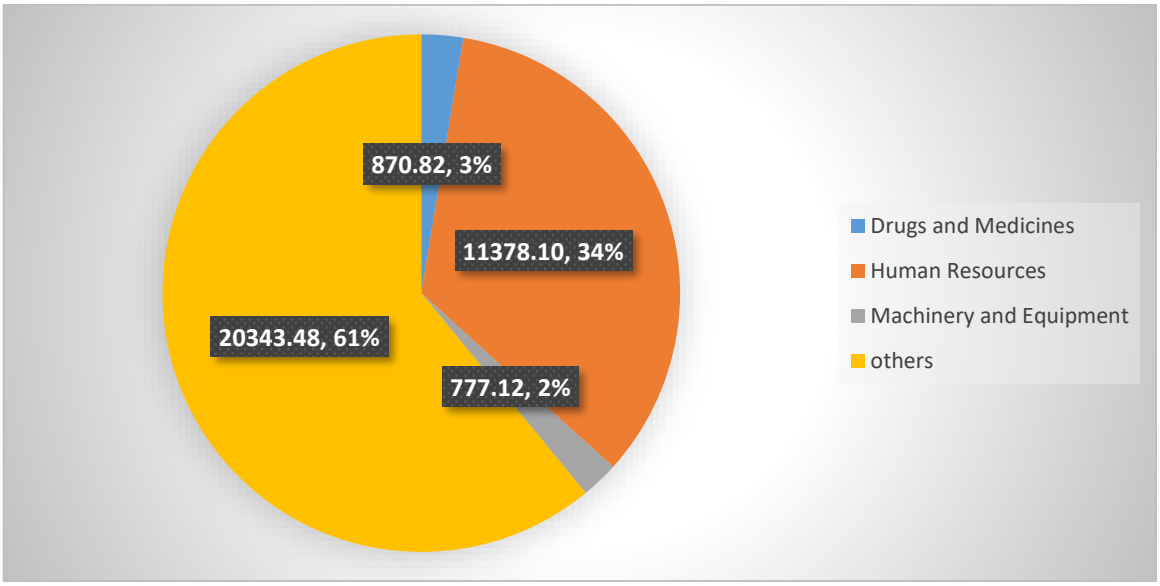
Chart 6.7 - Details of Revenue, Capital and Loans expenditure during 2016-22



Capital expenditure during the years 2016-17 to 2021-22 was showing a decreasing trend except in the year 2018-19. The component-wise expenditure of the Department during 2016-22 is shown in the pie-chart below:

Chart 6.8 – Component-wise expenditure

(₹ in crore)



Source : *VLC data*

Note: - Others includes Contingency Fund, scheme related expenditure mainly KCR Kit, Fixed Day Health Services etc., Grants-in-Aid assistance to TVVP also includes Human Resources component and Loans and GIA given to Aarogyasri Trust.

Of total health expenditure, the Department has incurred two *per cent* expenditure on Machinery & Equipment and three *per cent* expenditure *on* Drugs and Medicines.

6.7 Funding by the Private Healthcare sector

6.7.1 Investments by the Private sector

Para 2.3.3 of NHP 2017 envisages the growth of the private healthcare sector and medical technologies to ensure alignment with public health goals to enable private sector contribution to making healthcare systems more effective, efficient, rational, safe, affordable and ethical. Strategic purchasing by the Government to fill critical gaps in public health facilities would create a demand for the private healthcare sector, in alignment with the public health goals.

6.7.2 Collaboration with the Private Healthcare sector

In terms of the aim of ensuring greater private sector participation in healthcare, it was observed that, the Government was implementing the "Aarogyasri scheme". The objective of the scheme was, improving access of Below Poverty Line (BPL) families to quality medical care for treatment of identified diseases involving hospitalisation, surgeries and therapies through an identified network of healthcare providers by involving both public and private partners in the Aarogyasri network to achieve the health goals. It was observed that an amount of ₹2505.14 crore expenditure was incurred for providing treatment to 9.47 lakh patients during 2016-22 in 236 empanelled Network Private Hospitals under the "Aarogyasri" scheme.

In May 2021, for implementation of PM Ayushman Bharat programme, a Memorandum of Understanding (MoU) was signed between the State and the GoI. As per the MoU, the expenditure would be shared in the ratio of 60:40. Government of India has released its share of ₹90.24 crore during the year 2021-22 and the same has been utilised by the State Government.

6.7.3 Corporate Social Responsibility (CSR) funding

As per para 13.3 of NHP, CSR is an important area which should be leveraged for filling health infrastructure gaps in public health facilities across the country. Further, as per the provisions of the Government, the amount under CSR is allocated and utilised by various Companies in accordance with the broad framework provided by the Government under Section 135 of the Companies Act, 2013 and Companies (CSR Policy) Rules, 2014 as amended from time to time. Schedule VII of the Companies Act indicates the activities that can be undertaken by the companies, which inter-alia, include Healthcare, Education and Rural Development Projects, etc.

Department stated that, no CSR funds were received during the years 2016-17 to 2019-20 and CSR funds received during the period 2020-22 and the expenditure from those funds was as follows:

Table 6.4 – Details of funds received and expenditure incurred from CSR funds

(₹ in crore)

Year	Opening balance	Funds received	Expenditure	Closing Balance
2020-21	Nil	18.26	2.06	16.20
2021-22	16.20	2.07	17.66	0.61

Source: *Information furnished by TSMSIDC*

Status of the utilisation of the equipment received under CSR are commented upon in the Chapter 3 'Healthcare Services' of the Report.

Government in its response stated (August 2023) that periodical interaction was conducted by the Health Minister through meetings with private practioners, Federation of Obstetrics and Gynaecology Society (FOGSI), Indian Academy of Paediatricians, Neonatology forum to align private sector with public health goals. Monitoring of private sector performance through Birth Monitoring System (BMS) is being done to promote facility based review.

Furthermore, tertiary care services were being provided in the private sector for BPL population of the State through Aarogyasree Trust. This is also serving as a strategic alignment with the private sector.

However, the fact remains that CSR funds received were not fully utililised.

6.8 Funding for Health Missions

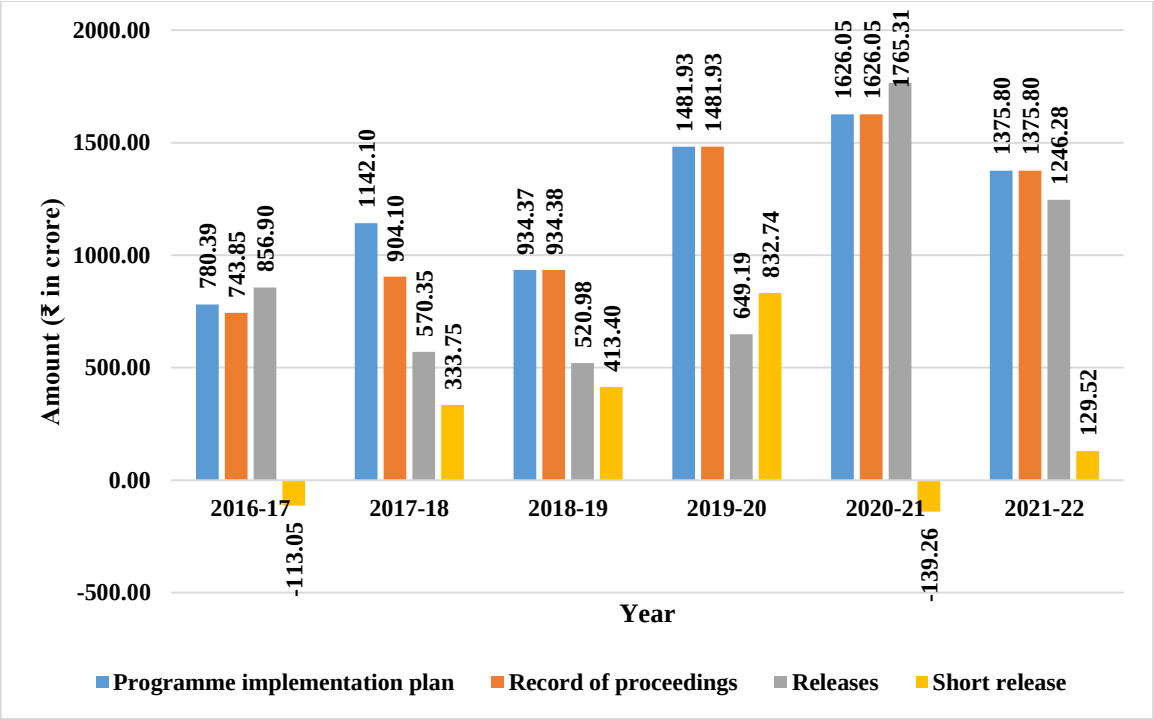
6.8.1 Funding under National Health Mission (NHM)

The NHM has been constituted to provide accessible, affordable and quality healthcare to the population, especially vulnerable groups. The key features of NHM include

(i) Creation of a fully functional public health delivery system which is accountable to the community.
(ii) Human Resources management, community involvement, decentralisation, rigorous monitoring & evaluation against standards and
(iii) The convergence of health related programmes at the level of villages and flexible financing for improving the health indicators of the State.

As per the scheme guidelines of NHM, the latest fund sharing pattern is in the ratio 60:40 between Centre and State respectively.
Details of proposals submitted, Records Of Proceedings (approval) and amount released are as below:

Chart 6.9 - Details of Programme Implementation Plan, Record Of Proceedings and Releases under NHM



Source: *Information furnished by the Department.*

Table 6.5 – Year-wise details of Receipt and Expenditure during the period 2016-22 under NHM

(₹ in crore)

Year	Opening balance	Funds received	Interest accrued /misc. receipts	Total funds available	Expenditure	Percentage of expenditure w.r.t funds available	Closing balance
2016-17	426.46	856.89	5.66	1289.01	0	0	1289.01
2017-18	1,289.01	570.35	19.01	1,878.38	670.65	35.71	1,207.73
2018-19	1,207.73	520.98	17.74	1,746.45	785.54	44.98	960.90
2019-20	960.90	649.19	2.63	1,612.72	838.78	52.00	773.94
2020-21	773.94	1,765.31	10.04	2,549.28	1,249.71	49.03	1,299.58
2021-22	1,299.58	1,246.28	3.98	2,549.84	1,610.87	63.18	938.97

Source: *Information furnished by NHM*

From the above, it was observed that, though the funds were available, utilisation ranged from 36 to 63 *per cent* only.

Government in its response (August 2023) while furnishing the details of the funds received during the period 2014-23 stated that, the utilisation of the available funds was 100 *per cent.*

Details of the funds released in respect of State Share, amount utilised on various activities scheme-wise and expenditure incurred scheme-wise were however not furnished.

Details of the non-utilisation of amounts and the components that were not taken up are discussed in the respective sub paragraphs.

6.8.1.1 Short utilisation/Non-utilisation of funds under different components

During the scrutiny, it was also observed that there were amounts lying in accounts without utilisation. Details of unutilised funds observed are as follows.

- Under the scheme "Tertiary Care in TVVP Hospitals", an amount of ₹5.34 crore (Central Share: ₹3.20 crore, State Share: ₹2.14 crore) was released to TVVP in May 2019 by the Government. When the Department requested (February 2020) the State Government for the issue of guidelines for the utilisation of scheme funds, the Department was directed to approach GoI in this regard. When this issue was brought to the notice of GoI, Department was advised to submit an action plan in this regard. However, no action plan was submitted to GoI for obtaining the guidelines and the entire amount was surrendered (April 2020) to State Government without utilising any amount.
- Audit also observed that, out of the amount of ₹36.49[6] crore released to Integrated Tribal Development Agencies (ITDAs) from the Mission Flexi pool and Reproductive and Child Health (RCH) Flexi pool funds for payment of salaries and

[6] 2016-17 to 2020-21 from Mission flexi Pool :- ₹32.60 crore , 2017-18 from RCH flexi pool :- ₹3.89 crore

other related expenditure of Maternal and Child Health centres, only an amount of ₹25.12 crore expenditure was incurred leaving a balance of ₹11.37 crore with them to the end of March 2022.

6.8.2 Delay in release of State Share

As per the NHM guidelines, as and when Central Share is released, the same should be released to the State Health Society along with the State Share. Year-wise details of GoI Share and State Share released under NHM are given in the table below.

Table 6.6 – Year-wise details of GoI share and State Share released under NHM

(₹ in crore)

Financial Year	GoI Release	Stare Share liability	State Releases as a percentage of the State share liability								Balance of State share to be released	Percentage of Central share released
			2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Total		
2016-17	398.58	265.72	195.05 (73%)	70.67 (27%)						265.72		66.67
2017-18	381.53	254.35		179.65 (71%)	74.70 (29%)					254.35		66.67
2018-19	713.40	475.60			154.40 (32%)	123.33 (26%)	197.87 (42%)			475.60		66.67
2019-20	991.39	661.31				22.66 (3%)	598.65 (91%)	40.00 (6%)		661.31		66.71
2020-21	671.87	447.91					6.00 (1%)	247.20 (55%)	65.17 (15%)	318.37	129.54 (29%)	47.39
2021-22	1,041.97	690.40						99.57 (14%)	92.15 (13%)	191.72	498.68 (73%)	18.40

Source: *Information furnished by NHM*

- As seen from the above, it is observed that the State share component was not fully released within the same financial year during 2016-22. The release of the State share within the same financial year is showing a decreasing trend from 73 *per cent* (2016-17) to 14 *per cent* (2021-22).
- Though the State share was released in subsequent years for the period 2016-17 to 2021-22, the State share was not fully released to the end of April 2022 in respect of the years 2020-21 and 2021-22.
- Against the amount of ₹447.91 crore to be released during the year 2020-21, an amount of ₹129.54 crore (29 *per cent*) was not released and similarly against ₹690.40 crore for the year 2021-22, an amount of ₹498.68 crore (73 *per cent*) was not released to the end of April 2022.

Government in its response stated (August 2023) that, most of the releases made by GoI were at the fag end of the financial year. It was also stated that the State Matching Share up to the financial year 2022-23 was completely adjusted and that there was no pendency of State Share adjustment from State Government.

However, details of the amounts adjusted for the years 2020-21 to 2022-23 were however not furnished.

6.9 Non-release of funds to Implementing Agencies

6.9.1 Non-release of State Share under National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS)

For the implementation of the NPCDCS, GoI released an amount of ₹32.59 crore[7] during the period 2020-22. Although the entire amount of GoI was released and utilised by MNJ Institute of Oncology, State Government had not released its matching share of ₹21.73 crore[8] as of April 2022.

6.10 Budget allocation and expenditure on certain components under National Health Mission

Budget allocation and expenditure on some of the important components under NHM were as follows:

Table 6.7: Budget allocation and Expenditure on important components under NHM

				Percentage of expenditure						
Scheme	Funds incl OB (₹ in lakh)	Expenditure (₹in lakh)	% of expenditure	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	
NVBDCP	4608	3906	85	18	17	34	30	30	60	
RNTCP	17480	17581	101	97	84	24	35	50	110	
NMHP	836	506	61	0	0	7	9	25	40	
NPHCE	781	439	56	0	0	8	20	37	18	
NLEP	2444	1470	60	7	6	50	90	9	39	
NTCP	363	173	48	0	9	13	13	21	28	

***Source**: Information furnished by the Department.*

6.11 Funding under National AYUSH Mission

National AYUSH Mission is a flagship Centrally Sponsored Mission launched (2014-15) by the Ministry of AYUSH. The National AYUSH Mission (NAM), through which AYUSH services are provided to the people, is a part of public health services. The basic objective of NAM is to promote AYUSH medical systems through cost-effective AYUSH services, strengthening of educational systems, facilitate the enforcement of quality control of AYUSH drugs and sustainable availability of AYUSH raw materials.

The funding pattern under the scheme in respect of Central and State Government is in the ratio of 60:40. The Mission Directorate releases the GoI share while approving the State

[7] 2020-21: ₹10.24 crore and 2021-22: ₹22.35 crore
[8] 2020-21: ₹6.83 crore and 2021-22: ₹14.90 crore

Annual Action Plans (SAAP) through sanction orders. After the release of funds from GoI, it is further released to the executing agency (State AYUSH Society (SAS)) along with State share for implementation of the scheme. Year-wise details of budget allocation, releases and expenditure during the period 2016-22 are as follows:

Table 6.8 - Statement showing year-wise details of funds allocated, release and expenditure in respect of AYUSH

(₹ in crore)

Year	PIP Approved	Budget Allocation		Budget Releases		Amount not released		Expenditure	Balance available with SAS
		Central Share	State Share	Central Share	State Share	Central Share	State Share		
2016-17	22.00	13.20	8.80	13.20	8.80	0.00	0.00	17.29	4.71
2017-18	17.50	10.50	7.00	10.50	4.69	0.00	2.31	5.58	9.61
2018-19	11.50	6.90	4.60	6.90	0.00	0.00	4.60	2.76	4.14
2019-20	15.57	9.34	6.23	6.87	0.00	2.47	6.23	0.00*	6.87
2020-21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00*	0.00
2021-22	61.57	36.94	24.63	31.32	0.00	5.62	24.63	0.00*	31.32
Total	128.14	76.88	51.26	68.79	13.49	8.09	37.77	25.63	56.65

Source: *Information furnished by State AYUSH Society*
Note: **Due to non-finalisation of Accounts of AYUSH Society and non-release of State share, expenditure figures of 2019-20 to 2021-22 were not furnished*

Scrutiny of the amounts released during the period 2016-17 to 2021-22 revealed the following.

- GoI had released its entire share of ₹30.60 crore during the period 2016-19. During the years 2019-20 and 2021-22 against the share of ₹46.28 crore due to be released, GoI had released only ₹38.19 crore, resulting in a short release of an amount of ₹8.09 crore to the SAS.
- State Government had released its share to the State AYUSH Society (SAS) fully only during the year 2016-17. During the year 2017-18, against the share of ₹seven crore to be released, State Government had released only ₹4.69 crore (70 *per cent*) and the balance ₹2.31 crore was not released even to the end of March 2022. From 2018-19 onwards, no State share was released to the SAS and the total amount which was not released by the State Government amounted to ₹35.46 crore. Specific reasons for short release of State Government share were called for from the Department, but the same are yet to be furnished.
- Though SAAP was submitted to Mission Directorate, GoI, no approval was received from Mission Directorate, GoI for NAM funds during the year 2020-21. When specific reasons for non-approval by GoI were called for, the reply was not furnished by the Department.
- It was also observed that the release of funds to the extent of ₹9.85 crore to the pharmacies for supply of medicines happened only during the period from June 2021 to February 2022. As a result, requisite medicines could not be supplied to the patients.

- As against the amount of ₹22.66 crore received for various components[9] during 2016-18, only an amount of ₹8.94 crore[10] could be expended to the end of March 2022.

6.11.1 Delay in release of GoI share to Implementing agencies

Based on the proposals submitted by the State Government, GoI releases its share to the State Government, which in turn had to release the amount to the State Health Society and State AYUSH Society by also including its own share. Though State Government released the GoI share to the State Health Society / State AYUSH Society headed by the Director of AYUSH during the years 2017-18 to 2022-23, the State share was released with delays of more than six months. The details of the delay in releases are as follows.

Table 6.9 - Delay in release of funds to Implementing Agencies by the State Government

(₹ in crore)

Name of the Department/ Office	Total Amount sanctioned	Releases				
		without delay	With delay of 15 days	With delay of 6 months	With delay of more than 6 months	Yet to be released
State Health Society/ National Health Mission	6,994.03	4,856.07	……	……	1,509.74	628.22
Director, AYUSH	128.14	82.28	……	……	……	45.86*
Total	**7,122.17**	**4,938.35**			**1,509.74**	**674.08**

Source: *Information furnished by the Department*

****includes ₹8.09 crore Central share released by GoI not released to Ayush Society by State Government***

6.11.1.1 Non-submission of Utilisation Certificates

As per Para 8 of NAM Guideline a certificate of the utilisation of the grants should be submitted to ensure sanction of further Grants-in-Aid. In respect of recurring grants, based on the UC, the balance amount will be released. UCs for the period 2014-17 were submitted only in September 2019, with delays ranging from two to four years. The Department replied that the funds pertaining to the Central Share for the years 2017-18 and 2018-19 were released to the State AYUSH Society in the month of September 2020 and April 2021 respectively by the State Finance Department. Moreover, the State share is yet to be released by the State Government.

As per the provisions of the National AYUSH Mission, 15 *per cent* weightage will be given based on the performance determined on the submission of Utilisation Certificates (UCs) due and pending as of 31st March of the previous financial year. Due to the delay in the submission of UCs to the GoI, the State Government could not get the benefit of

[9] Co-location of AYUSH facilities at District Hospitals: ₹4.34 crore; Upgradation of Hospitals/Dispensaries: ₹6.32 crore and Setting up of 50 Bedded Integrated Hospital: ₹12.00 crore

[10] Co-location of AYUSH facilities at District Hospitals: ₹2.60 crore; Upgradation of Hospitals/Dispensaries: ₹0.34 crore and Setting up of 50 Bedded Integrated Hospital: ₹6.00 crore

15 *per cent* weightage in the allocation of resource pool. The forgoing of the 15 *per cent* weightage was also confirmed (March 2022) by the Commissioner, AYUSH.

As per the information furnished by the Commissioner, AYUSH, UCs in respect of an amount of ₹18.93 crore (out of the GoI released amount of ₹83.17 crore) were still pending as of February 2023. Details of UC pending year-wise is furnished in the table below:

Table 6.10 - Details of UC pending year-wise

(₹ in crore)

Year	Amount of funds released by GoI	Amount for which UC due
2016-17	13.20	0.57
2017-18	10.50	0.95
2018-19	6.90	1.96
2019-20	6.87	2.69
2020-21	0.00	0.00
2021-22	31.32	12.76
Total	68.79	18.93

Source: *information furnished by AYUSH Department*

6.12 Emergency Response and Health System Preparedness Package

6.12.1 Package for Emergency Response to COVID

To build resilient health system for COVID-19, the MoHFW, GoI, introduced (7 April 2020) the Emergency COVID-19 Response and Health System Preparedness Package (ECRP).

ECRP-I was funded by GoI fully while funding pattern of ECRP-II, a Centrally Sponsored Scheme funded by Government of India and State Governments in the ratio of 60:40. The main objectives of ECRP, included, strengthening National and State healthcare systems to support prevention and preparedness, procurement of essential medical equipment, consumables & drugs and strengthening of surveillance activities including setting up of laboratories and bio-security preparedness. The NHM was made the implementing agency for the ECRP.

Table 6.11- Funds released for COVID related activities by GoI and State Government during 2019-20

Year	Purpose of release of funds	Funds released by (₹ in crore)		Total funds received (₹ in crore)	Expenditure incurred (₹ in crore)
		GoI	State Government		
2019-20	COVID related activities	33.40	22.66	56.06	Not furnished

Source: *Compiled from records furnished by NHM*

6.12.2 Emergency COVID Response Package (ECRP – I)

Table 6.12 - Details of funds received and expenditure incurred under ECRP I from GoI

(₹ in crore)

	Funds allocated	Funds received
ECRP I during 2020-21	386.37	386.37
ECRP I 2021-22	6.37	6.37
Total	392.74	392.74

Source: *Compiled from records furnished by NHM*

The funds allocated under the COVID package in 2019-20 and for ECRP-I were expended at the State level by the Government and in view of this there was no District-wise expenditure in respect of COVID package and ECRP-I.

Government in its response confirmed (August 2023) that procurement was done at State level and released to Districts and was operationalised/implemented at Districts.

Activity-wise allocation and expenditure incurred under COVID package and ECRP-I are as follows:

Table 6.13 Activity-wise allocation and expenditure incurred under COVID package and ECRP-I

(₹ in crore)

Sl. No	Activity/Item of expenditure	Amount sanctioned	Amount expended[11]
1	Testing and Lab Strengthening	59.21	2.69
2	Procurement (Excluding Central Supplies)	179.74	124.89
3	Health Facilities	88.44	119.03
4	Additional Human Resources engaged for COVID-19	34.49	33.28
5	Monitoring & Surveillance related	13.08	21.60
6	IT systems	0.01	0.07
7	Information, Education Communication/ Behaviour Change Communication	1.68	2.40
8	Training - No. of personnel	0.45	2.58
9	Miscellaneous	9.60	142.24
	Total	393.07	448.78

Source: *Compiled from records furnished by NHM*

It was observed that Utilisation Certificates were furnished to the GoI for the period ended March 2022 for the entire amount released under ECRP-I.

6.12.3 Emergency COVID Response Package (ECRP II)

The proposal submitted by the State Government for assistance under ECRP II was to the extent of ₹497.79 crore and approval of GoI was conveyed for the entire amount with a stipulation to expend it before March 2022.

Some of the main objectives of the ECRP II included:

- supporting the States to establish dedicated paediatric care unit in all Districts, duly supporting to establish Paediatric Centre of Excellence in each State,
- enable timely and quality management of COVID-19 patients at District and sub District level by increasing bed capacities wherever necessary,
- increase the availability of ICU beds including the paediatric ICU beds,
- support the States to have one Liquid Medical Oxygen (LMO) storage tank alongwith Medical Gas Pipeline System (MGPS) in all the Districts to enhance the availability of medical oxygen in public healthcare system,

[11] Includes the expenditure incurred from the funds released by GoI and State Government for COVID related activites during 2019-20

- support the States in implementation of Hospital Management Information System (HMIS) and
- enhancing testing capacity for identification and clinical management of COVID-19 patients at public healthcare facilities closer to the public due to the spread of cases in rural, peri-urban and tribal areas.

Of these, establishing paediatric care unit in each District, one centre of excellence per State, functional HMIS across all Districts, RT-PCR testing facility in public healthcare system and atleast one LMO plant with MGPS in each District were priority non-negotiable components of the sanction.

The details of fund received and expenditure incurred for the period from April 2021 to March 2022 under ECRP II is given in Table below:

Table 6.14 - Details of fund received and expenditure incurred under ECRP II

(₹ in crore)

Scheme	Funds allocated			Expenditure	Balance
	GoI	State	Total		
ECRP-II	298.68	199.12	497.80	416.57	81.23

Source: *Compiled from records furnished by NHM*

Although the State Government was to transfer the funds to State Health Societies (SHS) within 7 working days of its receipt from the Central Government, it released amounts with delays. The delays in release of funds by GoI ranged from 21 days to 59 days while the delay in release of its own share by State Government ranged from 60 to 186 days. (details vide ***Appendix 6.1***). The activities planned under ECRP-II and achievements in respect of each of these activities are as detailed in the table below:

Table 6.15 – Activities done against activities planned under ECRP II as of October 23

(₹ in crore)

S. No	Activities	Amount sanctioned	Amount expended	Remarks
Non-Negotiable items under ECRP-II				
1	Dedicated Paediatric Units (33)	**86.91**	**86.90**	All the oxygen supported beds, Intensive Care Unit (ICU) and High Dependeny Units (HDU) beds were established. Only one item, i.e., Infrared Vein Finder could not be procured in 33 DPCUs of all Districts. Some of the expensive equipment, such as Paediatric Ventilators with NIV mode and Neonatal Ventilators with NIV mode, were left idle and unused by DH Bodhan.
2	Centre of Excellence (CoE), Niloufer Hospital	**2.75**	**5.56**	Though the work was stated to be completed on February 2023, the same was not handed over to Niloufer Hospital, Hyderabad till May 2023. Out of 33 spokes to be established in 33 DPCUs, only 18 were established upto May 2023.
3	Liquid Medical Oxygen Plants (33)	**26.40**	**Nil**	LMO plants were not established in any of the Districts.

S. No	Activities	Amount sanctioned	Amount expended	Remarks
4	RTPCR LABS	**5.10**	**24.05**	Against the GoI sanctioned amount of ₹5.10 crore, expenditure of ₹24.05 crore was incurred towards establishment of 20 RT-PCR labs.
5	Hospital Management Information System (30 DH)	**51.00**	**4.63**	GoI sanctioned ₹51 crore for establishment of HMIS in 102 health facilities. Agreement was concluded for Stage 1 of the agreement only i.e., Outpatient modules. Out of 8 O.P. modules of 1st Phase, 2 modules i.e., OP and emergency modules were only implemented in 29 DME health facilities from 6th March 2023. Further, agreement was not concluded for Inpatient modules as of May 2023. In view of this, HMIS was not established.
Negotiable items under ECRP-II				
6	Establishment of 825 ICU Beds (10 Teaching hospitals)	**144.74**	**87.06**	625 ICU beds were established in 9 Medical College attached Hospitals. Work in progress at Nizam's Institute of Medical Sciences (NIMS), Hyderabad for establishment of 200 ICU Beds
7	Establishment of 90 ICU Beds (3 DH)	**15.16**	**Nil**	Sanctioned ICU beds not provided.
8	RT-PCR Kits	**15.39**	**12.23**	Details not furnished by the Department.
9	RAT-Antigen Kits	**77.00**	**62.06**	Details not furnished by the Department.
10	Drugs	**33.00**	**97.71**	Details not furnished by the Department.
11	Human Resources	**40.35**	**36.37**	Payment of stipends to GNM Nursing students, Final Year B.Sc. Nursing students and Medical PG Residents
	TOTAL	**497.80**	**416.57**	

Source: *Approval Proceedings of GoI - ECRP II – Telangana*

It was observed that Utilisation Certificates were furnished to the GoI for the period ended March 2022 for an amount of ₹361.87 crore out of the released amount of ₹450.56 crore.

6.12.4 Diversion of ECRP-II funds - ₹17.46 crore

As per the guidance note of GoI, for implementation of the HMIS project an amount of ₹50.00 lakh per health facility was sanctioned to 102 health facilities. NIMS, Hyderabad was not on the list of health facilities for implementation of HMIS in the GoI sanction order. However, an amount of ₹5.46 crore was paid towards implementation of HMIS in NIMS.

Contrary to the directions not to incur expenditure from ECRP-II funds on unapproved activities of ECRP-II, Government issued orders (March 2022) to pay ₹6.12 crore to TSMSIDC towards outstanding payments to CDAC pertaining to eHMS, for providing operational maintenance services for the e-Aushadhi project and ₹5.88 crore for installation of CCTV Cameras in the PHCs & UPHCs (to be incurred from XV Finance Commission funds) from ECRP-II funds. The total expenditure to the extent of ₹17.46 crore remains un-recouped to ECRP II funds.

Government in its response stated (August 2023) that, implementation of eHMIS in 102 facilities was approved under ECRP-II and that e-Aushadhi was an integral part of eHMIS.

It was stated that payments were done in order to successfully implement eHMIS in 102 facilities. It was also stated that CCTV cameras were installed in all the PHCs/UPHCs to enable live monitoring to collect, analyse and disseminate data on COVID-19 cases, testing, vaccination, hospitalisation, etc.

The response of the Government did not provide the details of the hospitals and the number of modules of eHMIS implemented.

It may be pertinent to note that XV Finance Commission grants were available for installation of CCTV cameras in PHCs/UPHCs.

6.12.5 ECRP-I & II – Utilisation of NHM interest funds on the activities not provided for under the Scheme – ₹78.37 crore

State Government has accorded administrative sanctions to the extent of ₹144.17 crore during December 2020 – September 2021 for the management of COVID-19 and directed to meet the expenditure from NHM interest funds subject to reimbursement from COVID funds. It was observed that, out of the sanctioned amount of ₹144.17 crore, only an amount of ₹65.80 crore was in respect of activities sanctioned under ECRP I & II and remaining amount of ₹78.37 crore was incurred on activities not sanctioned under ECRP I & II from NHM interest funds on a reimbursement basis. Although Commissioner of Health & Family Welfare requested Government to take necessary action for reimbursement of the amount of ₹144.17 crore to NHM funds, the same had not been done till date.

Government in its response stated (August 2023) that, Commissioner of Health & Family Welfare and Mission Director/NHM had addressed for reimbursement of funds of ₹78.37 crore expended from ECRP and the same was awaited.

6.12.6 Ex-Gratia payment to the dependent of COVID deceased

As per the orders of National Disaster Management Authority and as per the orders of the Hon'ble Supreme Court of India in June 2021, an amount of ₹50000 ex-gratia is required to be paid from the State Disaster Response Fund (SDRF) to the next of kin of the deceased persons who died due to COVID-19.

Accordingly, Telangana Government had issued five orders during the period from November 2021 to January 2022 for release of ₹66.68 crore from the SDRF for payment of ex-gratia to the next kin of the 13,336 deceased due to COVID-19. Although details of payment made were called for from Disaster Management Department regarding the actual details of utilisation, response of the Department is still awaited.

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6.13 Out Of Pocket Expenditure (OOPE)

Out Of Pocket Expenditure is the expenditure directly incurred by households at the point of receiving healthcare. Total Health Expenditure (THE) constitutes current and capital expenditures incurred by Government and private sources including external funds. THE as a percentage of GDP indicates health spending relative to the country's economic development. THE per capita indicates health expenditure per person in the country.

Government Health Expenditure (GHE) constitutes spending under all schemes funded and managed by Union, State and Local Governments including quasi-Governmental organisations and donors in case funds are channelled through Government organisations. It has an important bearing on the health system as low Government health expenditures may mean high dependence on household out-of-pocket expenditures.

As seen from the National Health Accounts, the year-wise details of the THE, GHE and OOPE in respect of Telangana for the period 2015-16 to 2018-19 are as follows.

Table 6.16 - Details of THE, GHE and Out of Pocket Expenditure

Year	THE		GHE			OOPE		
	(₹ in crore)	Per capita	(₹ in crore)	% of THE	Per capita	(₹ in crore)	% of THE	Per capita
2015-16	13,710	5,273	5,148	37.5	1,980	7,941	57.9	3,054
2017-18	15,789	4,267	6,281	39.8	1,698	7,844	49.7	2,120
2018-19	15,280	4,130	6,242	40.9	1,687	7,332	48	1,982

Source: *National Health Accounts for the respective years.*
Note: Telangana was not one of the selected States for conduct of review on OOPE. National Health Accounts for the years 2019-20 onwards are not available

Further scrutiny of GHE and OOPE of Southern Zone[12] States revealed that the OOPE of Telangana State does not compare favourably with that of Karnataka and Tamil Nadu.

Table 6.17 – Comparison of Out of Pocket Expenditure with neighbouring States

State	GHE (per capita)	OOPE (per capita)
India	1,815	2,155
Andhra Pradesh	1,576	3,140
Tamil Nadu	2,022	1,909
Karnataka	1,655	1,625
Telangana	1,687	1,982
Kerala	2,479	6,772

Source: *National Health Accounts Estimates 2018-19*

Scrutiny of the per capita expenditure revealed that, although it compared favourably with the OOPE per capita expenditure of National average, it was less when compared with the GHE of National average.

Scrutiny of GHE revealed that the GHE of Telangana was only ₹1,687 per capita. Government Health Expenditure showed a decreasing trend from 3.47 *per cent* (2016-17) to 2.53 *per cent* (2021-22) of total health expenditure of the State.

[12] State Reorganisation Act 1956

Government in its response (August 2023) stated that Telangana was ahead of Uttarakhand, Madhya Pradesh, Gujarat, etc. The response furnished by Government is not specific to the issue raised by Audit.

6.14 Implementation of State specific schemes

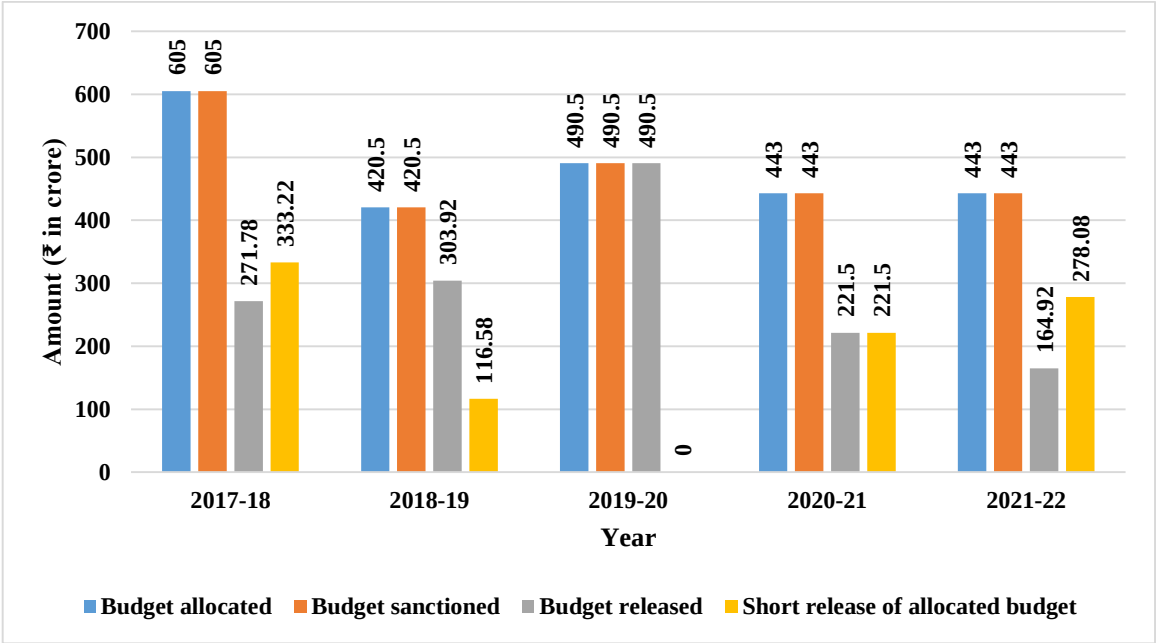
With a view to increase the Institutional deliveries as a part of SDG and to also provide proper Antenatal and Post Natal care, State Government launched the KCR Kit, Amma Vodi schemes. AMMA Vodi is a scheme where free transportation is provided to pregnant women for regular checkups and tests in the State from home to diagnostic centre or health centre and back to home.

6.14.1 Budget allocation for the KCR Kit scheme

KCR-Kit Scheme

Year-wise details of budget provision, releases and short releases are given in the Chart

Chart 6.10 – Details of budget provision and releases under KCR Kit scheme



Source: *Information furnished by Department*

Scrutiny revealed the following:

- Government had released an amount of ₹1452.62 crore during the period 2017-18 to 2021-22 under KCR Kit Scheme
- Initially, during the year 2017-18, an amount of ₹five crore was met from the funds from the RCH Flexi pool on a recoupment basis but the same has not been recouped to the RCH Flexi pool so far.
- Similarly, during the year 2017-18, an amount of ₹58.50 crore could not be utilised due to the lapse of the budget at the end of the financial year.

Government in its response (August 2023) assured that the amount of ₹five crore met from the funds of the RCH Flexi pool would be reimbursed shortly.

6.14.2 Kanti Velugu Programme:

Under the Kanti Velugu programme aimed at creating a "Avoidable Blindness Free" State, the Government has decided to provide universal eye screening for the entire population.

For the implementation of "Kanti Velugu" programme during the years 2018-19 and 2019-20, an amount of ₹177.54 crore (2018-19: ₹84 crore and 2019-20: ₹93.54 crore) was released.

Government in its response stated (August 2023) that, Medical Officers were appointed exclusively for the programme Phase-1 on temporary basis for a period of six months and that the remaining budget was utilised for implementation of the programme.

6.14.3 Other Issues

As per the State Bifurcation policy, out of ₹25.89 crore[13] apportioned amount to be received from the erstwhile Andhra Pradesh, an amount of ₹12.95 crore was received during August 2015. The balance amount of ₹12.94 crore was yet to be received by the Government of Telangana even after eight years.

Government in its response (August 2023) did not furnish information about the balance amount to be received from Government of Andhra Pradesh.

6.15 Conclusion

State Government had not formulated a Specific Comprehensive Policy/Plan with reference to NHP, 2017 to achieve universal health coverage and deliver quality healthcare services to all at affordable cost.

State Government had not conducted health, demographic and epidemiological surveys and had only conducted disease survey.

Although as per the NHP, 2017, State's spending on the Health sector should be more than 8 per cent of total State budget by 2020, the State's expenditure on Health ranged between 2.53 per cent to 3.47 per cent during 2016-17 to 2021-22 which was less than 50 per cent of the specified norm.

The expenditure on Health Sector remained less, i.e., less than one per cent of the State GSDP as against the norm of 1.15 per cent as envisaged in the NHP 2017. Further, it was observed that actual expenditure on primary healthcare in the State ranged between 15.56 per cent (2019-20) to 20.27 per cent (2017-18) of the total health budget as against the set target of 66.67 per cent.

While expenditure on Human Resources constituted a major portion of the total incurred expenditure including the amounts extended towards Grants-in-Aid, the expenditure on drugs and medicines had a meagre three per cent share.

State's share towards the Centrally Sponsored Schemes was not fully released within the same financial year during 2016-22. State Government did not release its matching share of ₹21.73 crore as of April 2022 for the implementation of the NPCDCS. Although the funds were available, utilisation ranged from 36 to 63 per cent only in respect of funds

[13] Regional Emergency Health Transport Services (REHTS): ₹21.09 crore; State Population Policy (SPP): ₹0.86 crore; Sukhibhava: ₹0.69 crore; Department For International Development (DFID): ₹1.50 crore and Others: ₹1.75 crore

released for NHM. Due to delay in submission of UCs to the GoI, the State Government could not get the benefit of 15 per cent weightage in allocation of resource pool from National AYUSH Mission.

Contrary to the directions not to incur expenditure from ECRP-II funds on unapproved activities, total funds to the extent of ₹17.46 crore was incurred for unapproved items which remains un-recouped to ECRP II funds.

State Government had accorded administrative sanctions to the extent of ₹144.17 crore during December 2020 – September 2021 for the management of COVID-19 and had directed to meet the expenditure from NHM interest funds subject to reimbursement from COVID funds. The amount was not recouped to NHM till date.

Although Out-of-Pocket- Expenditure (OOPE) of Telangana compared favourably with the OOPE per capita expenditure of National average, it was less when compared with the Government Health Expenditure (GHE) of National average.

6.16 Recommendations

- State Government may consider increasing Health sector spending to move closer to NHP targets in terms of 8 *per cent* of State budget and atleast 2.5 *per cent* of State GDP as specified in NHP 2017 by 2025 to reduce Out of Pocket Expenditure.
- State Government may consider allocation of up to two thirds of the total health budget for primary healthcare in terms of the norms prescribed by NHP 2017.
- Government should ensure that at least budgetary allocations are fully utilised by the Departments and timely release of NHM funds and its proper utilisation.
- Government may conduct health, demographic and epidemiological surveys as stipulated in NHP 2017.

Chapter 7

Implementation of Centrally Sponsored and State Schemes

CHAPTER 7

Implementation of Centrally Sponsored and State Schemes

7.1 Introduction

Access to quality healthcare services is a fundamental right of every citizen and Governments play a crucial role in ensuring the well-being of their people. Government of India and State Government have implemented many Schemes/Programmes to improve public healthcare and provide essential medical services to all sections of society. These Schemes/Programmes aim to address the challenges faced by the healthcare system, enhance accessibility, affordability and quality of care and promote overall well-being of citizens.

7.2 Centrally Sponsored Schemes/Programmes and State Schemes

The GoI launched the National Health Mission (NHM) to provide accessible, affordable, accountable, effective and reliable healthcare facilities to the people of the country. NHM was aimed to help States to achieve goals set under the framework[1]. Government of India is implementing various Schemes/Programmes under NHM for achieving the SDG[2] targets and also the targets stipulated as per the NHP 2017.

The Schemes/Programmes and the related components under NHM are shown in Table below:

Table 7.1 – Schemes/Programmes and Components

S.No	Name of the Schemes/Programmes	Components
1	Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCAH+N)	Improving Maternal Health, Child Health, Infrastructure in health facilities
2	Health System Strengthening	Adoption of IPHS Standards, Quality Standards, Skill Gaps and Standard Treatment Protocols, Hospital Management Societies (RKS) and Untied funds and Quality Improvement Programme
3	Non-Communicable Disease Control Programmes	1. National Programme for Prevention and Control of Cancer, Diabetes, Cardio-vascular diseases and Stroke (NPCDCS) 2. National Programme for Control of Blindness and Visual Impairment (NPCBVI) 3. National Mental Health Programme (NMHP)

[1] Reduction in Infant Mortality Rate (IMR) and Maternal Mortality Rate (MMR); Universal access to public health services such as Women's health, child health, water, sanitation & hygiene, immunisation and nutrition; Prevention and control of communicable and non-communicable diseases; Access to integrated comprehensive primary healthcare; Population stabilisation, gender and demographic balance

[2] In the cases of IMR, MMR, Malaria, Leprosy and Dengue

		4. National Programme for Healthcare of Elderly (NPHCE) 5. National Programme for Prevention and Control of Deafness (NPPCD) 6. National Oral Health Programme (NOHP) 7. National Programme for Palliative Care (NPPC) 8. National Programme for Prevention and Management of Burn Injuries (NPPMBI) 9. Other Non-Communicable Disease Programmes
4	Communicable Disease Programme	1. National Vector Borne Disease Control Programme (NVBDCP) 2. Revised National Tuberculosis Control Programme (RNTCP) 3. National Leprosy Eradication Programme (NLEP) 4. Integrated Disease Surveillance Programme (IDSP)
5	Infrastructure Maintenance	1. Strengthening of civil works of Specialty/GH/ DH/CHCs/PHCs and SCs for the transformation to IPHS standard 2. Upgradation of PHCs to FHCs

Source: *Scheme Guidelines*

Table 7.2 - Schemes implemented by the State Government

Name of the Scheme	Purpose of the Scheme	Benefits envisaged
KCR Kit & Amma Vodi Scheme[3]	For improving MMR, IMR	An amount of ₹12,000 / ₹13,000 to pregnant women who are receiving health services from public health institutions in the State at important stages in pre and post-natal period. Under Amma Vodi Scheme, State Government provides free transport facilities from home to home for regular check-ups and tests for pregnant women.
Kanti Velugu[4]	To achieve blindness free status in the State	Conducting a Comprehensive and Universal Eye Screening for the entire population of the State.
Aarogyasri	A community health insurance programme	Provides financial protection upto ₹2 lakh in a year to families living below poverty line for treatment of identified diseases thereby improving access of BPL families to quality medical care.

Source: *Scheme Guidelines*

7.2.1 Structure of NHM at National and State level

At the National level, the Mission Steering Group (MSG) and the Empowered Programme Committee (EPC) are in place. The MSG provides policy direction to the Mission. The Union Minister of Health & Family Welfare chairs the MSG. The convenor is the Secretary, Department of Health & Family Welfare and the co-convenor is the Additional Secretary & Mission Director. Financial proposals brought before the MSG are first placed before

[3] Both KCR Kit and Amma Vodi were launched on 2 June 2017
[4] launched on 15 August 2018

and examined by the EPC, which is headed by the Union Secretary of Health and Family Welfare.The EPC will implement the Mission under the overall guidance of the MSG.

At the State level, the Mission functions under the overall guidance of the State Health Mission (SHM) headed by the State Chief Minister. The SHS would carry out the functions under the Mission and would be headed by the Chief Secretary.

The State Programme Management Unit (SPMU), State Health System Resource Centres (SHSRC) and the State Institutes of Health and Family Welfare (SIHFW) will continue to play similar roles for the State as do their National counterparts for the Centre. The SPMU acts as the main secretariat of the SHS.

Audit scrutinised Centrally Sponsored Revised National Tuberculosis Control Programme (RNTCP), National Leprosy Eradication Programme (NLEP), National Programme for Palliative Care, National Vector Borne Disease Control Programme (Malaria, Dengue and Chikungunya) and Pradhan Mantri Matru Vandana Yojana.

Audit also examined the implementation of State Schemes *viz.*, KCR Kit and Kanti Velugu.

The observations in respect of the above mentioned Schemes/Programmes are as follows:

7.2.2 Revised National Tuberculosis Control Programme

India has been engaged in Tuberculosis (TB) control activities for more than 50 years. Yet TB continues to be India's severest health crises. The National Strategic Plan (NSP) February 2017 on Tuberculosis (TB) proposes bold strategies with commensurate resources to rapidly decline TB in the country by 2025 in line with the Global End TB targets and Sustainable Development Goal's vision to attain TB-free India.

Scrutiny of the programme implementation revealed the following:

7.2.2.1 Notification of TB cases in respect of health institutions

While the Project Implementation Plan (PIP) approval accorded by the GoI is for the financial year, the actual implementation of the scheme is for the calendar year. Year-wise details of targets for identification of the cases and achievement in respect of TB notified cases up to 2021 in the State are shown in the Table below:

Table 7.3 - Status of TB cases notification in the State

Calendar Year	Targets for TB Notification[5]		Actually Notified Cases of TB		Shortage in Notifications		Shortage in Percentage	
	Public	Private	Public	Private	Public	Private	Public	Private
2017	40,720	19,984	37,009	1,713	3,711	18,271	9.11	91.43
2018	41,928	34,988	42,087	8,922	-159	26,066	-0.38	74.50
2019	49,000	21,000	50,557	20,552	-1,557	448	-3.18	2.13
2020	56,770	25,230	40,541	22,703	16,229	2,527	28.59	10.02
2021	56,760	25,240	41,497	19,315	15,263	5,925	26.89	23.47

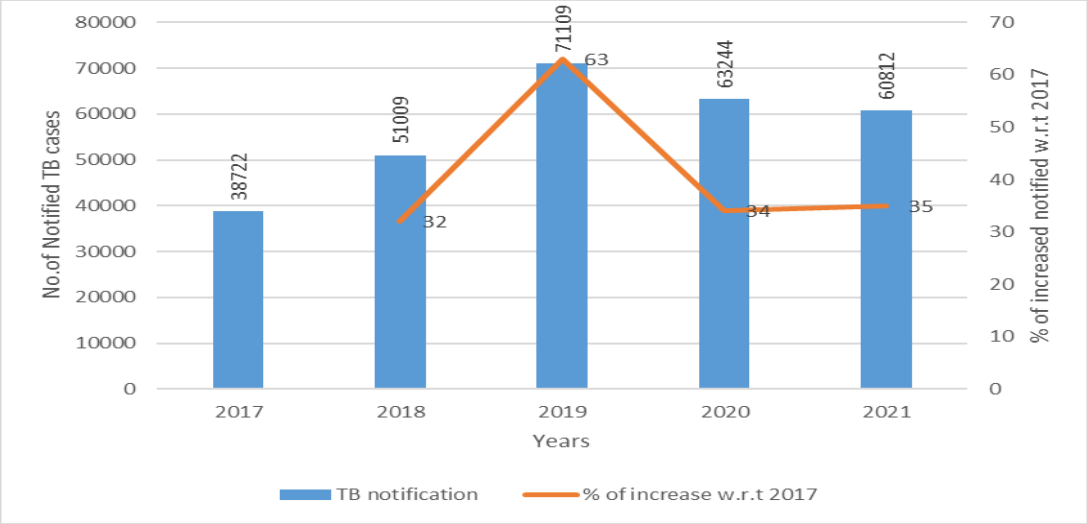
Source: *- Information furnished by the Department*

[5] Reporting about information on diagnosis or treatment and/or treatment of Tuberculosis cases to the Nodal Public Health Authority

- As seen from the Table 7.3 above, it was observed that, as against the targets fixed by GoI, the notifications were showing an increasing trend during the years 2018 and 2019 and a decreasing trend in the years 2017, 2020 and 2021 in respect of public health institutions. Further, though there was an increasing trend in the notification of cases in the private sector, the percentage of shortfall which decreased to 2.13 *per cent* in 2019 has once again increased to 23.47 *per cent* in 2021.

- Though as per the NSP 2017, the TB should be eliminated by 2025, the year-wise increase of cases compared to 2017 is given below.

Chart 7.1 – Details of TB cases notified and percentage of increase in TB cases w.r.t. 2017



Source :- *Information furnished by the Department*

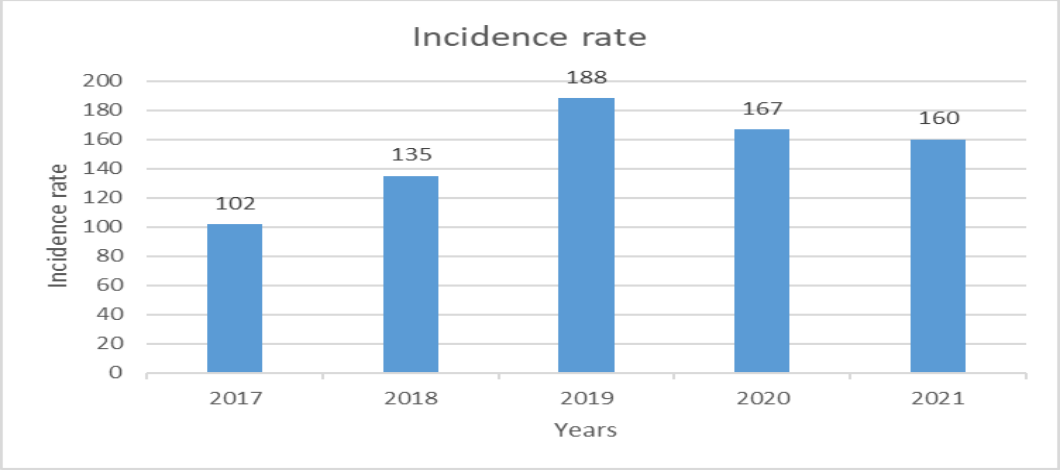
Government in its response stated (August 2023) that, during the years 2020 and 2021, the TB notification had decreased due to COVID pandemic and that the national average which was 60 *per cent* and 72 *per cent* respectively for the years 2020 and 2021 were less than the State average. It was also stated that, the TB notifications from private sector had shown an increasing trend after State started offering access to diagnosis (Rapid Molecular Diagnosis) under NAAT free of cost to the private sector.

7.2.2.2 Incidence Rate

The Incidence Rate of Tuberculosis is the number of new cases of TB per 1,00,000 people per year.

Year-wise details of incidence rate in Telangana is indicated in Chart 7.2.

Chart 7.2 – Year-wise details of Incidence Rate



Source:- *Information furnished by the Department*

- The Incident Rate of Tuberculosis in Telangana showed an increasing trend during the years from 2017 to 2019 and decreased thereafter. However, when compared to the base year 2017, it has increased by 57 *per cent* in 2021.
- It was observed that, out of the 33 Districts, the incidence rate was continuously increasing in five Districts during the years 2017 to 2019 and although it declined in 2020, it has increased in those districts except Mahabubnagar during 2021, as shown below:

Table 7.4 - District-wise incidence of rate of TB

Sl No	Name of the District	Rate of TB incidence				
		2017	2018	2019	2020	2021
1	Adilabad	176	188	225	182	195
2	Mahabubnagar	155	178	237	182	178
3	Hyderabad	150	248	379	305	323
4	Bhadradri Kothagudem	149	175	220	189	204
5	Jogulamba Gadwal	71	153	171	163	173

Source: - *Information furnished by the Department*

- Incidentally, it was also observed that the incidence rate in Hyderabad District was more than the incidence rate of India (210) during the year 2021.
- Further, it was also observed that, compared to an incidence rate of 71 in 2017, the incidence rate in the Jogulamba Gadwal District had increased to 173 in 2021.

Government in its response, attributed to (August 2023) increase in incidence rate of TB in the State due to regular conduct of Active Case Testing among the vulnerable population in community, increase in number of Designated Microscopy Centres (DMC) from 345 to 525 and increase in molecular testing machines from 15 to 32; the higher incidence rate in Hyderabad and mapping of private sector of health institutions also for identification of the cases etc. It was further stated that the State was identified as one of the top three States in India for overall best performance in NTEP in the year 2022.

7.2.2.3 Success Rate

Treatment success is an indicator of the performance of National TB Programme. As seen from the information furnished in the table below, the success rate of treatment in Telangana was ranging from 88 *per cent* to 90 *per cent*.

Table 7.5 – Success Rate of Treatment of TB

Year	Total Public and Private notified cases	No of TB Patients cured	No of TB Patients died	No of TB Patients who lost to follow up	Default cases	Treatment completed	Treatment success rate TB cases (Treatment completed & Cured) (C+G/B)
A	B	C	D	E	F	G	H
2017	38722	18929	1514	1251	1756	15272	88%
2018	51009	23290	1964	924	2464	22367	90%
2019	71109	28814	2613	712	4295	34675	89%
2020	63244	24888	2111	491	4763	30991	88%
2021	60812	25254	1884	498	3520	29656	90%
2022	50859	13498	1092	121	4003	32145	90%

Source: *Information furnished by the NHM*

7.2.2.4 Non-implementation of Patient Provider Support Agency (PPSA) under RNTCP

Government of India has given high priority to eliminating TB from India. However, despite robust public health interventions, one of the reasons that the TB burden continues to remain high is due to a lack of effective public-private engagement. In India, the private sector was the preferred first point of care for TB patients and the current scale of public-private sector engagement was insufficient to effectively contribute towards addressing the TB burden. The following activities were proposed to be implemented under the PPSA.

- Mapping private-sector providers (formal and informal), laboratories and chemists.
- Increasing engagement of private-sector providers through in-clinic visits and contributing medical education.
- Linking RNTCP provided diagnostic services (sputum microscopy, X-ray, CB-NAAT, sputum collection and transport) and fixed drug combinations (FDCs)
- Facilitating and updating TB notification and other relevant information in Nikshay[6].
- Facilitating incentives given by RNTCP to the private-sector Doctors and patients
- Counselling the patients to ensure treatment adherence
- Facilitating linkage for DR-TB treatment and HIV services, as required.

[6] Ni Kshay –TB is the web-enabled Patient Management System for TB control under the National Tuberculosis Elimination Programme (NTEP)

Table 7.6 - Details of targets and achievement of TB

Year	TB Notification[7]		%	Drug Sensitive Tuberculosis (DS TB)		%	Drug Resistant Tuberculosis (DR TB)		%
	Targets	Achievement		Cases	Outcome		Cases	Outcome	
2016	73,749	45,532	62	45,160	45,160	100	372	230	62
2017	75,481	45,021	60	44,239	39,744	90	782	462	59
2018	74,847	52,053	70	50,536	46,083	91	1,517	1,004	66
2019	70,000	71,152	102	68,741	61,903	90	2,411	1,734	72
2020	82,210	63,115	77	60,821	54,237	89	2,294	1,533	67
2021	82,210	61,092	74	59,656	39,500	66	1,436	508	35

Source: *Information furnished by the Department*

To strengthen the involvement of private sector, the GoI has prioritised approved Patient-Provider Support Agency in the Record Of Proceedings (ROP)[8] 2019-20. An amount of ₹176.35 lakh was approved for implementation of PPSA in the five Districts of Khammam, Nizamabad, Karimnagar, Nalgonda and Hanumakonda and while the amount was released, it was kept unutilised to the end of March 2022.

Scrutiny revealed the following:

- Though the funds were released for the finalisation of PPSAs, the Technical Committee was formed only in November 2021 i.e., after the lapse of two years.
- The Technical Committee members had approved and finalised (April 2022) the proposed Request for Proposal (RFP) for floating PPSA services in ten Districts divided into two[9] clusters. Due to the non-finalisation of the RFP for floating PPSA services, the process of fixing targets in respect of private parties had not been taken to its finality.

Government in its response stated (August 2023) that presently PPSA was being implemented in 10 Districts of the State since 24 December 2022. It attributed the COVID pandemic to non-finalisation of PPSA for two years. It was also stated that the process of fixing targets for private notification based on population was completed and shared with the agency implementing PPSA.

7.2.2.5 Payment of financial incentives to TB Patients

Government of India, Ministry of Health and Family Welfare launched "Nikshay Poshan Yojana" a scheme of incentives for nutritional support to TB patients with effect from 1 April 2018. All TB patients notified on or after 1 April 2018 including all existing TB patients under treatment are eligible to receive incentives. The patient must be registered/notified on the NIKSHAY portal. A financial incentive of ₹500 per month is to be provided in the form of a Direct Benefit Transfer for each notified TB patient for the duration for which the patient is on Anti-TB treatment.

[7] After introduction of NiKshay portal in 2017, due to technical issues till 2020, there were variations in the figures indicated in Table 7.5 and Table 7.6

[8] Record of Proceedings is for the financial year while the actual implementation is for the calendar year

[9] Cluster 1: - Hyderabad, Suryapet, Nizmabad Cluster 2: - Karimnagar, Jagtial, Medchal Malkajgiri, Siddipet, Vikarabad, Rangareddy and Sangareddy

Table 7.7 – Details of Payments pending for TB patients

Year	Total Notified private and public	No. of TB patients Eligible for NSP payment	Amount for NSP Payable (₹ in crore)	No. of beneficiaries bank account seeded and verified in Nikshay	No. of TB beneficiaries who were paid NSP	Amount of payment made (₹ in crore)	No. of beneficiaries pending for payment
2017	38,722	2,133	1.02	1,620	2,567	0.11	-
2018	50,718	32,149	15.22	26,181	39,195	9.01	-
2019	70,792	50,282	21.53	44,429	54,557	12.32	2,651
2020	62,956	49,900	18.88	44,341	47,439	11.78	3,397
2021	61,333	54,588	18.12	51,290	59,455	12.33	3,434
2022	52,549	46,749	11.76	44,379	37,610	8.02	9,139

Source: *Information furnished by the Department.*

As seen from the above, it was observed that the payments to beneficiaries were pending since 2019.

Government in its response stated (August 2023) that it was intensively monitoring payment of all the monetary benefits to the TB patients and that during the years 2020, 2021, 2022, payments had been made to the extent of 68 *per cent*, 73 *per cent* and 85 *per cent* respectively of the total notified TB patients.

Government response is not acceptable as the financial assistance towards nutrition support was envisaged as a means of providing relief to suffering patients.

7.2.3 National Leprosy Eradication Programme

Sustainable Development Goal 3.3.6 in respect of Leprosy, envisaged that by the end of 2030 the disease is to be eliminated. NLEP is a Centrally Sponsored Scheme under the umbrella of National Health Mission (NHM). The NLEP's mission is to provide quality leprosy services free of cost to all sections of the population, with easy accessibility, through the integrated healthcare system, including care for disability after cure of the disease with a main aim to reduce Prevalence rate to less than 1/10,000 population at sub-National and District level.

7.2.3.1 Financial Management

Based on the proposals submitted by the State Government, the GoI releases the amounts for incurring expenditure on the scheme. Year-wise details of releases, expenditure and balance available during the years 2016-17 to 2021-22 are as given below:

Table 7.8 - Details of releases, expenditure incurred and balance

(₹ in crore)

Financial Year	Opening Balance	Funds Received			Total Fund Available	Expenditure during the year	Closing Balance
		GoI Share	State Share	Total			
2016-17	0.39	1.50	1.00	2.50	2.89	0.20	2.70
2017-18	2.70	0.00	0.00	0.00	2.70	0.16	2.54

2018-19	2.54	1.50	1.00	2.50	5.04	2.54	2.50
2019-20	2.50	2.36	0.00	2.36	4.86	4.38	0.48
2020-21	0.48	1.09	14.88	15.97	16.45	1.43	15.02
2021-22	15.02	0.72	0.00	0.72	15.74	5.99	9.74
Total		7.17	16.88	24.05		14.70	

Source: *Information furnished by Department*

Out of the total funds of ₹24.44 [10]crore, the expenditure incurred during the six-year period was ₹14.70 crore (60 *per cent).* Except for 2019-20 where expenditure was 90 *per cent*, for the other years, it ranged from 6 to 51 *per cent* and to that extent the implementation of the schemes suffered.

Details of the implementation of the programme are explained in succeeding paragraphs.

7.2.3.2 Implementation of the National Leprosy Eradication Programme

GoI issued (August 2016) the Revised Operational Guidelines for Leprosy Case Detection Campaign in respect of National Leprosy Eradication Programme and had recommended that periodic active case detection campaigns should be undertaken in priority areas with focus on detection of backlog cases as well as new cases.

Increase in number of new Leprosy cases in Adult and Child categories

Table 7.9 - Year-wise data on Adult, Child Cases and Annual New Case Detection Rate (ANCDR), Cases under Multi Drug Therapy (MDT) and Prevalence Rate

Sl. No.	Year	Population	New Cases			Female	ANCDR	New leprosy Cases under MDT	Prevalence Rate
			Adult	Child	Total				
1	2016-17	3,71,97,024	2,474	184	2,658	964	7.15	1,939	0.52
2	2017-18	3,75,91,317	2,724	186	2,910	1109	7.74	2,329	0.62
3	2018-19	3,80,04,821	3,320	225	3,545	1439	9.33	2,766	0.73
4	2019-20	3,80,04,821	3,767	234	4,001	1620	10.53	2,423	0.64
5	2020-21	3,83,80,409	1,649	104	1,753	------	4.57	1,341	0.35
6	2021-22	4,04,44,103	1,947	80	2,027	------	5.01	1,472	0.36
TOTAL			**15,881**	**1,013**	**16,894**	**5132**		**12,270**	

Source: *- Information furnished by Leprosy division*

New Leprosy cases had increased in Adult and Child categories during 2016-20.

Scrutiny of the information related to 33 Districts for the years 2020-21 and 2021-22 revealed the following:

- Out of 33 Districts of the State, the Annual New Case Detection Rate (ANCDR) is showing an increasing trend in 23 Districts during 2021-22 when compared to 2020-21.
- Child Case Detection Rate (CDR) is showing an increasing trend in 12 Districts in 2021-22 when compared to 2020-21.
- Prevalence of Grade-II disability of 3.33 in the Sangareddy District had come down to 0.98 in 2021-22. However, in Hyderabad, it had increased from 2.70 (2020-21)

[10] OB: ₹0.39 crore + funds received ₹24.05 crore

to 5.36 (2021-22). In Mahabubnagar District also, the prevalence of Grade-II disability had increased from 0 to 2.00.

Case Prevalence Rate (PR) in the Districts:

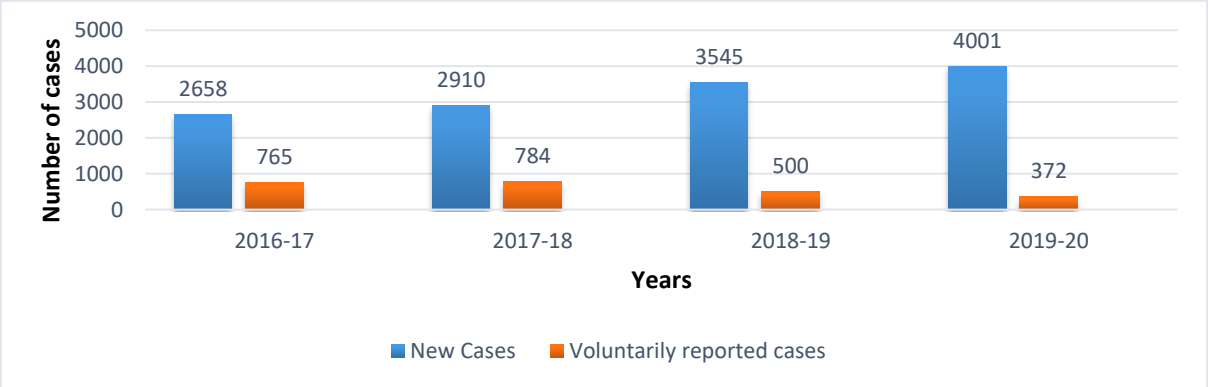
The PR is ranging from 0.35 (2020-21) to 0.73 (2018-19) in the State during the period from 2016-22, which is within the target of the scheme. But during the scrutiny, the following was observed:

- During the year 2019-20, PR in eight Districts[11] was more than 1. However, during the subsequent years 2020-21 and 2021-22, the Districts have a PR of less than 1 which indicates that suitable measures have been initiated by the department to address this issue.
- Though it was less than 1 in respect of 22 Districts during 2020-21, the PR was showing an increasing trend in 19 Districts during 2021-22 in comparison with the year 2020-21 (details vide ***Appendix 7.1***).

Voluntarily reported cases out of new cases

The Programme also aims to spread awareness about the disease and reduce the stigma attached with the disease. However, it was noticed that the percentage of voluntarily reported cases out of new cases detected was in a declining trend from 28.78 to 9.30 *per cent* during 2016-17 to 2019-20. Due to the change of Reporting format by GoI (2020-21 onwards) the data of Voluntarily reported cases among the new cases were not being reported.

Chart 7.3 - Voluntarily reported cases out of new cases



Source: *Information furnished by Department*

It was replied (June 2022) that, due to the introduction of new initiatives[12] for the new case detection, new cases had gradually increased and were immediately kept on Multi-Drug Therapy (MDT) for treatment. As the new case detection got increased, the programme indicators were correspondingly more. GR-II disability percentage and per million

[11] Adilabad; Jogulamba Gadwal; Kumuram Bheem Asifabad; Mahabubabad; Mancherial; Narayanpet; Nirmal and Suryapet

[12] Leprosy Case Detection Campaign (LCDC), Active Case Detection and Regular Surveillance (ACD&RS), Focussed Leprosy Campaign (FLC), special plan for hard-to-reach areas and Sparsh Leprosy Awareness Campaign (SLAC)

population also increased, especially in the Districts where there was cross-border migration of the population from one State to the other State.

Further, the decrease in the reporting of cases during the years 2020-21 and 2021-22 was reportedly due to the deployment of staff for COVID-19 pandemic work**.**

Reconstructive Surgery for Leprosy Patients: Reconstructive Surgery (RCS) is a low-cost alternative to correcting the deformity and thereby rehabilitating patients of leprosy into performing occupational and social duties. Leprosy patients who have undergone RCS will be paid a welfare allowance @ ₹8000 per surgery.

Scrutiny of relevant records revealed that, although funds were available, as of May 2022, welfare allowance was not paid to 144 patients (46 *per cent* out of 310 leprosy patients) who had undergone RCS during 2016-17 to 2021-22. It was replied that the bank account details and certificate of surgery would be obtained from the RCS patients and the welfare allowance would be disbursed in due course and details will be furnished to Audit.

7.2.4 National Programme for Palliative Care

Palliative care is also known as supportive care, which is required in the cases of terminally ill patients such as Cancer, AIDS etc., and can be provided relatively simply and inexpensively either in Community Health Centres or even in patients' homes. As per the Operational Guidelines for Palliative Care issued by GoI, at least five beds were to be prioritised for palliative care patients in CHCs/UPHCs etc.

Scrutiny of information received (October 2022) from NHM revealed the following:

- Of 32 Hospitals Palliative Wards, Palliative Care Medical Officers were not available at four hospitals[13].
- Out of 32 Hospitals, Physiotherapist posts were not sanctioned in 10 hospitals.
- Against the sanctioned strength of 132 Staff Nurses, 19 vacancies (14 *per cent*) were observed.

Government in its response stated (August 2023) that, Palliative Care Centres/wards were established in all Districts with 8-10 beds in each District with Medical Officers, Physiotherapists and Staff Nurses.

Government had not provided evidence of the recruitment of Human Resources in palliative care wards of the District Hospitals.

7.2.5 National Vector Borne Disease Control Programme (NVBDCP)

The National Vector Borne Disease Control Programme (NVBDCP) is an umbrella programme for prevention and control of vector borne diseases (VBDs), *viz.*, Malaria, Lymphatic Filariasis, Kala-azar, Dengue, Chikungunya and Japanese Encephalitis (JE). These diseases pose major public health problems and hamper socio-economic development. Generally, the rural, tribal and urban slum areas are inhabited mostly by people of socio-economic groups who are more prone to develop VBDs and are considered as high-risk groups.

Details of incidence of Vector borne diseases during the period 2017-21 were as detailed in Table 7.10.

[13] **DHs:** Kamareddy; Narayanpet, Nirmal and AH, Vemulavada

Table 7.10 - Incidence of Vector borne diseases during 2017-21

Name of Vector borne Disease	2017	2018	2019	2020	2021
Malaria	2,688	1,792	1,711	872	881
Dengue	3,827	6,362	13,361	2,173	7,135
Chikungunya	58	1,063	1,374	183	76
Japanese Encephalitis	11	20	50	2	0

Source: *Information furnished by Department*

Out of the total funds of ₹46.08[14] crore available, the expenditure incurred during the period was ₹39.05 crore (85 *per cent*).

Implementation of the Programmes are explained below:

7.2.6 National Malaria Eradication Programme

Sustainable Development Goal 3.3.3 envisages eradication of Malaria to be achieved by 2030.

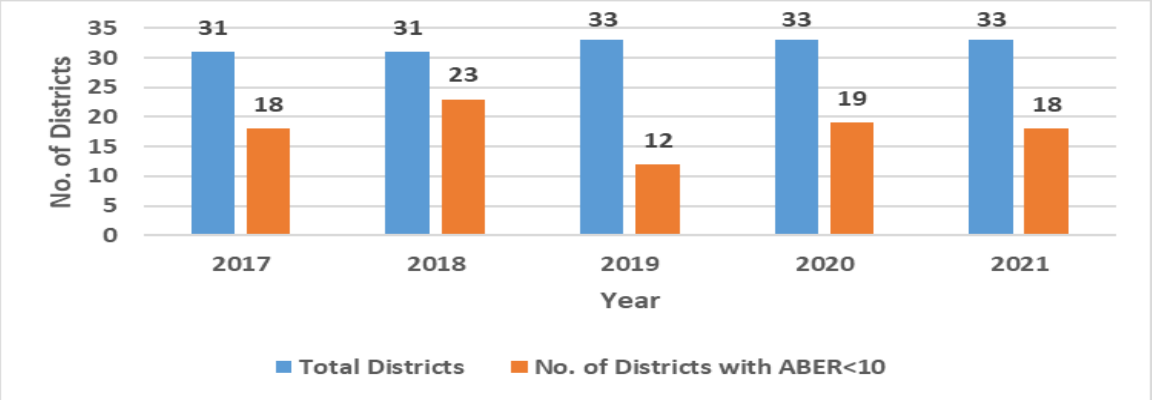
The National Framework (2016) for Malaria elimination in India has been formulated with the objective of transmission of Malaria interrupted under Categories 1 and 2 in 2014 into Zero indigenous cases by 2022.

The main objectives of the scheme included, increasing Annual Blood Examination Rate (ABER) to 10 *per cent* of target population under surveillance, bringing down Annual Parasite Incidence (API) to 1.3 or less, giving special attention to areas with API of above 2 which were considered as malaria prone and providing indoor residual spray of insecticides and free distribution of insecticides treated bed nets to BPL families.

Annual Blood Examination Rate (ABER)

ABER is the percentage of persons screened annually for Malaria. As per the Malaria Operational Manual and as per the ROP fixed by GoI, ABER is expected to be more than 10 *per cent* of the population and required focused attention on the high Malaria endemic Districts. Though it is required to conduct ABER more than 10 *per cent*, it was observed that ABER was less than 10 *per cent* during the years.

Chart 7.4 - Districts with ABER<10



Source: *Information furnished by Department*

It was also observed that, out of the above Districts, ABER was less than 10 *per cent* continuously during 2017-21 in eight[15] Districts.

[14] ₹2.17 crore + ₹43.91 crore
[15] Hyderabad, Karimnagar, Nalgonda, Nirmal, Nizamabad, Rajanna Sircilla, Vikarabad and Warangal (U)

On this being pointed out, it was replied that the percentage of ABER is less than 10 due to seasonal variations, lack of sufficient staff, not actively involving ASHA workers in some Districts and due to lack of surveillance of male staff.

Annual Parasite Incidence (API)

Annual Parasite Incidence is calculated as the total number of positive slides for parasite in a year X 1000 per total population annually. Areas with API of more than 2 are classified as high-risk areas. GoI while approving the Record of Proceedings for the year 2016-17 and 2017-18 had specifically commented upon the need for focused attention and monitoring of high malaria endemicity in the selected Districts[16] and advised Area specific gaps, rectification and close monitoring for effective malaria control and moving towards elimination. Further, while issuing administrative approval of ROP for the year 2018-19 by GoI in case of Category 1 Districts with API<1 sought case-based surveillance & response, focus identification and classification to achieve zero indigenous cases and in Districts with API 1 to 2 to API less than 1.

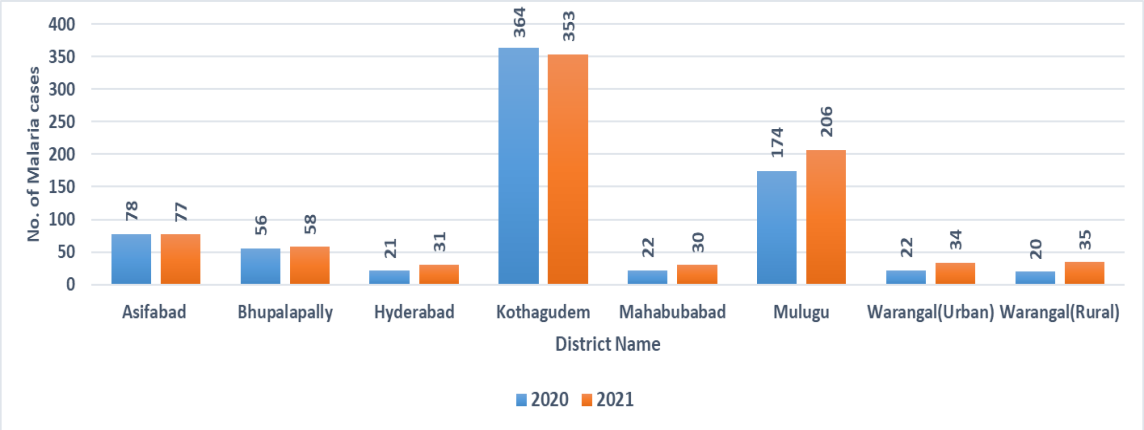
Scrutiny revealed that during the years 2017-21, the API was more than 2 in three erstwhile Districts[17]. Details of the number of sub-centres with API of more than 2 are given in the ***Appendix 7.2.***

While stating that both Adilabad and Khammam are endemic Districts for malaria for a long time, it was replied (June 2022) by the Department that based on API, special interventions like Indoor Residual Spray & Long-Lasting Insecticide Nets (LLINs) were taken up in those areas.

Identification of cases

The transmission of malaria was to be interrupted and zero indigenous cases had to be attained[18] in all the States by 2022.

Chart 7.5 - Trend of Malaria cases in 8 Districts in 2020 & 2021



Source: *Information furnished by Department*

Though there was a declining trend of Malaria cases reported during 2016-21, the increasing number of cases was almost similar to previous years in newly formed Districts of Bhupalpally, Mulugu, Kumuram Bheem Asifabad, Mahabubabad, Warangal (R) and

[16] Adilabad, Khammam, Kumuram Bheem Asifabad, Jayashankar Bhupalpally, Bhadradri Kothagudem, Mahabubabad, Mancherial, Nirmal, Warangal and Nagarkurnool
[17] Kumuram Bheem Asifabad, Mancherial (erstwhile Adilabad District), Bhadradri Kothagudem (erstwhile Khammam District), Jayashankar Bhupalpally, Mahabubabad & Mulugu (erstwhile Warangal District)
[18] as per the National Framework for Malaria Elimination

Hanumakonda in 2021 when compared to 2020. Also, Bhadradri Kothagudem and Mulugu Districts are the most affected with more number of cases during 2020 and 2021.

It was replied (June 2022) that the Districts are malaria endemic Districts and having tribal areas. The increase of cases in Hyderabad was attributed to migration from the different endemic States. However, the reply is silent about the prevention control measures taken to curb the increase in malaria cases in these Districts.

Spraying of Insecticides:

As per Para 4.2.1.2 of the Malaria Operational Manual 2009, the recommended spray schedule for Dichloro Diphenyl Trichloroethane (DDT) and Synthetic Pyrethroids is 1st round: 1st May and 2nd round: 16th July. Spraying is usually started to coincide with the build-up of vector population and before peak malaria transmission and spray operations will start in time to cover the entire transmission season, which is usually about five to six months in most parts of the country.

Scrutiny of Annual Reports revealed the following:

- The 1st & 2nd rounds of spray operations were conducted in the Districts with delays ranging from 6 days (Adilabad) to 93 days (Mancherial) during 2016 to 2021 (***Appendix 7.3***). Second round of spray was not done in Karimnagar (2016) and in Mahabubabad (2017).
- Though API is more than 2, no spray operations were conducted in Mahabubabad in 2018.
- Although the spray operations had been conducted twice a year in the Districts of Mulugu and Bhadradri Kothagudem, delays were noticed in conduct of spray operations in both the Districts.

Additional Director, National Vector Borne Disease Control Programme (NVBDCP) replied (June 2022) that due to continuous rains, there was a delay in conducting spray operations.

Insecticides utilisation in Districts: As per the Operational Manual for Malaria Elimination in India 2009, the Insecticide requirements are calculated based on the total population in epidemic affected areas.

Scrutiny of annual reports revealed that, in respect of the six Districts[19] which were identified with API more than two, against the insecticide requirement of 20,805 Kg[20] of Alphacypermethrin (ACM 5%) for a population of 5,54,800, only 14,669 Kg was utilised during 2020 and 2021.

It was replied that regular spray was conducted in the Districts. However, expenditure details were not furnished. No specific reply was furnished in respect of short utilisation.

7.2.6.1 Dengue and Chikungunya

Sustainable Development Goal 3.3.5 in respect of dengue envisaged the target of eliminating the epidemic by the end of 2030. Both Dengue and Chikungunya are Vector Borne diseases and are caused by viruses carried by mosquitoes. The programme for Dengue and Chikungunya are included under the umbrella of the NVBDCP.

[19] Kumuram Bheem Asifabad, Jayashankar Bhupalpally, Mancherial, Mahabubabad, Mulugu and Bhadradri Kothagudem
[20] Calculated on the basis of 37.5 MT per million population

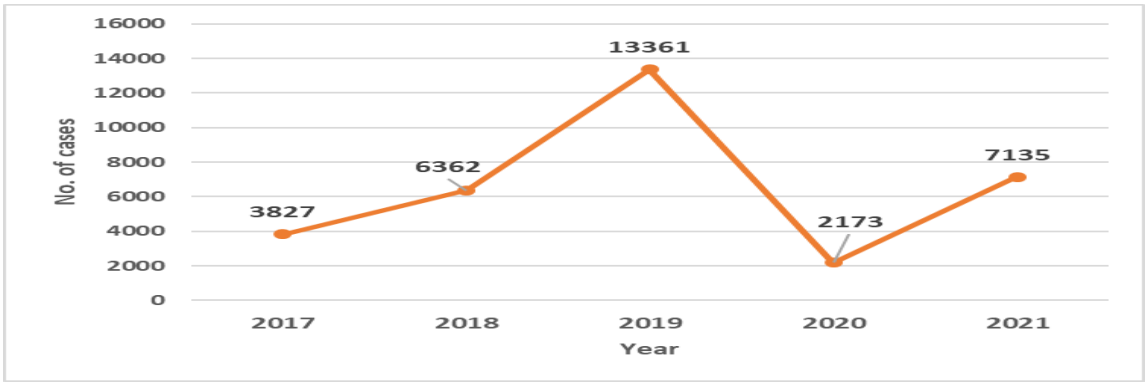
Implementation of programmes for the prevention and control of Dengue & Chikungunya

(A) Dengue

A total of 4,037 Dengue cases were reported in the erstwhile 10 Districts[21] during 2016. More positive cases were recorded in the Districts of Khammam (1,416), Hyderabad (780), Rangareddy (568). Out of the total 4,037 cases, 242 cases were not traced and 36 cases pertain to other States.

Dengue Positive Cases showed an increasing trend from 3,827 in 2017, 6,362 in 2018 to 13,361 in 2019. Subsequently, the number of cases decreased to 2,173 in 2020 and again raised to 7,135 in 2021 as detailed in chart 7.6.

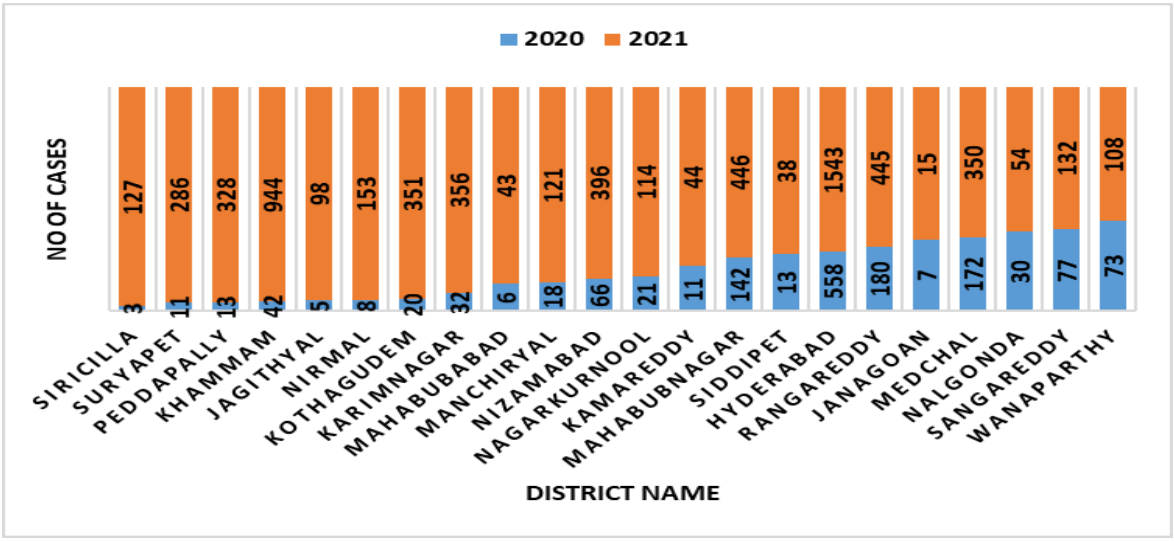
Chart 7.6 - Trend of Dengue cases during 2017 to 2021



Source: *Information furnished by Department*

Compared to 2020, an abnormal increase in dengue positive cases was noticed during 2021, the year-wise and District-wise cases noticed are shown in the chart below:

Chart 7.7 - Trend of Dengue cases in 22 Districts during 2020 & 2021



Source: *Information furnished by Department*

[21] Khammam: 1,416 cases; Hyderabad: 780; Rangareddy: 568; Nizamabad: 258; Karimnagar: 210; Warangal: 207; Mahabubnagar: 122; Medak: 93; Nalgonda: 66 and Adilabad: 39

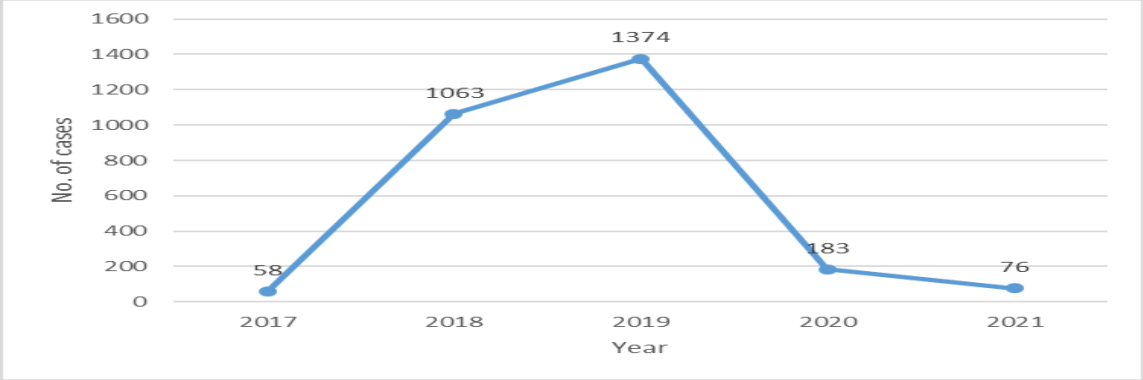
As shown above, Rajanna Sircilla District had the maximum percentage of increase of 4,133 *per cent* and Wanaparthy had the lowest percentage of increase of 48 *per cent*.

Department attributed (November 2022) the increase to rapid unplanned urbanisation, improper water management and water storage practices due to water scarcity, etc.

(B) **Chikungunya:**

- Out of 11,156 samples taken, 2,754 Chikungunya cases (nearly 25 *per cent*) were detected during the period 2017 to 2021. The year-wise details are shown in the graph below:

Chart 7.8 - Trend of Chikungunya cases during 2017-21



Source: *- Information furnished by the Department*

- More number of cases were recorded in the Districts of Hyderabad, Khammam, Medchal Malkajgiri, Rangareddy, Mahabubnagar and Karimnagar during 2017-21.
- Though there were a huge number of Dengue and Chikungunya cases in Hyderabad during 2017-21, Temephos (Larvicides), Pyrethrum (Adulticide) and Malathion[22] were not used in the District.

Department stated (November 2022) that, Chikungunya tests were conducted for suspected cases only and that tests in all fever cases need not be conducted for Chikungunya. Further it was stated that in respect of Hyderabad District, expenditure on preventive measures is being borne by GHMC.

7.2.7 Pradhan Mantri Matru Vandana Yojana – Funds not utilised

Government of India introduced (September 2017) "Pradhan Mantri Matru Vandana Yojana (PMMVY)" Scheme for providing partial compensation for wage loss in terms of cash incentives to the woman so that they can take adequate rest before and after delivery of the first living child. Ministry of Women and Child Development, Government of India released funds of ₹65.20 crore during the year 2017-18 for this purpose. However, these funds were not utilised as of June 2022 and remained in the ESCROW account.

On this being pointed out, it was replied (August 2022) that, GoI had requested (June 2019) to co-brand the KCR Kit scheme with PMMVY, orders for which were yet to be issued by

[22] man-made organophosphate insecticide that is commonly used to control mosquitoes

the Government. Since the issue of co-branding had not been resolved, funds of ₹65.20 crore released in 2017-18 could not be utilised so far.

Government in its response stated (August 2023) that, the possibility of dovetailing of PMMVY and KCR Kit programme was explored by the State. However, as the guidelines of the two schemes were not fully in alignment and considering the broader coverage of the target group and financial assistance by the KCR Kit programme, PMMVY could not be implemented.

7.3 State Schemes

The State Government supplements the efforts of the Central Government in the delivery of health services through various schemes.

7.3.1 KCR Kit Scheme

KCR Kit[23] Scheme was implemented[24] by the State Government with its own funds, to improve the incidence of institutional deliveries and to improve IMR & MMR duly providing wage compensation of ₹12,000 and ₹13,000 in case of male and female child respectively in four instalments. As per the guidelines, the beneficiary should have an AADHAAR card, belong to Telangana State and the delivery should have been in Government Health facilities. For availing benefit under the scheme, beneficiary can register[25] the name in nearest PHC or any Government Hospital (or) by providing the details to ASHA Workers. Auxiliary Nursing Midwife (ANM) was responsible for entering and updating the details of pregnant women *viz*., completion of at least two ANC check-ups, issue of two doses/booster dose of TT injection and IFA tablets, AADHAAR Number & Bank account details with IFSC code etc.

The instalment-wise conditions for which the amount transferred to the beneficiary accounts were as detailed in the table:

Table 7.11 – KCR Kit Scheme wage compensation

Instalment	Conditions	Amount
1st	• Registration of pregnancy at Public Health Facility. • At least 2 ANC check-ups by the Medical Officer with IFA tablets & Inj.TT.	• An amount of ₹3,000 will be paid after completion of two ANC check ups
2nd	• Delivery in public health institution. • The Child has to be administered BCG, OPV 0 dose and Birth Dose of Hepatitis B.	• An amount of ₹5,000 (For Female child) or ₹4,000 (For Male child) will be paid after delivery in public health institutions. • In addition to this a Kit consisting of 16 items will be provide to the pregnant women after delivery.

[23] Comprising soaps for mother and child, baby oil, baby bed, mosquito net, dresses, towel and napkins, powder, diapers, shampoo, sarees, handbag, toys for kid, etc
[24] with a view to provide quality healthcare throughout pregnancy and post-delivery, to encourage institutional deliveries
[25] by taking details from the beneficiary (i.e. AADHAAR number, name, age, address, phone number, registration date, bank account details, etc)

Instalment	Conditions	Amount
3rd	• Child has to be administered OPV 1, 2 & 3; IPV 1 & 2 doses; and Pentavalent 1, 2 & 3 doses i.e. by the age of 3 ½ months.	• An amount of ₹2,000 will be paid after first immunisation stage.
4th	• Child has to be administered Measles vaccine, Vitamin A and JE 1st dose i.e. by the age of 9 months to child.	• An amount of ₹3,000 will be paid after second immunisation stage.

Source: *Scheme Guidelines*

7.3.1.1 Implementation of KCR Kit Scheme

As per the Scheme Guidelines, the amount would be transferred to the beneficiary in different phases (instalments) through Direct Benefit Transfer (DBT) system.

Scrutiny of the payments made in different phases revealed the following.

- Year-wise details of beneficiaries to whom payments were made and amount due to be released during different phases during the period 2017-22 are as follows.

Table 7.12 – Information on payments under KCR Kit Scheme

year	ANC stage		Delivery stage		Immunisation @ 3 ½ months		Immunisation @ 9 months	
	No.of persons to whom Payment Released	No.of persons to whom release is pending	No.of persons to whom Payment Released	No.of persons to whom release is due	No.of persons to whom Payment Released	No.of persons to whom release is due	No.of persons to whom Payment Released	No.of persons to whom release is due
2017-18	2,97,506	1,141	2,74,374	483	4,05,271	4,583	4,28,214	3,156
2018-19	3,68,304	2,717	2,41,319	1,833	3,60,678	3,352	3,15,852	3,818
2019-20	2,32,873	5,499	2,16,480	6,109	3,15,131	13,144	2,23,461	73,830
2020-21	2,23,990	45,321	1,06,177	89,171	88,167	2,04,242	23,871	2,38,325
2021-22	22,621	2,27,441	9,451	1,88,182	11,731	1,97,177	2,123	70,258

Source: *Information furnished by the Department*

- Up to the financial year 2019-20, a significant number of registered beneficiaries (9,357 at the ANC stage, 8,425 at the delivery stage, 21,079 at the first immunisation stage and 80,804 cases at the second immunisation stage) have not received payment for over three years.
- During the financial year 2020-21, payment due and not disbursed was ranging from 17 to 90 *per cent* at different stages and similarly in 2021-22 it was ranging from 90 to 97 *per cent* at different stages.

Department stated (December 2022) that, payments would be released to the beneficiaries based on the availability of funds.

Government in its response stated (August 2023) that, DBT of ₹1,261.67 crore had been transferred to individual beneficiaries (13,90,636) and all measures are being taken to clear the dues from time to time. It was also stated that a Kit (KCR Kit) was provided to the beneficiaries at the time of delivery in Government healthcare facilities. However, details of the year-wise payments of ₹1,261.27 crore were not provided to Audit.

Thus, it is evident that the benefits envisaged during the pregnancy of women were not being extended on time, defeating the objective of providing compensation for wage loss during the pregnancy period.

7.3.1.2 Payment to Beneficiaries

As per the Scheme Guidelines, the amount is to be transferred to the beneficiary in different phases[26] through Direct Benefit Transfer (DBT) system. The amount should be credited to the beneficiary account only.

Scrutiny of the data revealed that amounts in respect of multiple beneficiaries with different AADHAAR numbers were credited to the same bank account. When the issue was verified with the bank[27] authorities, it was confirmed that an amount of ₹32.90 lakh was paid to the 462 beneficiaries whose bank account numbers were not matching with the envisaged beneficiaries bank account numbers. It indicates that the payments were credited to different persons other than the registered beneficiaries.

Government replied (August 2023) that, the issue occurred during the initial phase of the programme implementation. However, in the year 2019 corrective measures were taken to address the issue by laying down certain conditions for not accepting any duplicate bank accounts in KCR Kit Application. Further it was stated that the scheme has been notified under AADHAAR Act 2016 (November 2022) and AADHAAR authentication has been done for each registered pregnant woman to avoid duplication. Government also stated that necessary steps are being taken to fix the issues identified on priority basis.

7.3.2 Antenatal Care

Antenatal Care (ANC) is the systematic supervision of women during pregnancy to monitor the progress of foetal growth and to ascertain the well-being of the mother and the foetus. Thus, every pregnant woman (PW) should be registered during the first trimester (first 12 weeks) of her pregnancy and undergo four check-ups during the pregnancy, at prescribed intervals for proper ANC[28] and they should also be provided Iron Folic Acid (IFA), Calcium and Albendazole Tablets.

As per data available in Health Management Information System (HMIS), it was observed that PW were registered after the completion of the first trimester and consequently were not provided stipulated ANCs as detailed in Table 7.13.

[26] Two ANC check ups, Delivery, immunisation by end of 3 ½ months, immunisation by end of 9 months
[27] State Bank of India
[28] 1st ANC - at the time of registration during first trimester, 2nd ANC - during 20-24 weeks of pregnancy, 3rd ANC – during 28-32 weeks of pregnancy, 4th ANC – during 34-36 weeks of pregnancy.

Table 7.13 - PW registered with ANC

Year	Total number of PW registered for ANC	Total number of PW registered during first Trimester	Shortfall (percentage) with respect to total PW	PW who received three ANCs check ups	Excess(+)/ Shortfall (-) percentage with respect to total PW
2016-17	13,81,510	8,00,973	42.02	12,24,469	(-)11.37
2017-18	11,79,409	5,57,492	52.73	7,65,826	(-)35.07
2018-19	7,58,446	4,87,639	35.71	8,04,940	(+)6.13
2019-20	6,75,092	4,54,873	32.62	7,15,219	(+)5.94
2020-21	7,11,469	5,23,440	26.43	5,67,231	(-)20.27
2021-22	6,82,425	4,67,099	31.55	5,15,455	(-)24.47

Source: *Information furnished by the Department*

As seen from the above, while the percentage of PW registered for ANC in the first trimester was showing a decreasing trend from previous year (73.57 *per cent*) to current year (68.45 *per cent*), the trend of 'woman not registered during the first trimester' was also decreasing ranging from as high as 53 *per cent* (2017-18) to 32 *per cent* (2021-22).

Government in its response stated (August 2023) that, the first trimester registrations had improved from 83.10 *per cent* (NFHS-4) to 88.50 *per cent* (NFHS-5) and that the programme data of KCR Kit for the year 2022-23 showed a first trimester registration of 98 *per cent*.

To avoid pregnancy-related complications immediately after registration for ANC, two doses of TT injection should be given and also at least 100 IFA tablets should be provided as supplementation. This should be continued for three months even in the post-partum period if required. The details of the TT1, TT2 and supply of IFA tablets are given in Table below.

Table 7.14 - Details of TT1, TT2 and IFA issued

Year	Registered PW for ANC	PW who Received TT1	Percentage of shortfall	PW who Received TT2	Percentage of shortfall	PW who Received 100 IFA tablets	Excess(+)/ Shortfall (-) percentage of shortfall
2016-17	13,81,510	10,44,856	24.37	10,20,916	26.01	13,06,017	(-)5.46
2017-18	11,79,409	7,32,861	37.86	6,97,446	40.86	10,14,134	(-)14.01
2018-19	7,58,446	7,00,436	7.65	6,69,288	11.76	9,78,986	(+)29.08
2019-20	6,75,092	5,56,289	17.60	5,32,134	21.18	7,15,219	(+)5.94
2020-21	7,11,469	5,97,564	16.01	5,73,838	19.34	7,68,258	(+)7.98
2021-22	6,82,425	5,50,977	19.26	5,31,268	22.15	7,30,760	(+)7.08

Source: *Information furnished by NHM*

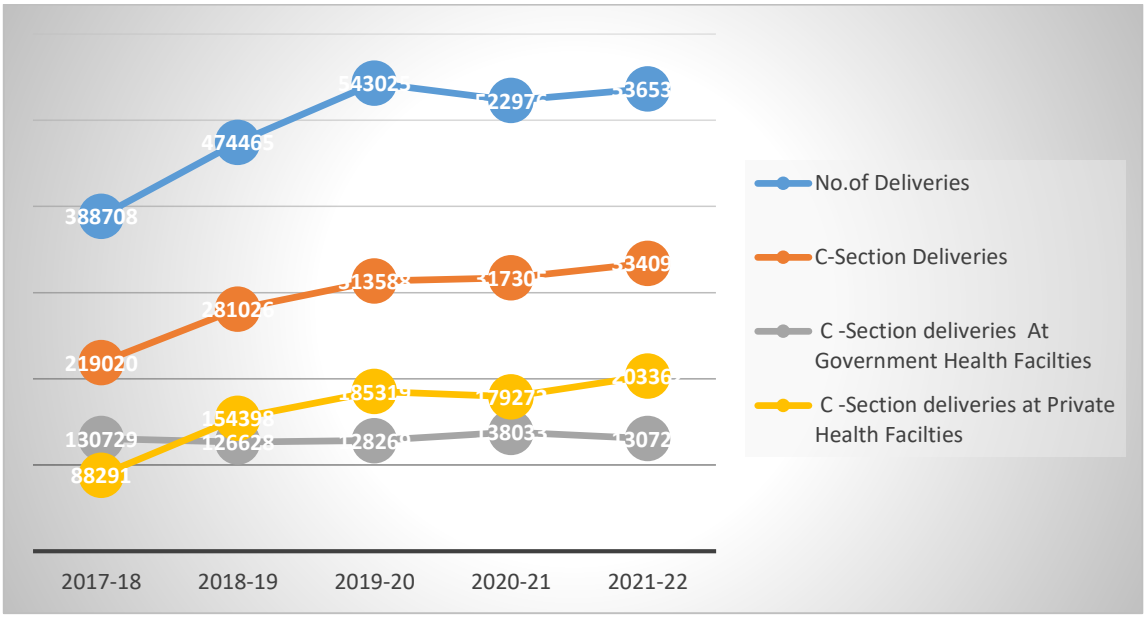
Administering TT injections to pregnant women has shown an increasing trend.

The issue of IFA tablets was more than the number of PW registered. Department attributed the repeated issue of IFA tablets to pregnant women patients in the case of anaemic patients.

7.3.3 Incidence of Institutional Deliveries

To minimise the Maternal Mortality Rate (MMR), deliveries in hospitals and health institutions are encouraged for safe delivery and survival of the child as well as the mother. Year-wise details of total deliveries and C-section deliveries during the period 2017-18 to 2021-22 are shown in the chart below.

Chart 7.9 - Details of deliveries during 2017-22



Source: *- Information furnished by the Department*

From the above chart, it was observed that C-Section Deliveries in Telangana are higher and had increased from 56 *per cent* to 62 *per cent* of total institutional Deliveries during the period 2017-18 to 2021-22. Further, the C-Section deliveries in Government Health facilities decreased from 60 (2017-18) to 39 *per cent* (2021-22), while C-Section deliveries in Private Health facilities increased from 40 (2017-18) to 61 *per cent* (2021-22).

On this being brought to notice, Department accepted the Audit observation and stated that action would be taken to minimise C-section deliveries by increasing the quality of care, midwifery-led care, short-term training to staff nurses, review of facilities etc.

7.3.4 Immunisation

As per the KCR Kit Scheme Guidelines, the payments will be paid to the PW only after receiving the required immunisations.

Audit verified the year-wise details of vaccinations received by Children between the 0 to 1 year age group and noticed that the targets were achieved by the Department in respect of BCG and OPV 3. The achievement of targets under Measles I/Measles Rubella 1 (MR1) which had shown a downward trend during the years 2017-18 and 2018-19, however, increased and was 95 *per cent* during the year 2020-21. Details are given in the Table 7.15.

Table 7.15 – Details of vaccinations

Year	Pentavalent 3			MEASLES 1/MR1		
	Target	Achievement	Achievement %	Target	Achievement	Achievement %
2016-17	6,18,000	9,03,741	146	6,18,000	9,22,324	149
2017-18	6,21,000	6,28,123	101	6,21,000	3,56,276	57
2018-19	6,31,000	6,15,504	98	6,31,000	6,04,783	96
2019-20	6,35,400	6,31,115	99	6,35,400	6,25,348	98
2020-21	6,35,400	6,27,688	99	6,35,400	6,02,434	95

Source: *Information furnished by the Department*

Joint Director CH&FW, Telangana stated (March 2023) that, DPT 3 antigen dose at 14 weeks was incorporated in the Pentavalent vaccine which refers to the 5-in-1 vaccine protecting against Diphtheria, Pertussis, Tetanus (DPT), Hepatitis B and Haemophilus Influenzae. Hence, no separate coverage for DPT 3 is registered in the HMIS since 2015. Pentavalent vaccine was introduced in the year 2015. Further, the Measles vaccine switched to Measles & Rubella (MR) vaccine in the year 2017-18. MR campaign was conducted in the year 2017 and introduced MR vaccine in Routine Immunisation in August 2017.

7.3.5 Immunisation of Children between 5 to 16 years

Targets and achievements in respect of immunisation of children between 5 to 16 years are shown in Table below.

Table 7.16 – Targets and Achievements

Year	DPT (5 years)			Tetanus Toxoid (10 years)			Tetanus Toxoid (16 years)		
	Target	Achievement	%	Target	Achievement	%	Target	Achievement	%
2016-17	5,95,000	7,14,041	120	6,20,000	7,07,779	114	6,95,000	6,82,194	98
2017-18	5,98,000	4,40,829	74	6,23,000	4,33,207	70	6,98,000	4,12,015	59
2018-19	5,75,600	4,82,428	84	6,44,800	4,61,749	72	7,26,900	4,42,326	61
2019-20	5,65,695	5,42,076	96	6,33,626	5,30,999	84	7,14,440	5,12,918	72
2020-21	5,79,600	5,36,949	93	6,49,200	4,83,072	74	7,32,000	4,33,691	59

Source: *Information furnished by the Department*

State Government had achieved more than the targets in respect of DPT (5 years) and Tetanus Toxoid TT (10 years) during the year 2016-17. While there is an increasing trend from 2017-18 to 2019-20, there is a shortfall in 2020-21; in respect of TT (10 years) also the same trend has continued.

Joint Director CH&FW, Telangana stated (March 2023) that, during COVID-19 pandemic all the educational institutes in the State were closed and the vaccination coverage of Tetanus and Diptheria (Td) to the age group of 10 years and 16 years was affected to an extent. With a view to improving the coverage of Td (10 years) and Td (16 years) the State Government initiated a school based Td campaign which was conducted in the month of November 2022.The coverage of Td 10 & Td 16 after the campaign were as follows:

Table 7.17 Coverage of children under Td 10 and Td 16

Target Fixed	TT 10 achieved	%	Target achieved	TT 16	%
6,00,431	7,59,031	126	6,76,965	7,11,050	105

Source: *Information furnished by the Department*

Table 7.18 - District-wise different types of Immunisation during 2021-22

DISTRICT NAME	BCG	OPV-0	OPV-1	OPV-2	OPV-3	HEP-B
Adilabad	99.53	99.46	93.14	37.92	37.76	98.95
Bhadradri Kothagudem	98.04	97.73	92.92	39.49	38.50	95.53
Hanumakonda	99.48	99.45	93.80	37.60	36.85	99.23
Hyderabad	98.79	98.75	88.52	34.33	33.39	96.06
Jagtial	99.39	99.38	93.92	38.82	38.23	99.35
Jangaon	99.29	99.17	93.88	37.34	36.26	98.35
Jayashankar Bhupalpally	99.29	99.21	93.27	37.98	36.54	97.66
Jogulamba Gadwal	99.51	99.50	91.75	39.05	38.81	99.40
Kamareddy	99.47	99.05	93.43	38.92	39.46	95.57
Karimnagar	99.47	99.43	93.80	37.62	37.16	99.27
Khammam	98.98	98.84	90.76	37.82	36.77	94.63
Kumuram Bheem Asifabad	99.46	99.39	92.06	38.56	38.55	99.37
Mahabubabad	98.97	98.91	93.16	37.24	36.40	94.57
Mahabubnagar	98.89	98.57	92.83	38.11	38.09	94.31
Mancherial	99.43	99.37	93.97	39.49	39.86	99.19
Medak	98.81	97.00	92.53	41.12	40.90	94.67
Medchal Malkajgiri	99.14	99.10	87.89	34.11	33.72	98.66
Mulugu	98.95	98.73	92.24	36.37	35.27	95.09
Nagarkurnool	99.25	99.15	93.28	37.56	37.23	97.11
Nalgonda	99.53	99.50	93.73	38.06	37.79	99.10
Narayanpet	99.10	98.94	92.81	38.22	38.87	97.66
Nirmal	99.14	98.97	93.36	42.31	42.12	96.26
Nizamabad	99.50	99.47	93.11	38.13	38.39	98.80
Peddapalli	99.48	99.39	93.42	38.90	38.12	99.43
Rajanna Sircilla	99.38	99.26	94.15	40.92	40.54	98.06
Rangareddy	99.49	99.40	91.50	36.00	35.51	96.88
Sangareddy	98.35	97.98	89.42	39.37	39.19	96.64
Siddipet	99.56	99.49	93.78	40.44	39.74	99.28
Suryapet	99.51	99.19	94.57	39.21	38.61	96.82
Vikarabad	99.07	99.03	89.68	35.70	34.81	97.47
Wanaparthy	99.15	98.53	92.54	36.82	36.13	96.00
Warangal	99.51	99.50	92.95	36.68	35.98	99.33
Yadadri Bhuvanagiri	99.38	99.34	93.54	37.92	37.56	98.37

Source: *KCR Kit data*

As seen from the above, the percentage of immunisation for BCG, OPV 0, OPV 1 and Hepatitis B shows significant achievements were made in the Districts. In respect of Oral Polio Vaccines 2 & 3, the percentage was less than 50 which shows the coverage was very poor in the Districts which needs focussed attention.

Government in its response stated (August 2023) that, Telangana had always been above the National average for immunisation and at present immunisation coverage was fully achieved.

7.3.6 Administration of OPV and Hepatitis B Vaccination and Vitamin K injection dose to New-Born

As per the National Immunisation Schedule, Newborns are to be administered doses of Vaccines *viz.,* OPV and Hepatitis B etc. OPV vaccine is given for immunisation against Polio and Hepatitis B vaccine is given against Hepatitis B. In addition to this, Vitamin K injections are given to prevent a serious disease called Haemorrhagic disease of the newborn (HDN). Details of birth doses given to Newborns in the MCH attached to District Hospitals during the period 2016-17 to 2021-22 are given below:

Table 7.19 - Percentage of birth doses given to newborn during 2016-17 to 2021-22

Name of District Hospital	Total live birth	Achievement (%)		
		Vitamin K	OPV	Hepatitis B
BOD	10470	100	100	100
GAD	16428	100	100	100
GAJ	21569	100	100	100
KDP	6815	100	100	100
MDK	18762	99.32	99.32	99.32
MED	1388	100	100	100
MUL	9084	100	100	100
NRY	6243	100	100	100
NRS	6425	100	100	100
PED	7022	100	100	100
TDR	6927	100	100	100
UT	1114	99	88.5	88.5
YB	8090	100	100	100

Source: *Data from Health Management Information System*

Note: Colour grading has been done on colour scale with Green colour depicting satisfactory performance; yellow denoting moderate performance while Red colour depicting poor performance

7.3.7 Kanti Velugu Scheme

Government decided (August 2018) to take up universal eye screening by covering the entire population of the State under the name "Kanti Velugu" with an objective to;

(i) conduct eye screening & vision test for all citizens of the State
(ii) provide spectacles free of cost
(iii) arrange for surgeries and other treatments free of cost
(iv) provide medicines for common eye ailments
(v) educate people on prevention of serious disabling eye diseases.

Scrutiny of the Scheme revealed the following:

- Out of the total population of 3.56 crore (as of June 2019), screening was conducted in respect of 1.55 crore people and the requirement of reading glasses was identified in respect of 24.67 lakh; prescription glasses for 18.53 lakh and surgeries for 9.59 lakh people.

- Against the total beneficiaries (24.67 lakh) recognised, reading glasses were delivered to 23.44 lakh patients leaving a balance of 1.24 lakh identified beneficiaries.
- As seen from the information, it was also observed that the glasses distribution in the Districts were ranging from 74 *per cent* (Vikarabad) to 96 *per cent* (Mancherial).
- Out of beneficiaries identified for prescription glasses (18.53 lakh), 14.36 lakh beneficiaries were delivered glasses and 4.17 lakh people were not given the benefit.
- Against 74,809 cases identified for evaluation of posterior[29] segment to the end of March 2022, evaluations were not conducted in respect of 66,976 beneficiaries. It was stated by the Department that the details of these cases were not available and it may be cases of persons who have migrated.

When the specific reasons for discontinuing the scheme without providing required glasses and treatment to the beneficiaries were called for, it was replied that it was discontinued due to COVID-19. It was also stated that the decision to resume the scheme was dependent upon the Government decision.

7.4 Declaration of Awards

Government of India have framed certain indicators[30] for the elimination of TB.

Efforts made by the State to eliminate TB during the period 2019-21 were recognised by the Government of India and the following Awards were given to the State/Districts:

Table 7.20 - Awards received during 2019-20 and 2020-21

Sl. No.	Award	Category	Year	Remarks
1	Innovation and community Engagement	National	2019-20	State level
2	Nizamabad (Silver)	Sub-National	2020-21	District level
3	Khammam (Bronze)	Sub-National	2020-21	District level
4	Bhadradri Kothagudem(Bronze)	Sub-National	2020-21	District level

Source: *Information furnished by the Department*

7.5 Kayakalp Awards

To promote practice of cleanliness, hygiene & sanitation and to control hospital acquired infection, Kayakalp Award Scheme was launched in 2015 for Central Government

[29] posterior segment of the eye comprises back two thirds of the eye, including vitreous humor, retina, the choroid and the optic nerve

[30] In this connection State TB Score Indicator was fixed as 100 duly divided into respective percentages *viz.*, (i) TB Notification achieved (20 *per cent*) (ii) TB Notified patients with known HIV status (10 *per cent*) (iii) TB notified patients with UDST done (10 *per cent*) (iv) Treatment success rate (15 *per cent*) (v) Eligible beneficiaries paid under Nikshay Poshan Yojana (10 *per cent*) (vi) Diagnosed MDR patients initiated on treatment (15 *per cent*) (vii) Eligible contact children (< 6 years) given chemoprophylaxis (5 *per cent*) (viii) Eligible PLHIV given IPT (5 *per cent*) and (ix) Expenditure amongst the approved ROP of the State (10 *per cent*)

institutions and State's public health facilities. Kayakalp has now been extended to the Health & Wellness Centres in all States/UTs.

The objectives of the 'Kayakalp' Scheme are:

- to promote cleanliness, hygiene and infection control practices in public healthcare facilities, through incentivising and recognizing such public healthcare facilities that show exemplary performance in adhering to standard protocols of cleanliness and infection control;
- to inculcate a culture of ongoing assessment and peer review of performance related to hygiene, cleanliness and sanitation;
- to create and share sustainable practices related to improved cleanliness in public health facilities linked to positive health outcomes.

Table 7.21 - Number of health facilities (category-wise) which have received Kayakalp awards in the State

Type	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	Total
DH	4	2	6	9	8	12	41
AH	5	5	3	7	6	9	35
CHC	7	10	3	11	3	9	43
PHC	102	118	146	236	216	225	1043
UPHC	10	0	67	90	59	74	300
SC HWC	0	0	0	0	0	124	124
Total	**128**	**135**	**225**	**353**	**292**	**453**	**1586**

Source: *Information furnished by NHM*

The number of health facilities which received the Kayakalp awards shows an increasing trend ranging from 128 in 2016-17 to 453 in 2021-22. This indicates that more health facilities are promoting cleanliness, hygiene and infection control practices.

7.5.1 Quality Certification

Quality Certification programme for public health facilities recognises the well performing facilities and it also enables to improve the credibility of public hospitals in the community. National Accreditation Board for Hospitals and Healthcare Providers (NABH) is a constituent board of the Quality Council of India, an autonomous body, for accreditation of healthcare organisations. Certification is provided against National Quality Assurance Standards (NQAS) on meeting pre-determined criteria. The certified facilities are also provided financial incentives as recognition of their good work.

Table 7.22 - Number of health facilities (category-wise) awarded NQAS in the State

Type	2017-18	2018-19	2019-20	2020-21	2021-22	Total
DH	0	1	2	0	3	6
AH	0	1	1	0	0	2
CHC	0	0	0	0	1	1
PHC	1	26	52	0	26	105

Type	2017-18	2018-19	2019-20	2020-21	2021-22	Total
UPHC	0	1	2	0	6	9
SC HWC	0	0	0	0	0	0
Total	**1**	**29**	**57**	**0**	**36**	**123**

Source: *Information furnished by NHM*

7.6 Conclusion

The State Government implemented all the Centrally sponsored schemes in Telangana under National Health Mission (NHM).

As against the targets fixed by GoI, the notification of TB cases were showing an increasing trend during the years 2018 and 2019 and a decreasing trend in the years 2017, 2020 and 2021 in respect of public health institutions. The Incidence Rate of Tuberculosis in Telangana showed an increasing trend and when compared to the base year 2017, it has increased by 57 per cent in 2021. Out of the 33 Districts, the incidence rate was continuously increasing in five Districts during the years 2017 to 2019 and although it declined in 2020, it has increased in those districts except Mahabubnagar during 2021.

GoI has prioritised approved Patient-Provider Support Agency (PPSA) in the ROP 2019-20. An amountof ₹176.35 lakh was approved for implementation of PPSA in the five Districts of Khammam, Nizamabad, Karimnagar, Nalgonda and Hanumakonda and while the amount was released, itwas kept unutilised to the end of March 2022.

Out of the total funds of ₹24.44 crore released in respect of National Leprosy Eradication Programme, the expenditure incurred during the six-year period was ₹14.70 crore (60 per cent) and except for 2019-20 where expenditure was 90 per cent, for the other years, it ranged from 6 to 51 per cent. New Leprosy cases had increased in Adult and Child categories during 2016-20 but have been showing a declining trend in the years 2020-21 and 2021-22. Although funds were available, as of May 2022, welfare allowance was not paid to 144 patients (46 per cent out of 310 leprosy patients) who had undergone Reconstructive Surgery (RCS) during 2016-17 to 2021-22. The Case Prevelance Rate (PR) was showing an increasing trend in 19 Districts during 2021-22 in comparison with the year 2020-21.

Under the National Malaria Eradication Programme, Annual Blood Examination Rate (ABER) was less than 10 per cent continuously during 2017-21 in eight Districts. The Annual Parasite Incidence (API) was more than 2 in three erstwhile Districts. Bhadradri Kothagudem and Mulugu Districts are the most affected with higher number of cases during 2020 and 2021. Dengue positive cases showed an increasing trend from 3,827 cases in 2017 to 7,135 cases in 2021.

Funds of ₹65.20 crore received under PM Matru Vandana Yojana during the year 2017-18 were not utilised as of June 2022 and remained in the ESCROW account.

C-Section Deliveries in Telangana are higher than National average. C-Section Deliveries in the State increased from 56 per cent to 62 per cent of total institutional Deliveries during the period 2017-18 to 2021-22. However, the C-Section deliveries in Government Health facilities

decreased from 60 (2017-18) to 39 per cent (2021-22), while C-Section deliveries in Private Health facilities increased from 40 (2017-18) to 61 per cent (2021-22).

The percentage of immunisation for BCG, OPV 0, OPV 1 and Hepatitis B shows significant achievements were made in the Districts. In respect of Oral Polio Vaccines 2 & 3, the percentage was less than 50 which shows the coverage was very poor in the Districts which needs focussed attention.

The achievement of targets under Measles I/Measles Rubella (MR1) which had shown a downward trend during the years 2017-18 and 2018-19, however, it increased to 95 per cent during the year 2020-21.

State Government had achieved more than the targets in respect of DPT (5 years) and Tetanus Toxoid TT (10 years) during the year 2016-17. While there is an increasing trend in vaccination from 2017-18 to 2019-20, there is a shortfall in 2020-21; in respect of TT (10 years) also the same trend has continued.

Out of the total population of 3.56 crore (as of June 2019), under Kanti Velugu Scheme, screening was conducted in respect of 1.55 crore people, surgeries for 9.59 lakh beneficiaries were identified and the requirement of reading glasses was identified in respect of 24.67 lakh and prescription glasses were provided for 14.36 lakh beneficiaries.

Efforts made by the State to eliminate TB during the period 2019-21 were recognised by the Government of India and the State was awarded in various categories.

Kayakalp award for promoting practice of cleanliness, hygiene & sanitation and controlling the hospital acquired infection have been won by 1,586 Health institutions of the State. Certification against National Quality Assurance Standards (NQAS) on meeting pre-determined criteria wherein the certified facilities are also provided financial incentives as recognition of their good work was won by 123 health institutions during the period 2017-18 to 2021-22.

7.7 Recommendations

- State Government may make resolute efforts to minimise C-section deliveries.
- State Government may ensure that payments under KCR Kit are disbursed to the eligible beneficiaries after bio-metric authentication of the beneficiary.
- State Government should ensure that funds received from GoI for implementation of programmes are utilised on priority basis.

Chapter 8

Sustainable Development Goals - 3

CHAPTER 8

Sustainable Development Goals -3

8.1 Introduction

The Sustainable Development Goals (SDGs) were adopted in September 2015 to set out a vision for a world free of poverty, hunger, disease and want. The 2030 Agenda for Sustainable Development consists of 17 various SDGs. NITI Aayog has been entrusted with the responsibility for coordinating and overseeing the implementation of the 2030 Agenda in India. Out of these 17 SDGs, SDG-3 relates to "Good Health and Well Being".

Government of Telangana decided to implement the SDGs in the State (January 2016) and launched an initiative titled "Telangana 2030 in the light of SDGs". A Committee was constituted (December 2018) under the Chairmanship of the Chief Secretary to Government. The Planning Department was the nodal agency for ensuring the implementation of the SDGs in the State and coordinating on SDGs. All line Departments were made responsible for implementing the programmes as mapped with the SDGs.

To achieve the SDG-3 targets, in addition to the Health Department, other Departments *viz.*, Women and Child Development Department, Municipal Administration & Urban Development Department were also mapped.

Sustainable Development Goal -3 seeks to ensure good health and well-being for all, at every stage of life. Sustainable Development Goal -3 addresses all major health priorities, including reproductive, maternal and child health; communicable, non-communicable and environmental diseases; universal health coverage; and access for all to safe, effective, quality and affordable medicines and vaccines. It also calls for more research and development, increased health financing and strengthened capacity of all countries in health risk reduction and management.

8.2 Policy and Framework for implementation of SDGs

8.2.1 Institutional Framework

A Draft State Indicator Framework had been developed by the Planning Department (March 2019) and distributed to all the Departments for their inter Departmental convergence and coordination. When Planning Department was addressed regarding the specific Targets, Plans, State Indicators Frame Work prepared Department-wise and formation of District Level Committees for inter Departmental convergence and coordination for achieving these targets, it was replied (February 2023) that the Draft Vision Document had been prepared (March 2019) by the Planning Department which had also identified additional indicators. However, copy of the Vision Document prepared by the Planning Department and other related information called for was not provided to Audit.

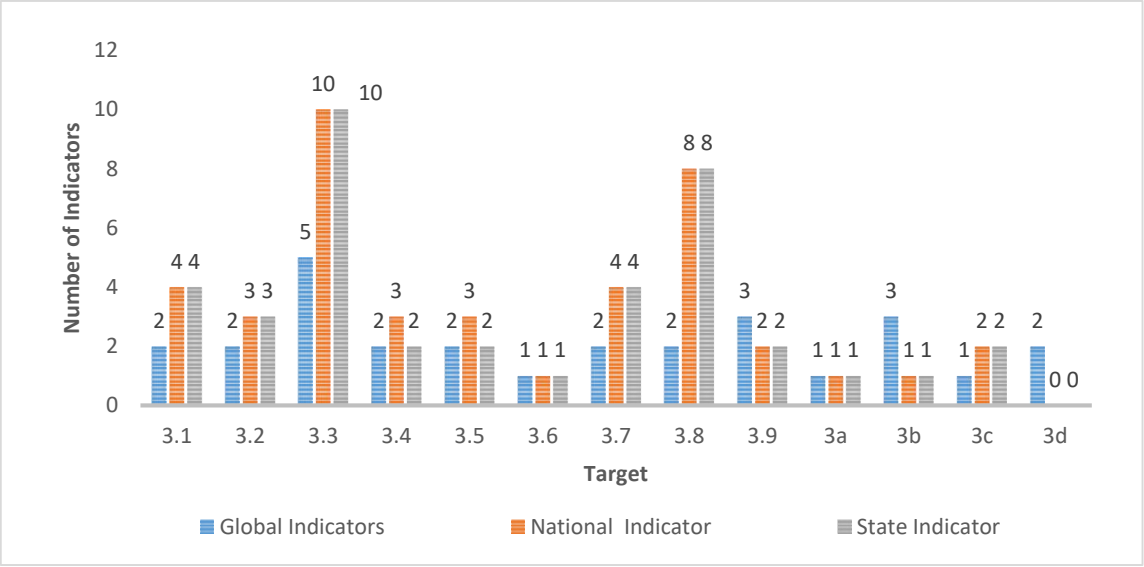
8.2.2 Status of SDG-3 Health Indicators in Telangana

Table 8.1 – Status of SDG-3 health indicators in Telangana

Sl. No	Target	Indicators	Target 2030	India	State	Source
1	3.1	3.1.1 Maternal Mortality Rate (per 1,00,000 live births)	70	97	43	SRS 2018-20
2		3.1.2 Percentage of Home deliveries attended by Still Birth Attendance (SBA) (Doctor/ Nurse/ ANM)	100	89.4	93.6	NFHS-5
3		3.1.3 Percentage of women aged 15−49 years with a live birth, for last birth, who received Antenatal care, four times or more (in percentage)	100	58.1	70.4	NFHS-5
4		3.1.4 Percentage of Institutional deliveries conducted (including C-sections)	100	88.6	97	NFHS-5
5	3.2	3.2.1 Under 5 mortality rate (per 1,000 live births)	25	41.9	29.4	NFHS-5
6		3.2.2 Neonatal mortality rate, (per 1,000 live births)	12	24.9	16.8	NFHS-5
7		3.2.3 Percentage of children in the age group 12-23 months fully immunised	100	76.4	79.1	NFHS-5
8		3.2.4 Infant Mortality rate		35.2	26.4	NFHS-5
9	3.3	3.3.1 Number of new HIV infections per 1,000 uninfected population	0	0.05	0.05	India HIV estimates 2021 fact sheet
10		3.3.2 Tuberculosis incidence per 1,00,000 population	0	188	160	TB statistics and information furnished by State
11		3.3.3 Malaria incidence per 1000 population	0	0.34	NA	
12		3.3.10 HIV Prevalence Rate (in *per cent*)	0	0.21	0.47	India HIV estimates 2021 fact sheet
13	3.4	3.4.2 Suicide mortality rate	3.5	10.4	20.6	SDG Niti Aayog Index 2021
14	3.6	3.6.1 Death rate due to road traffic injuries	5.81	11.56	18.68	SDG Niti Aayog Index 2021
15	3.7	3.7.1 Percentage of currently married women (15−49 years) who use any modern family planning methods (like indicator 3.8.1 and 5.6.1)	100	66.7	68.1	NFHS-5
16	3.8	3.8.2 Percentage of TB cases successfully treated (cured plus treatment completed) among TB cases notified to the national health authorities during a specified period	100	83	89	TB annual report 2022 p.179
17		3.8.3 Percentage of people living with HIV, currently receiving ART among the detected number of adults and children living with HIV	100	85	77	India HIV estimates 2021

Details of the indicators are given in ***Appendix 8.1.*** Status of indicators adopted by the State of Telangana in respect of the SDG-3 (Global, National and adopted by State) are given in the chart below:

Chart 8.1 - Status of indicators formulated/adopted by Telangana for targets of SDG-3



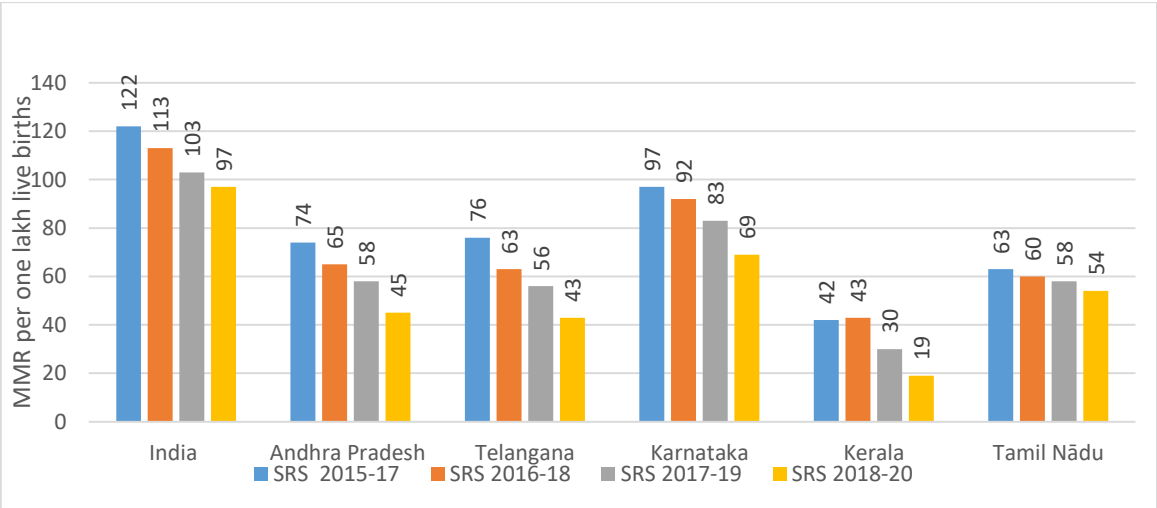
Source: *Information furnished by the Department*

8.3 Sustainable Development Goals Index Reports

8.3.1 Maternal Mortality Rate (MMR)

SDG Target 3.1 aims at reducing the global MMR to less than 70 per 1,00,000 live births by 2030. MMR in respect of the State and other neighbouring Southern States in the India as per Sample Registration System (SRS) was as follows:

Chart 8. 2 – Comparison of MMR of Telangana with MMR of India and other neighbouring Southern States



Source: *Sample Registration System*

As evident from the chart, Telangana had already achieved the required target of Maternal Mortality Rate (MMR) less than 70.

8.3.2 KCR Kit Scheme to address MMR

Year-wise details of the Budget released and Expenditure incurred in respect of Aarogya Lakshmi and KCR Kit programme which are aimed at addressing the MMR and IMR are given in the table 8.2.

Table 8.2 – Details of Budget released and expenditure incurred

Year	Aarogya Lakshmi (₹ in crore)		KCR Kit (₹ in crore)	
	Budget Received	Expenditure	Budget Received	Expenditure
2016-17	451.85	180.99		
2017-18	429.00	176.32	605.00	271.78
2018-19	297.79	99.23	420.50	303.92
2019-20	171.96	117.38	490.50	490.50
2020-21	184.68	140.67	443.00	221.50
2021-22	299.30	289.91	443.00	164.92

Source:*VLC data*

8.3.3 Immunisation

Immunisation is one of the most important and cost-effective strategies for the prevention of childhood sicknesses and disabilities and is thus a basic need for all children. India's Universal Immunisation Programme provide free vaccines against 11 life threatening diseases - Tuberculosis, Diphtheria, Pertussis, Tetanus, Polio, Hepatitis B etc. The Ministry of Health, GoI prescribes a schedule for the immunisation programme.

Table 8.3 - Immunisation data in respect of India, State and other Southern States

State	2015-16 (NFHS – 4)		2019-20 (NFHS-5)	
	Rural (% of achievement)	Urban (% of achievement)	Rural (% of achievement)	Urban (% of achievement)
India	61.3	63.9	76.8	75.5
Andhra Pradesh	67.2	60.4	74.7	69.3
Telangana	68.3	66.7	81.5	74.7
Karnataka	64.8	59.8	86.5	80.0
Kerala	82.0	82.2	78.0	77.6
Tamil Nādu	66.8	73.3	91.7	86.4

Source: *NFHS 4 and NFHS 5*

8.3.4 Infant Mortality Rate (IMR)

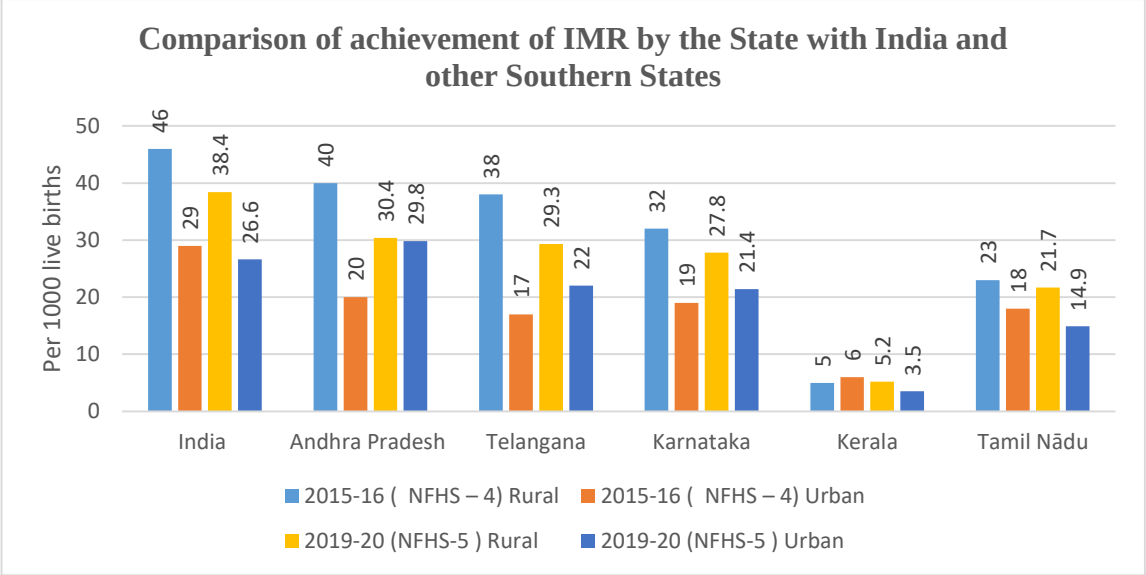
As there was no specific target for IMR in the SDG, Audit compared IMR with the targets specified in NHP 2017. As per NHP, Infant Mortality Rate was to be reduced to 28 per 1000 live births by 2019.

Table 8.4 - IMR in respect of India, State and other Southern States

State	2015-16 (NFHS – 4)		2019-20 (NFHS-5)	
	Rural	Urban	Rural	Urban
India	46.0	29.0	38.4	26.6
Andhra Pradesh	40.0	20.0	30.4	29.8
Telangana	38.0	17.0	29.3	22.0
Karnataka	32.0	19.0	27.8	21.4
Kerala	5.0	6.0	5.2	3.5
Tamil Nādu	23.0	18.0	21.7	14.9

Source: *NFHS 4 and NFHS 5*

Chart 8.3 - Comparison of achievement of IMR by the State with India and other Southern States



NFHS 4: National Family Health Survey – 4; NFHS 5: National Family Health Survey – 5

Source: *NFHS*

Although Telangana had achieved the required target of Infant Mortality Rate (IMR) to 28 in urban areas, the same was not achieved in the rural areas as of 2019-20.

Government in its response stated (August 2023) that, there was no set target for IMR by GoI and that the State was constantly working to improve health systems and healthcare delivery mechanism to reduce IMR which resulted in IMR reducing from 40 per 1000 live births (2014) to 21 per 1000 live births (2019-20).

8.3.5 Under -5 Mortality Rate (U5MR)

SDG Target 3.2 aims to reduce mortality rate of children under age of 5 years (U5MR) to as low as 25 per 1000 live births by 2030. U5MR in respect of the State and other Southern States in India as per NFHS was as follows:

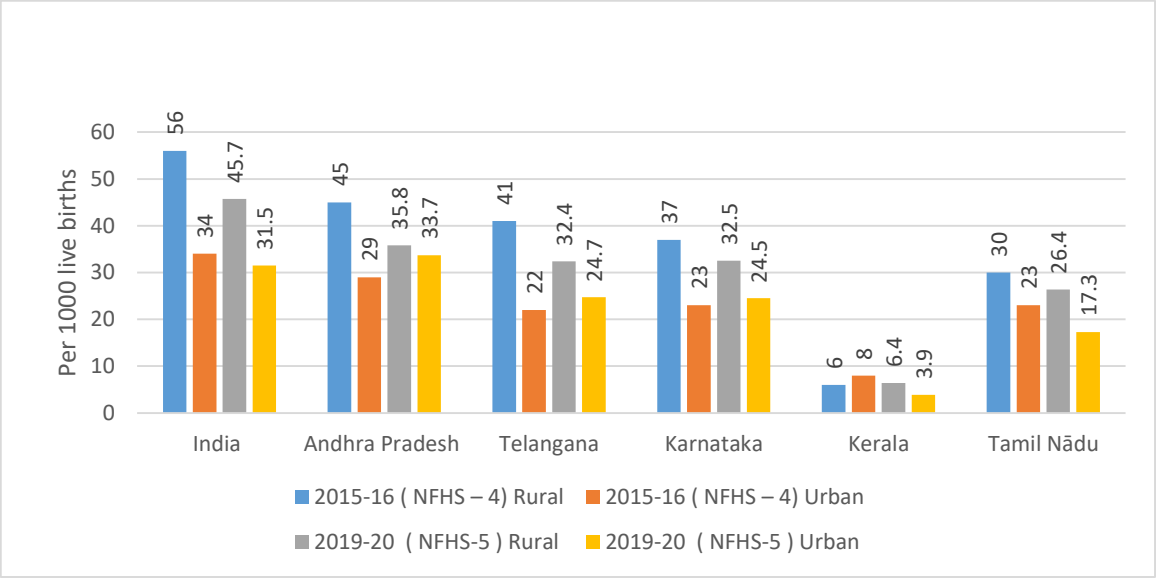
Table 8.5 – Comparison of U5MR of Telangana with India and other Southern States

State	2015-16 (NFHS – 4)		2019-20 (NFHS-5)	
	Rural	Urban	Rural	Urban
India	56.0	34.0	45.7	31.5
Andhra Pradesh	45.0	29.0	35.8	33.7
Telangana	41.0	22.0	32.4	24.7
Karnataka	37.0	23.0	32.5	24.5
Kerala	6.0	8.0	6.4	3.9
Tamil Nādu	30.0	23.0	26.4	17.3

NFHS 4: National Family Health Survey – 4; NFHS 5: National Family Health Survey – 5

Source: *NFHS*

Chart 8.4 - Comparison of U5MR of Telangana with India and other Southern States



Source: *NFHS 4: National Family Health Survey–4*; *NFHS 5*: *National Family Health Survey–5*

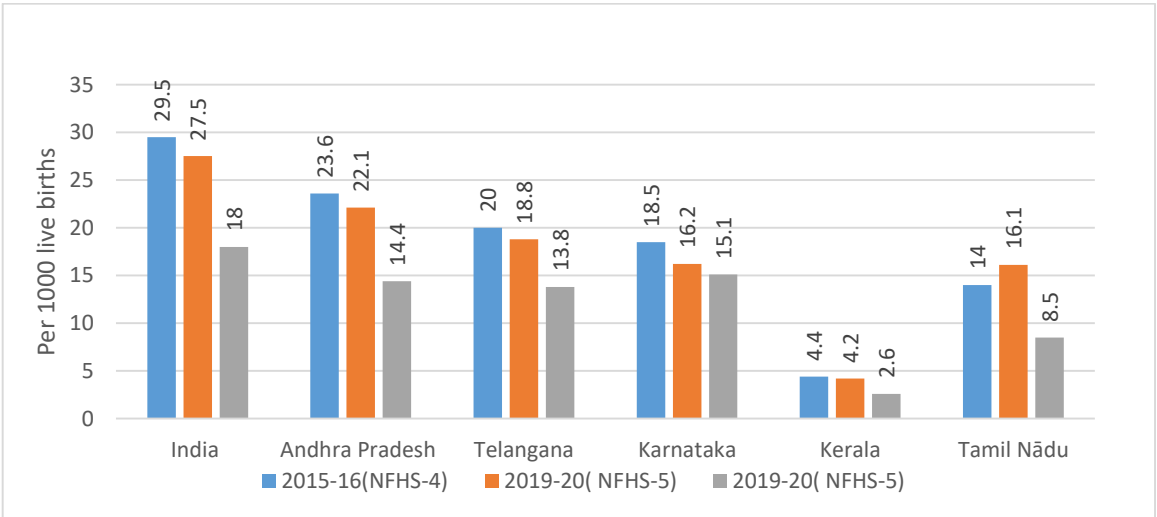
Although Telangana had achieved the required target of Under 5 Mortality Rate (U5MR) of 25 per 1000 live births in urban areas, the same was not achieved in the rural areas.

Government in its response stated (August 2023) that, although the SDG target for U5MR of 25 per 1000 live births was to be achieved by 2030, it had already achieved it and U5MR of Telangana was only 23 per 1000 live births which was less than the national achievement of 32 per 1000 live births.

8.3.6 Neonatal Mortality Rate (NMR)

Target 3.2 also aims to reduce NMR to as low as 12 per 1000 live births by 2030. NMR in respect of the State, India and other Southern States in the India as per National Family Health Survey (NFHS) is as follows:

Chart 8.5 - Comparison of NMR of Telangana with India and other Southern States

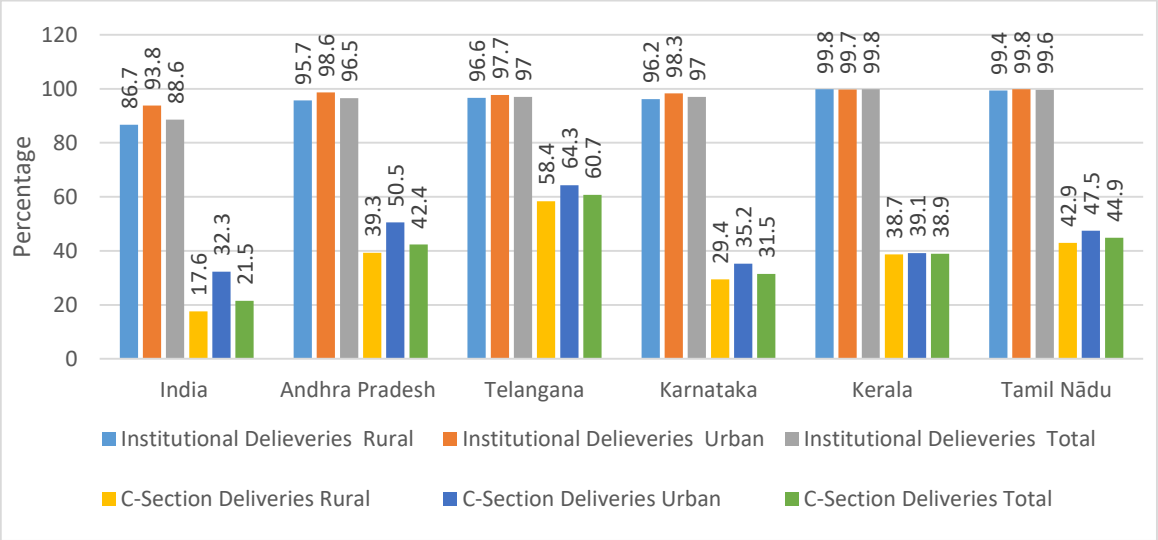


Source: *NFHS*

8.3.7 Institutional Deliveries

Target 3.1.4 aims 100 *per cent* Institutional deliveries conducted (including C-sections) by 2030. Institutional deliveries and caesarean deliveries in respect of rural and urban in respect of Telangana as per NFHS is as follows.

Chart 8.6 - Comparison of Institutional Deliveries of Telangana with India and other Southern States



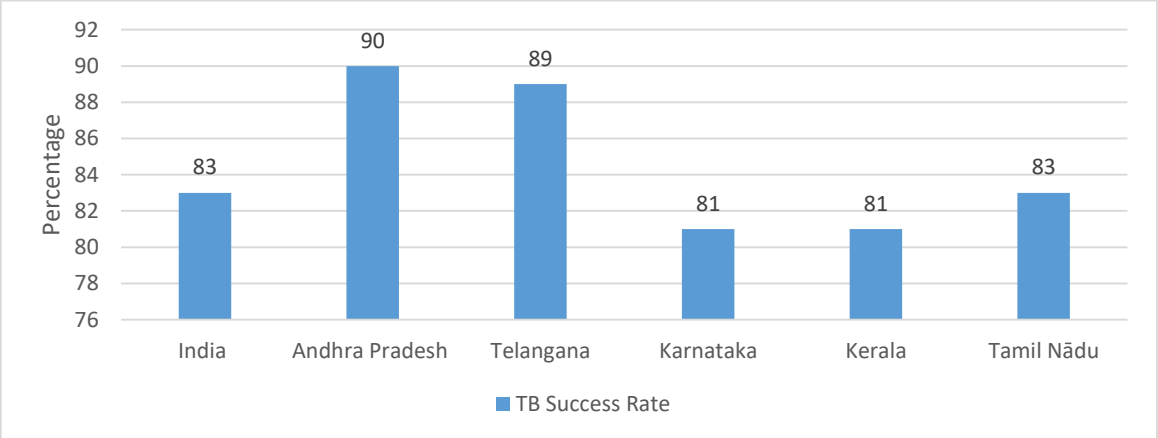
Source : *NFHS -5*

8.3.8 Tuberculosis Success Rate

As per Target 3.8.2, Percentage of TB cases successfully treated (cured plus treatment completed) among TB cases notified to the National Health authorities during a specified period is to be 100 *per cent* by 2030. Further, as per the National Tuberculosis Elimination Programme 2017, TB should be eliminated by 2025. In line with this objective, a target was set to achieve a Tuberculosis (TB) Incidence Rate of 77 per 100,000 population by 2023.

As per the TB Statistics in India 2022 Report, the TB Incidence Rate in respect of India, Telangana and other Southern States are given in the chart below:

Chart 8.7 - Comparison of Tuberculosis Success Rate of Telangana with India and other Southern States

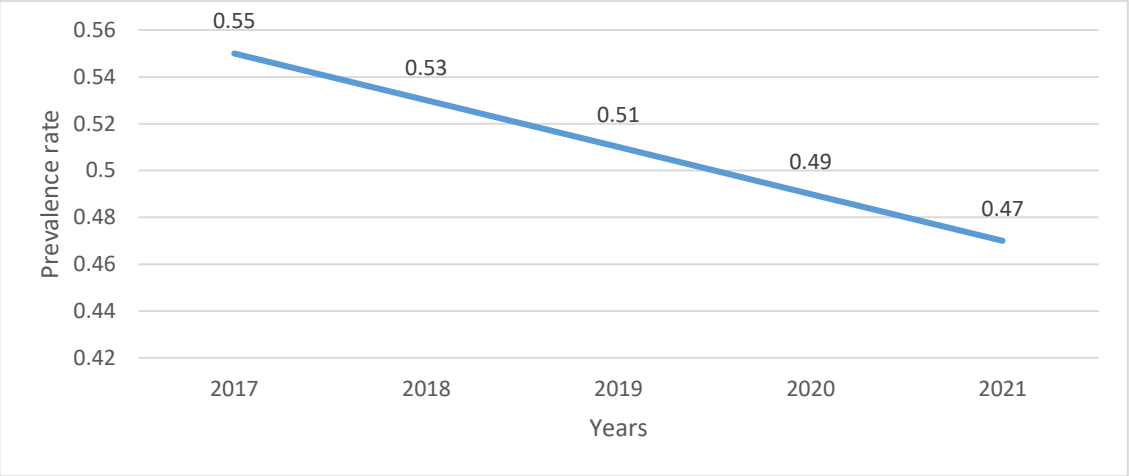


Source: *TB statistics India 2022*

8.3.9 HIV Prevalence Rate

Target 3.3.10 sets the target that, HIV Prevalence Rate (in *per cent*) should be zero by 2030.

Chart 8.8 – HIV Prevalence Rate (in *per cent*)



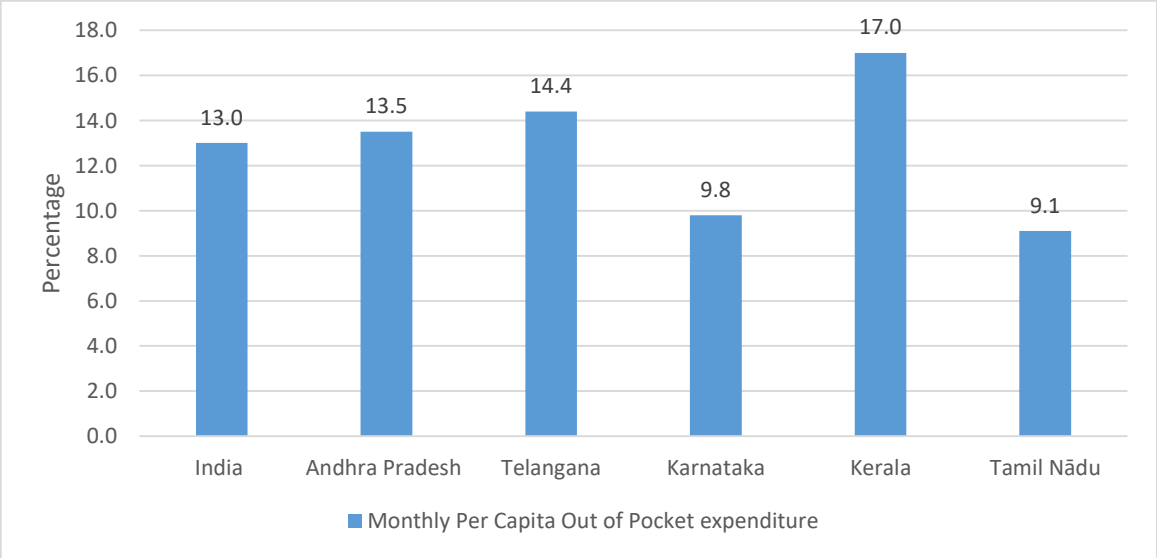
Source: *- HIV fact sheet 2021*

The HIV prevelance rate of Telangana showed a declining trend during the period 2017 to 2021 as indicated in Chart 8.8.

8.3.10 Monthly per capita Out-Of-Pocket Expenditure on health

By 2030, the target of Monthly per capita out-of-pocket expenditure on health as a share of Monthly Per capita Consumption Expenditure (MPCE) is 7.83 *per cent*. This target corresponds to the global SDG target 3.8 which aims to achieve universal health coverage, including financial risk protection and access to affordable essential medicines and vaccines for all.

Chart 8.9 - Comparison of Monthly per capita Out of Pocket Expenditure of Telangana with India and other Southern States

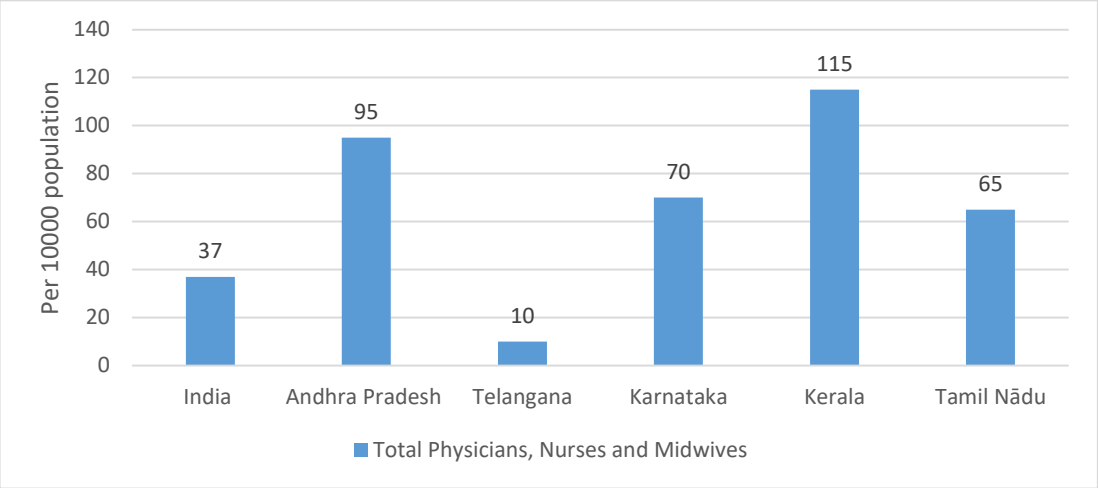


Source: *NITI Aayog SDG Index 2021*

8.3.11 Total Physicians, Nurses and Midwives per 10,000 population

Global SDG Target 3c aims to substantially increase health financing and the recruitment, development, training and retention of the health workforce. The target fixed for skilled health professionals' density (Physicians/Nurses/Midwives per 10,000 population) is 45 by 2030.

Chart 8.10 - Comparison of Total Physicians, Nurses and Midwives per 10,000 population of Telangana with India and other Southern States

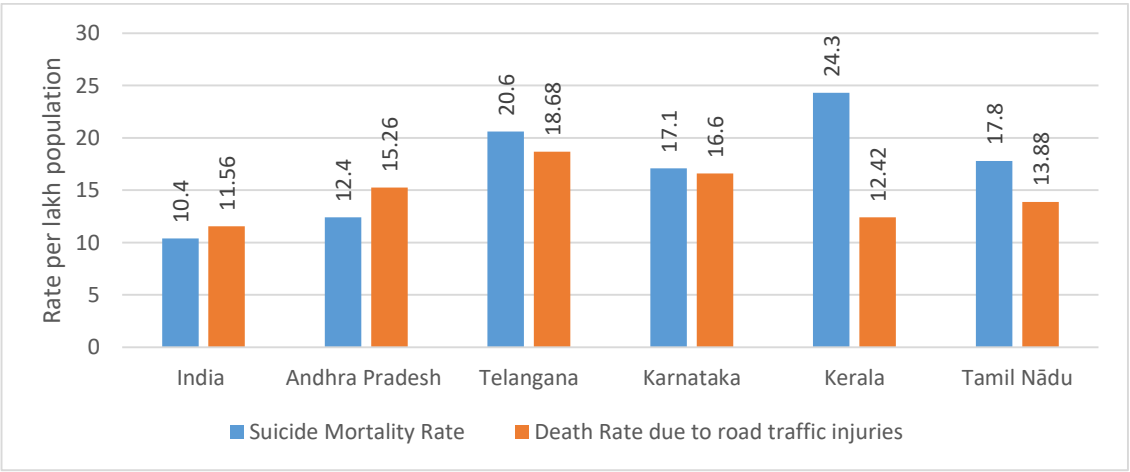


Source: *NITI Aayog SDG Index 2021*

8.3.12 Suicide Mortality Rate and Death Rate due to Road Traffic Injuries/Accidents

Global SDG target 3.4 aims to reduce by one-third premature mortality from non-communicable diseases through prevention, treatment and to promote mental health and well-being, by 2030. The target fixed for reducing the Suicide rate (per 1,00,000 population) is 3.5. Target 3.6 of SDG aims to have the number of global deaths and injuries from road traffic accidents reduced and under this, the target fixed for the Death rate due to road traffic accident/injuries is 5.81 per lakh.

Chart 8.11 - Comparison of Suicide Mortality Rate and Death Rate due to Road Traffic Injuries/Accidents of Telangana with India and other Southern States

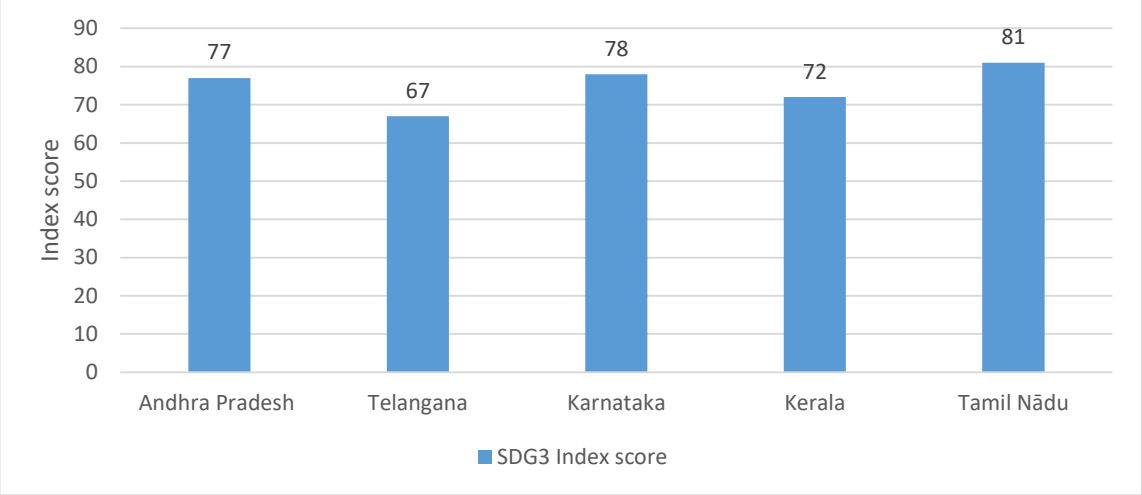


Source: *- NITI Aayog SDG Index 2021*

8.4 SDG-3 Index score

To measure India's performance towards the Goal of Good Health and Well-Being, 10 National level Indicators had been identified, which capture eight out of the thirteen SDG Targets for 2030 outlined under this Goal. NITI Aayog had assessed the performance of States based on these indicators, the SDG Index Score of Telangana and other Southern States was as follows.

Chart 8.12 - SDG-3 Index score



Source: *NITI Aayog SDG Index 2021*

Telangana was graded as a front runner as it had secured a score of 67 in view of the performance of State in respect of implementation on MMR (63), U5MR (30), immunisation of children in the age group 9-11 (98), TB notification (192), HIV incidence rate (0.08), Suicide Rate (20.6), Death due to traffic accidents (18.68), Institutional deliveries (99.90), OOPE (14.40), Availability of total Physicians, Nurses and Midwives (10) as per the parameters considered by NITI Aayog.

8.5 Conclusion

Telangana had already achieved the required target of Maternal Mortality Rate (MMR) of less than 70 per 100,000 live births. The State had met the target Infant Mortality Rate (IMR) of 28 per 1000 live births in urban areas, but it fell short in rural areas. Similarly, while achieving the target of Under-5 Mortality Rate (U5MR) of 25 per 1000 live births in urban areas, Telangana did not meet this goal in rural areas. There was an increase in the percentage of institutional deliveries in Telangana during NFHS-5 as compared to NFHS-4, Caesarean deliveries percentage in NFHS 5 had increased in both in Urban and rural areas. C-Section deliveries were higher in Telangana as compared to the National average. Further, the C-Section deliveries in Government Health facilities decreased from 60 (2017-18) to 39 per cent (2021-22), while C-Section deliveries in Private Health facilities increased from 40 (2017-18) to 61 per cent (2021-22).

Monthly Per Capita Out-of-Pocket Expenditure on health in the State is higher than the National average. The State also fell short of achieving the target of 45 health

professionals per 10,000 population to be achieved. The suicide mortality rate and Deaths due to road traffic injuries in Telangana are higher than that of National average.

As per the NITI Aayog SDG Index 2021, Telangana is in Front Runner category with an Index Score of 67. Telangana has performed well in aspects of MMR, Immunisation, IMR, U5MR, NMR, Institutional Deliveries and Tuberculosis success rate. However, still there is scope for improvement in respect of certain indicators, viz., Total Physicians, Nurses and Midwives per 10000 population, Suicide Mortality Rate, Death rate due to Road Traffic Accidents, Caesearian Deliveries etc.

8.6 Recommendations

- State Government may ensure achievement of targets and plans by the Health Department and associated line Departments to achieve the SDG–3 goals.
- State Government may take all the necessary measures to address the issues of higher Infant Mortality Rate, Under-5 Mortality Rate and Neonatal Mortality rate in rural areas, Suicide Mortality Rate and Deaths due to Road Traffic Accidents.

(P. MADHAVI)
Accountant General (Audit)
Telangana

Hyderabad
The 10 July 2024

Countersigned

(GIRISH CHANDRA MURMU)
Comptroller and Auditor General of India

New Delhi
The 12 July 2024

Appendices

Appendix 3.1

(Reference to Paragraph No. 3.5, Page No.72)

Availability of Diagnostic services in DHs

Name of Service	Name of Test/Diagnostic Services	BOD	GAD	GAJ	HYD	KDP	MDK	MED	MUL	NRY	NRS	PED	TDR	UT	YB
Radiology	X-ray for chest, skull, spine, Abdomen, bones	A	A	A	A	A	A	A	A	A	A	A	A	A	A
	Dental X-ray	NA	NA	A	A	NA	A	NA	NA	A	A	NA	NA	NA	NA
	Ultrasonography	A	A	A	A	A	A	A	A	A	A	A	A	A	A
	CT Scan	NA	NA	NA	A	NA	NA	NA	A	NA	NA	A	A	NA	NA
	Barium Swallow, Barium meal, Barium enema, IVP	NA	NA	NA	NA	NA	NA	NA	NA	NA	A	NA	NA	NA	NA
	MMR (Chest)	NA	A	NA	NA	NA	NA	NA	A	NA	NA	NA	NA	NA	NA
	HSG	NA	A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cardiac Investigation	ECG	A	A	A	A	A	A	A	A	A	A	A	A	A	A
	Stress Tests	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ECHO	NA	NA	NA	NA	NA	A	NA	A	NA	NA	NA	NA	NA	NA
ENT	Audiometry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Endoscopy for ENT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ophthalmology	Refraction by using Snellen's Chart	A	A	A	NA	A	A	A	NA	NA	NA	A	NA	NA	NA
	Retinoscopy	NA	A	A	NA	A	NA	NA	A	NA	NA	A	NA	NA	NA
	Ophthalmoscopy	NA	A	A	NA	A	A	NA	A	NA	NA	A	NA	NA	NA
Endoscopy	Laparoscopic (diagnostic)	A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Oesophagus	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Stomach	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Colonoscopy	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Bronchoscopy	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Arthroscopy	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Hysteroscopy	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Respiratory	Pulmonary function tests	NA	NA	NA	NA	A	NA	NA	NA	NA	NA	NA	NA	NA	NA

Source: *Information furnished by the hospitals.*
Code-A=available;/NA= Not available

Appendix 3.2

(Reference to Paragraph No. 3.6.4, Page No. 77)

Availability of Oxygen services in the District Hospitals

Name of Service	District Hospitals													
	BOD	GAD	GAJ	HYD	KDP	MDK	MED	MUL	NRY	NRS	PED	TDR	UT	YB
Whether the requirement of oxygen in the hospital was assessed and infrastructure created accordingly?	NA	A	A	NA	NA	A	A	NA	A	A	A	A	A	NA
Whether the standard operating procedure for oxygen was available and was being followed?	NA	A	A	A	A	NA	NA	A	NA	NA	A	A	A	A
Whether agreements were executed for the supply of uninterrupted oxygen?	NA	A	A	NA	A	NA	NA	A	NF	NA	NA	A	A	A
Whether Centralised oxygen supply system was installed in the hospital?	A	A	A	A	A	A	A	A	A	NA	NA	A	NA	A
In all such cases, whether required buffer stock was assessed and maintained all the time?	A	A	A	A	A	A	A	A	NA	A	A	A	A	A
Whether records of serviceability and availability of oxygen cylinders were maintained as per guidelines?	A	A	NF	NA	A	NA	A	A	NA	A	A	NA	A	A
Whether required number Oxygen Supply (Central) are available in Eclampsia Room?	A	A	A	NF	A	NA	A	A	NA	A	A	A	NA	A

Name of Service	District Hospitals													
	BOD	GAD	GAJ	HYD	KDP	MDK	MED	MUL	NRY	NRS	PED	TDR	UT	YB
Whether oxygen reservoir is available for each bed at Special New-born Care Unit?	NA	A	A	NA	A	NA	A	NA	NA	NA	NA	A	A	A
Whether the health institution have Double Outlet Oxygen Concentrator at Special New-born Care Unit?	NA	A	A	NA	A	NA	A	NA	NA	NA	A	A	A	A
If the Centralised oxygen supply system was not installed whether adequacy of required oxygen cylinders was assessed?	A	A	NF	NF	A	NA	A	NA	NA	A	A	A	A	A

A-Available; NA –Not Available; NF-Not Furnished

Appendix 3.3

(Reference to Paragraph No. 3.8, Page No.79)

Laundry services in the District Hospitals

Name of Service	Disrict Hospitals													
	BOD	GAD	GAJ	HYD	KDP	MDK	MED	MUL	NRY	NRS	PED	TDR	UT	YB
Availability of required linen sets	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Availability of system of changing the patient/OT linen at the prescribed intervals to maintain hygiene	A	A	A	A	A	A	A	A	A	A	NA	A	A	A
Availability of system to check the quality of cleanliness of the linen received from laundry	A	A	A	A	A	A	A	A	A	A	NA	A	A	A
Availability of date wise and patient wise records against each entry of linen issued from linen stock	A	A	A	A	A	A	A	A	A	A	NA	A	A	A
Availability of system for periodic physical verification of linen inventory	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Follow up of procedure for sluicing of soiled and infected linen	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Maintenance of norms for washing and drying of the linens	A	A	A	A	A	NA	A	A	A	A	NA	A	A	A

Source: *Information furnished by DHs*

Code : A = Available; NA = Not available

Appendix 3.4

(Reference to Paragraph No. 3.8, Page No.79)

Laundry Services in the test checked AHs

Name of Service	Area Hospitals	
	Golconda	Malakpet
Availability of required linen sets	A	A
Availability of system of changing the patient/OT linen at the prescribed intervals to maintain hygiene	A	A
Availability of system to check the quality of cleanliness of the linen received from laundry	A	A
Availability of date wise and patient wise records against each entry of linen issued from linen stock	A	A
Availability of system for periodic physical verification of linen inventory	A	A
Follow up of procedure for sluicing of soiled and infected linen	A	A
Maintenance of norms for washing and drying of the linens	A	A

Source: *Information furnished by AHs*

Code: A= Available; NA = Not available

Appendix 3.5

(Reference to Paragraph No. 3.14, Page No.90)

Results of Doctors' and Patients' Survey

SL No	Questionnaire	Number of beneficiaries, Doctors surveyed	Responses	
			Yes	No
1	Provision of required infrastructure	89	73	16
2	Aware of medical records in the hospital for last 3 years	89	84	5
3	Prescribing generic medicine and its availablility in pharmacy	89	76	13
4	Registration of the medical practitioner in the hospital	89	71	18
5	Display of registration number of Doctor in the clinic and prescription	89	25	64
6	Availability of trained and qualified nursing and para medical staff	89	84	5
7	Manual of SOPs in the Doctors chamber	89	63	26
8	Concerned immediately the Public health authorities in case of communicable and notifiable diseases	89	83	6
9	Awareness to patients regarding usage of prohibited drugs and its side-effects	89	82	7
10	Applicability of rules and regulations are sufficient to regulate the Government health sector	89	73	16
11	Any improvement to be made in the healthcare infrastructure in the Government hospitals	89	77	12
12	Monthly meetings to discuss or address the issues faced by the hospital	89	67	22

13	Monitoring system in place for patients requiring long term/continuous treatment (with ailments like TB/HIV etc.)	89	20	69

Results of OPD Patients' Survey

SL No	Questionnaire	Responded as		Not Responded
		Yes	No	
1	Hospital Approachable by Road	375	0	0
2	Availability of the Enquiry/May I Help desk	272	103	0
3	Seating arrangement is adequate at Registration Counter?	355	20	0
4	Availability of Drinking Water Facility	348	27	0
5	Availability of Neat And Clean Toilet Facility	365	10	0
6	Adequacy of Registration Counters	365	9	1
7	Availability of Staff in Registration Counters	373	2	0
8	Cleanliness OPD Area	375	0	0
9	Satisfactory Patient Calling System	291	84	0
10	Satisfaction with the treatment given by the Doctor.	373	1	1
11	Explanation of nature of ailment by the Doctor	373	1	1
12	Availability of prescribed medicines in Pharmacy	371	0	4
13	Availability of all Pathological Tests	247	7	121
14	Availability of all Radiology Tests	215	39	121
15	Availability of Complaint Box	286	89	0

Results of IPD Patients' Survey

SL No	Subject	Responded as		Not Responded
		Yes	No	
1	Response of Nurses	202	2	2
2	Periodical monitoring by nurses regarding medications	203	2	1
3	Periodical monitoring of Urine Cathers	126	4	76
4	Availability of Drugs in Pharmacy	194	10	2
5	Availability of Lab and Radiology facilities	200	4	2
6	Out of Pocket Expenditure for Medicines and Lab Tests	41	163	2
7	Consent for treatment from family members	204	0	2
8	Information about Patient Rights	205	0	1
9	Prompt Response to complaints	195	2	9
10	Availability of Doctors and services in case of emergency situations	205	1	0
11	Availability of Nurses round the clock	150	0	56
12	Provision of attendant / trolley / wheel chair services	201	1	4
13	Dignified behaviour of the staff while delivering services	205	0	1
14	Restriction of visitors at patient care areas	203	2	1
15	Effective security system in the patient care areas	201	4	1

SL No	Subject	Responded as		Not Responded
		Yes	No	
16	Provision of food	190	10	6
17	Quality and sufficiency of food	140	2	64
18	Provision of diet as prescribed by the Doctor.	192	2	12
19	Provision of clean and ironed linen	150	0	56
20	Regular change of bed linen	145	3	58
21	Different colour linen in different days	109	37	60
22	Attending complaints about linen	111	23	72
23	Provision of clean house coat / pyjama	97	47	62
24	Regular cleaning of floors, walls etc.	150	0	56
25	Neat and clean status of toilets, sink etc.	134	16	56
26	Separate toilet facility for men and women	189	15	2
27	Regular removal of Garbage from the patient care area	205	0	1

Appendix 3.6

(Reference to Paragraph No. 3.14, Page No.90)

Results of Joint Physical Verification of test checked hospitals

	Questionnaire	Responded		Not responded
		Yes	No	
Joint Inspection Report-Status of completeness of In-Patients Records	Whether date of first visit was mentioned?	12	0	3
	Whether diagnosis after investigation was made?	11	0	4
	Whether follow up treat was prescribed?	11	0	4
	Whether investigation was advised ?	11	0	4
	Whether patients' occupation was noted?	5	7	3
	Whether signature and name of the Doctors was there?	11	1	3
	Whether clinical note was made?	10	2	3
Joint Inspection Report-Beneficiary Survey- Laundry Services	Whether bed linen is changed every day?	12	0	3
	Whether different coloured bed linen is provided on different weekdays?	4	7	4
	Whether bed linen is changed every time when got soiled?	12	0	3
	Whether neat and clean bed linen are provided which are dry and iron pressed?	9	0	6
	Whether clean bed side curtains are provided with each bed?	4	6	5
	Whether complaint about linen was attended?	3	0	12

	Questionnaire	Responded		Not responded
		Yes	No	
	Whether any officer visits to check the bed linen every day?	6	2	7
	Whether toilets are neat and clean every time?	11	1	3
	Whether machines are used for moping?	1	14	0
	Whether garbage is removed from patient care area regularly?	12	0	3
	Whether closed trolley is used for removal of garbage?	5	7	3
Joint Inspection Report-Citizen Charter	Whether the facility has established citizen charter?	8	7	0
	Is it displayed in hospital?	8	7	0
	Are there adequate number of notice boards detailing the location of all the services/Departments/wards etc?	14	1	0
	Is it in simple local language (Telugu)?	12	1	2
	Is it followed at all the level?	11	2	2
	The facility displays the services and entitlements available in its Departments.	11	2	2
	It displays rights of patients	5	8	2
	Whether user charges are displayed?	3	3	9
	Charter provides information about available OPD services and their timings Department wise.	10	4	1
	Charter provides information about available diagnostic services.	11	3	1
	Charter provides information about available emergency and trauma care services and mode of approach thereof.	9	4	2
	Charter provides information about available family welfare, maternity and childcare services	9	3	3
	Charter provides information about available immunisation services.	9	3	3
	Charter provides information about available diagnostic services.	12	2	1
	Charter provides information about available ambulance services.	5	9	1
	Charter provides information about responsibilities of users.	4	10	1
	Charter provides information about services not available at the facility level.	1	14	0
	Charter provides information about equipment's not in order.	3	11	1
	Charter provides information about services available to BPL patients.	5	7	3
	Availability of Dietary service in the hospital	8	7	0

	Questionnaire	Responded		Not responded
		Yes	No	
Joint Physical verification of Dietary Services	Availability of dedicated kitchen	6	7	2
	Whether dietician is available? If not, since when	2	11	2
	Whether food supplied to the patients is patients specific such as diabetic, semi solid and liquid?	13	2	0
	Whether system of diet counselling to the patients, formulation of caloric requirement and accordingly setting diet for the patients is adopted?	6	6	3
	Whether types of the diets prescribed by the Department. If so, the details may be furnished	6	6	3
	List of the items to be provided in diet is prepared (Menu Chart)	6	5	4
	Whether diet is provided to the patients as per the Menu chart?	7	3	5
	Whether facility of serving trolley is provided?	6	5	4
	Whether protective gears (apron, head gear, clear plastic gloves) are used by the cooks in the kitchen those serving food?	8	1	6
	Whether proper hygiene of kitchen is maintained?	6	3	6
	Whether quality of diet is checked by a competent person on regular basis as prescribed in IPHS Guideline?	7	2	6
	Whether FSSAI registration certificate were issued under food safety and standard Act 2006and it was renewed regularly?	0	9	6
	Whether distribution of foods to patients is checked by Food Inspector or District authorities from time to time?	1	8	6
	Whether facilities such as refrigerator, water purifier and storage room are available?	9	2	4
	Whether commercial gas cylinders are used in kitchen?	8	3	4
	Whether inventory of kitchen equipment is maintained?	4	4	7
	Whether minimum number of staffs required for cooking and distribution of foods to IPD patients is specified and deployed accordingly?	6	3	6
	Whether Diet Register is maintained. If so, the details may be furnished.	8	2	5
	Air-conditioned pharmacy	2	13	0
	Labeled shelves/racks	9	6	0

	Questionnaire	Responded		Not responded
		Yes	No	
Joint Inspection Report-Drugs Management Facilities	Away from water and heat	14	1	0
	Drugs stored above the floor	13	2	0
	Drugs stored away from walls	12	3	0
	24-hour temperature recording of cold storage area	8	5	2
	Display instructions for storage of vaccines	7	5	3
	Functional temperature monitoring device in freezers	8	5	2
	Maintenance of temperature chart of deep freezers	7	5	3
	Drugs kept under lock and key	14	1	0
	Poisons kept in a locked cupboard	8	5	2
	Expired drugs stored separately	13	0	2
Joint Inspection Report- Fire-fighting Services	Whether NOC was obtained from Fire Department?	1	10	4
	Whether NOC has been renewed on timely basis?	0	10	5
	Whether the provision of smoke detector is in place?	3	8	4
	Whether the provison of alarm is in place in case of fire?	3	8	4
	Whether fire extinguisher is refilled on timely basis?	0	6	9
	Number of Fire Hydrants available			
	Whether Sand buckets is available in hospital	4	5	6
	Whether underground backup water for fire is available in hospital	5	5	5
	Whether evacuation plans routes for fire exit has been displayed?	2	8	5
	Whether fire extinguisher is installed at power back (DG room) up area?	4	6	5
	Whether underground static water tank is constructed for meeting the fire contingency?	5	5	5

Appendix 4.1

(Reference to Paragraph 4.4.1, Page 97)

Non submission of indents by the Health Facilities

Indent Period Value	Actual submission Date	No. of HFs required to submit annual indents	No. of HFs submitted indents	No. of HFs did not submit the annual indents
2016-17	---	1,230	No data	
2017-18	May 2017 to March 2018	1,246	867	379 (30%)
2018-19	January 2018 to February 2019	1,385	963	422 (30%)
2019-20	April 2019 to November 2019	1,308	930	378 (29%)
2020-21	November 2019 to February 2020	1,311	1,036	275 (21%)
2021-22	July 2021 to September 2021	1,300	1,140	160 (12%)

Appendix 4.2

(Reference to Paragraph 4.8.2, Page 122)

Equipment supplied to COE, Niloufer Hospital, Hyderabad

Sl. No.	Item	No. of units supplied	Unit Cost	Cost of supplied qty.
1	Cots Fowler Paediatric ICU	30	25,500	7,65,000
2	Air Mattresses	50	2,820	1,41,000
3	High Frequency Oscillatory Ventilators	4	24,88,500	99,54,000
4	Paediatric Ventilators with NIV Mode	45	11,68,700	5,25,91,500
5	Neonatal Ventilators with NIV Mode	21	12,35,850	2,59,52,850
6	Bubble CPAP Machines	24	3,15,000	75,60,000
7	Paediatric Airvo (HFNC) Machines	275	2,15,460	5,92,51,500
8	Laryngoscope	5	1,68,000	8,40,000
9	Portable ECG	10	1,04,944	10,49,440
10	USG with 3 Probes	5	18,45,200	92,26,000
11	3 Para Monitors	16	28,000	4,48,000
12	5 Para Monitors	7	55,000	3,85,000
13	Infusion Pumps	350	34,272	1,19,95,200
14	Syringe Pumps	300	29,990	89,97,000
15	Open Radiant Warmers	10	54,572	5,45,720
16	Oxygen Hoods	10	1,176	11,760
17	Phototherapy Units	5	42,000	2,10,000
18	Ethylene Oxide Sterilizer	2	16,99,200	33,98,400
19	ABG Machine	5	3,48,100	17,40,500
	TOTAL			**19,50,62,870**

Appendix 5.1

(Reference to Paragraph 5.8.4, Page 152)

Mother and Child Health Buildings

Sl.No.	Location of MCH Centre	Present Status
1	MCH Sultanbazar	Completed
2	MCH Centre at DH, Sangareddy	Completed
3	MCH Centre at DH, Mahabubnagar	Completed
4	MCH Centre at DH, Tandur	Completed
5	MCH Centre at DH, Jangaon	Completed
6	MCH Centre at DH, Khammam	Completed
7	MCH Centre at DH, Nalgonda	Completed
8	MCH Centre at DH King Koti, Hyderabad	Completed
9	MCH Centre at DH, Karimnagar	Completed
10	MCH Centre at CHC, Eturunagaram, Mulugu District	In progress
11	MCH Centre at AH, Suryapet, Suryapet District	Completed
12	MCH Centre at CHC Manthani, Karimnagar District	Completed
13	MCH Centre at CHC Kollapur, Nagarkurnool District.	Completed
14	MCH Building at AH, Medak	In progress
15	MCH Building at AH, Wanaparthy	Completed
16	MCH Building at AH, Mancherial	Completed
17	MCH Building at CHC, Peddapalli	Completed
18	MCH Building at AH, Kothagudem	Completed
19	MCH Building at AH, Jagtial	Completed
20	MCH Centre at DH, Kamareddy	In progress
21	MCH Centre at Banswada in Kamareddy District	Completed
22	MCH Centre at Gandhi Hospital, Musheerabad, Secunderabad	In progress
23	MCH Building at Gajwel, Siddipet District	In progress
24	MCH Building at Narayankhed in Sangareddy District	In progress
25	MCH Building at Alampur, Jogulamba Gadwal District	In progress
26	MCH Building at GGH, Nizamabad	Completed

Appendix 6.1

(Reference to Paragraph 6.12.3, Page 178)

Delay in release of funds to State Health Societies (SHSs)

Sl. No.	Year	Details of release of ECRP II funds by GoI	GoI sanction date	Amount of GoI share	Date of adjustment of GoI share into SHS Account	Amount (GoI share)	Date of adjustment of State Share into SHS Account	Amount (State Share)	Delay in adjustment of Central Share	Delay in adjustment of State Share
1	2021-22	First instalment of First Tranche	22-07-2021	44.80	12-08-2021	44.80	18-11-2021	40.00	21	98
		Second instalment of First Tranche	24-08-2021	104.54	22-10-2021	104.54	21-12-2021	40.00	59	60
							11-01-2022	19.57		81
FIRST INSTALMENT (TOTAL)				149.34		149.34		99.57		
2	2021-22	Second Tranche	31-01-2022	149.34	16-03-2022	29.34	16-08-2022	10.55	44	153
					17-03-2022	40.00	19-09-2022	89.00	45	186
					22-03-2022	20.00			50	181
					23-03-2022	40.00			51	180
					25-03-2022	20.00			53	178
SECOND INSTALMENT (TOTAL)				**149.34**		149.34		99.55		
GRAND TOTAL				**298.68**		298.68		199.12		

Appendix 7.1

(Reference to Paragraph 7.2.3.2, Page 194)

Leprosy Prevalence Rate in 19 Districts

Sl. No.	District	2020-21	2021-22
1	Adilabad	0.59	0.70
2	Jayashankar Bhupalpally	0.08	0.40
3	Jogulamba Gadwal	0.37	0.52
4	Kamareddy	0.10	0.17
5	Karimnagar	0.06	0.24
6	Khammam	0.43	0.47
7	Mahabubnagar	0.38	0.55
8	Medak	0.19	0.26
9	Medchal – Malkajgiri	0.16	0.18
10	Mulugu	0.21	0.29
11	Nagarkurnool	0.36	0.48
12	Nalgonda	0.63	0.66
13	Nizamabad	0.13	0.24
14	Rajanna Sircilla	0.07	0.25
15	Rangareddy	0.25	0.28
16	Vikarabad	0.55	0.69
17	Wanaparthy	0.22	0.33
18	Warangal (Rural)	0.23	0.29
19	Yadadri Bhuvanagiri	0.31	0.48

Appendix 7.2

(Reference to Paragraph 7.2.6, Page 197)

Sub Centres with API more than 2 in the Districts

Sl. No.	District	2017	2018	2019	2020	2021
1	Kumuram Bheem Asifabad	12	2	6	6	5
2	Jayashankar Bhupalpally	26	24	2	5	3
3	Bhadradri Kothagudem	32	17	21	49	31
4	Mahabubabad	0	2	2	2	2
5	Mancherial	18	----	----	2	2
6	Mulugu	----	----	26	29	37

Appendix 7.3

(Reference to Paragraph 7.2.6, Page 198)

Spraying operations conducted in Districts during 2016–21

Sl. No.	Name of the District	Rounds	Date of Spray (2016)		Actual spray schedule	Delay in no. of days
1	Adilabad	I	07-05-2016	29-07-2016	01-05-2016	6
2	Adilabad	II	13-08-2016	02-11-2016	16-07-2016	28
3	Warangal	I	13-06-2016	09-08-2016	01-05-2016	43
4	Warangal	II	26-08-2016	24-10-2016	16-07-2016	41
5	Khammam	I	01-06-2016	04-08-2016	01-05-2016	31
6	Khammam	II	19-08-2016	27-12-2016	16-07-2016	34
7	Karimnagar	I	23-06-2016	28-08-2016	01-05-2016	53
8	Mahabubnagar	I	15-06-2016	16-07-2016	01-05-2016	45
9	Mahabubnagar	II	17-08-2016	25-10-2016	16-07-2016	32
Sl. No.	**Name of the District**	**Rounds**	**Date of Spray (2017)**		**Actual spray schedule**	**Delay in no. of days**
1	Bhadradri Kothagudem	I	01-06-2017	24-08-2017	01-05-2017	31
2	Jayashankar Bhupalpally	I	01-06-2017	23-08-2017	01-05-2017	31
3	Mahabubabad	I	23-06-2017	31-07-2017	01-05-2017	53
4	Adilabad	I	23-06-2017	06-08-2017	01-05-2017	53
5	Kumuram Bheem Asifabad	I	22-06-2017	03-07-2017	01-05-2017	52
6	Khammam	I	28-06-2017	06-07-2017	01-05-2017	58
7	Nirmal	I	08-07-2017	20-08-2017	01-05-2017	68
8	Nagarkurnool	I	06-07-2017	22-07-2017	01-05-2017	66
9	Mancherial	I	20-07-2017	10-08-2017	01-05-2017	80
1	Bhadradri Kothagudem	II	30-08-2017	23-11-2017	16-07-2017	45
2	Jayashankar Bhupalpally	II	02-09-2017	15-12-2017	16-07-2017	48
3	Adilabad	II	04-09-2017	22-11-2017	16-07-2017	50
4	Kumuram Bheem Asifabad	II	26-08-2017	02-09-2017	16-07-2017	41
5	Khammam	II	08-08-2017	28-08-2017	16-07-2017	23
6	Nirmal	II	06-10-2017	12-10-2017	16-07-2017	82
7	Nagarkurnool	II	06-09-2017	23-09-2017	16-07-2017	52
8	Mancherial	II	08-09-2017	25-11-2017	16-07-2017	54

Sl. No.	Name of the District	Rounds	Date of Spray (2018)		Actual spray schedule	Delay in no. of days
1	Bhadradri Kothagudem	I	29-06-2018	04-09-2018	01-05-2018	59
2	Jayashankar Bhupalpally	I	01-06-2018	13-09-2018	01-05-2018	31
3	Kumuram Bheem Asifabad	I	15-07-2018	09-08-2018	01-05-2018	75
4	Adilabad	I	28-06-2018	07-08-2018	01-05-2018	58
5	Mancherial	I	10-07-2018	26-07-2018	01-05-2018	70
1	Bhadradri Kothagudem	II	01-10-2018	19-11-2018	16-07-2018	77
2	Jayashankar Bhupalpally	II	10-09-2018	16-11-2018	16-07-2018	56
3	Kumuram Bheem Asifabad	II	10-09-2018	25-10-2018	16-07-2018	56
4	Adilabad	II	10-09-2018	24-10-2018	16-07-2018	56
5	Mancherial	II	10-09-2018	17-09-2018	16-07-2018	56
Sl. No.	**Name of the District**	**Rounds**	**Date of Spray (2019)**		**Actual spray schedule**	**Delay in no. of days**
1	Adilabad	I	27-06-2019	17-07-2019	01-05-2019	57
2	Kumuram Bheem Asifabad	I	01-07-2019	31-07-2019	01-05-2019	61
3	Mancherial	I	07-07-2019	21-08-2019	01-05-2019	67
4	Mahabubabad	I	15-07-2019	31-07-2019	01-05-2019	75
5	Jayashankar Bhupalpally	I	17-06-2019	17-08-2019	01-05-2019	47
6	Mulugu	I	17-06-2019	17-08-2019	01-05-2019	47
7	Bhadradri Kothagudem	I	15-06-2019	26-08-2019	01-05-2019	45
1	Adilabad	II	27-08-2019	05-10-2019	16-07-2019	42
2	Kumuram Bheem Asifabad	II	09-09-2019	06-10-2019	16-07-2019	55
3	Mancherial	II	20-09-2019	13-10-2019	16-07-2019	66
4	Mahabubabad	II	20-09-2019	11-10-2019	16-07-2019	66
5	Jayashankar Bhupalpally	II	17-09-2019	05-10-2019	16-07-2019	63
6	Mulugu	II	19-08-2019	07-11-2019	16-07-2019	34
7	Bhadradri Kothagudem	II	09-09-2019	07-11-2019	16-07-2019	55
Sl. No.	**Name of the District**	**Rounds**	**Date of Spray (2020)**		**Actual spray schedule**	**Delay in no. of days**
1	Kumuram Bheem Asifabad	I	15-06-2020	08-07-2020	01-05-2020	45
2	Mancherial	I	24-06-2020	07-08-2020	01-05-2020	54
3	Mahabubabad	I	24-06-2020	29-07-2020	01-05-2020	54

4	Jayashankar Bhupalpally	I	17-06-2020	22-07-2020	01-05-2020	47
5	Mulugu	I	05-06-2020	16-08-2020	01-05-2020	35
6	Bhadradri Kothagudem	I	15-06-2020	22-07-2020	01-05-2020	45
1	Kumuram Bheem Asifabad	II	27-08-2020	03-09-2020	16-07-2020	42
2	Mancherial	II	10-08-2020	18-09-2020	16-07-2020	25
3	Mahabubabad	II	01-08-2020	21-09-2020	16-07-2020	16
4	Jayashankar Bhupalpally	II	27-08-2020	11-09-2020	16-07-2020	42
5	Mulugu	II	24-08-2020	17-09-2020	16-07-2020	39
6	Bhadradri Kothagudem	II	06-08-2020	28-09-2020	16-07-2020	21
Sl. No.	**Name of the District**	**Rounds**	**Date of Spray (2021)**		**Actual spray schedule**	**Delay in no. of days**
1	Kumuram Bheem Asifabad	I	28-07-2021	08-08-2021	01-05-2021	88
2	Mancherial	I	02-08-2021	06-08-2021	01-05-2021	93
3	Mahabubabad	I	01-06-2021	23-07-2021	01-05-2021	31
4	Jayashankar Bhupalpally	I	01-06-2021	14-07-2021	01-05-2021	31
5	Mulugu	I	17-06-2021	30-07-2021	01-05-2021	47
6	Bhadradri Kothagudem	I	15-06-2021	01-08-2021	01-05-2021	45
1	Kumuram Bheem Asifabad	II	20-09-2021	26-09-2021	16-07-2021	66
2	Mancherial	II	02-08-2021	03-10-2021	16-07-2021	17
3	Mahabubabad	II	01-10-2021	10-10-2021	16-07-2021	77
4	Jayashankar Bhupalpally	II	03-08-2021	03-10-2021	16-07-2021	18
5	Mulugu	II	11-08-2021	02-10-2021	16-07-2021	26
6	Bhadradri Kothagudem	II	13-08-2021	29-09-2021	16-07-2021	28

Appendix 8.1

(Reference to Paragraph 8.2.2, Page 215)

List of Indicators and Sub Indicators

Target Number	Description	Global indicator	National Indicator	State Indicator (SIF)
3.1	By 2030, reduce the global maternal mortality rate to less than 70 per 100,000 live births	3.1.1 Maternal Mortality rate	3.1.1 Maternal Mortality Rate, (per 1,00,000 live births)	3.1.1 Maternal mortality rate
		3.1.2 Proportion of births attended by skilled health personnel	3.1.2 Percentage of births attended by skilled health personnel (Period 5 years)	3.1.2 Percentage of births attended by skilled health personnel(Period 5 years)
			3.1.3 Percentage of births attended by skilled health personnel (Period 1 year)	3.1.3 Percentage of births attended by skilled health. personnel. (Period 1 year)
			3.1.4 Percentage of women aged 15−49years with a live birth, for last birth, who received. Antenatal care, fourtimes or more (Period 5 years/1 year) (in percentage)	3.1.4 Percentage of women aged 15−49 years with a live birth, for last birth, who received Antenatal care, four times or more.
3.2	By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 livebirths and under- 5 mortality to at least as low as 25 per 1,000 live births	3.2.1 Under-5 mortality rate	3.2.1 Under - five mortality rate, (per1,000 live births)	3.2.1. Under-5 mortality rate
		3.2.2 Neonatal mortality rate	3.2.2 Neonatal mortality rate,(per 1,000 live births)	3.2.2 Neonatal mortality rate
			3.2.3 Percentage ofchildren aged 12-23 months fully immunised	3.2.3 Percentage of children aged 12-23 months fully immunised (BCG, Measles and three doses of Pentavalent vaccine)
3.3	By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases	3.3.1 Number of new HIV infections per 1,000 uninfected population	3.3.1 Number of new HIV infections per 1,000 uninfectedpopulation	3.3.1 Number of new HIV infections per 1,000 uninfected population
		3.3.2 Tuberculosis incidence per 1,00,000 population	3.3.2 Tuberculosis incidence per 1,00,000 population	3.3.2 Tuberculosis incidence per 100,000 population
		3.3.3 Malaria incidence per 1,000 population	3.3.3 Malaria incidence per 1,000population	3.3.3 Malaria incidence per 1,000 population
		3.3.4 Incidence of Viral Hepatitis B per 1,00,000 population	3.3.4 Prevalence of Viral Hepatitis B per 1,00,000 population	3.3.4 Viral Hepatitis (including A & B) incidence per 100,000 population
		3.3.5 No. of people requiring interventions against neglected tropical disease	3.3.5 Dengue: Case Fatality Ratio, (in ratio)	3.3.5 Dengue: Case Fatality Ratio
			3.3.6 Number of Chikungunya cases	3.3.6 Number of Chikungunya cases
			3.3.7 Number of new cases of Kalaazar/ V Leishmaniasis	3.3.7 Number of newcases of Kala azar / V Leishmaniasis
			3.3.8 Number of new cases of Lymphatic Filariasis (LF)	3.3.8 Number of newcases of Lymphatic Filariasis (LF)

			3.3.9 Proportion ofgrade- 2 cases amongst new casesof Leprosy, (in rate per million)	3.3.9 The proportion ofgrade-2 cases amongst new cases of Leprosy
			3.3.10 HIV Prevalence Rate, (in percentage)	3.3.10 HIV PrevalenceRate
3.4	By 2030, reduce by one third premature mortality from non-. communicable diseases through prevention and treatment and promote mental health and well-being	3.4.1 Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease	3.4.1 Number of deaths due to cancer	3.4.1 Number of deaths due to cancer
		3.4.2 Suicide mortality rate, (per 1,00,000 population)	3.4.2 Suicide mortality rate (per 1,00,000 population)	3.4.2 Suicide mortality rate
			3.4.3 Percentagedistribution of leading cause groups of deaths	
3.5	Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol	3.5.1 Mortality rate attributed to unintentional poisoning	3.5.1 Percentage of population (men (15 - 49 years) & women (15 - 49 years)) who drink alcohol about once a week out of total population (men (15 - 49 years & women (15 - 49 years)) who drink alcohol	
		3.5.2 No. of persons treated in de-addiction centers	3.5.2 Number of persons treated in de-addiction centers	3.5.2 Number of persons treated in de-addiction centers
			3.5.3 Percentage of population (men (15-54 years)) and women (15- 49 years)) who consume alcohol	3.5.3 Percentage of population (men (15-54years) and women (15- 49 years)) who consume alcohol.
3.6	By 2020, halve the number of global deaths and injuries from road traffic accidents	3.6.1 Death rate due to road traffic injuries	3.6.1 People killed/injured in road accidents (per 1,00,000 population)	3.6.1 People killed/injured in road accidents (per 1,00,000 population)
3.7	By 2030, ensure universal access to sexual and reproductive health- care services, including for family planning, information and education and the integration of reproductive health into national strategies and programmes	3.7.1 Proportion of women of reproductive age (aged 15-49 years) who have their need for family planning satisfied with modern methods	3.7.1 Percentage ofcurrently married women (15-49 years) who use anymodern family planning methods,	3.7.1 Percentage ofcurrently married women (15-49 years) who use any modern family planning. methods
		3.7.2 Adolescent birth rate (aged 10-14 years, aged 15-49 years) per 1,000 women in that age group	3.7.2 Percentage of women aged 15-19years who were already mothers or pregnant	3.7.2 Percentage of women aged 15-19 years who were alreadymothers or pregnant
			3.7.3 Percentage of Institutional Births (5 years/1 year)	3.7.3 Institutional Births (%) (5 years/1 year)
			3.7.4 Percentage ofcurrently married women aged 15-49 years who have theirneed for family planning satisfied with modern methods	3.7.4 Percentage ofcurrently married women aged 15-49 years who have theirneed for family planning satisfied with modern methods
3.8	Achieve universal health coverage, including financial risk protection, access to quality essential	3.8.1 Coverage of essential health services	3.8.1 Percentage ofcurrently married women (15-49 years) who use anymodern family planning methods	3.8.1 Percentage ofcurrently married women (15-49 years) who use any modern family planning methods

	health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all	3.8.2 Proportion of population with large household expenditures on health as a share of total household expenditure or income	3.8.2 Percentage of TB cases successfully treated (cured plus treatment completed) among TB cases notified to the national health authorities during a specified period	3.8.2 Percentage of TB cases successfully treated (cured plus treatment completed) among TB cases notified to the nationalhealth authorities during a specifiedperiod
			3.8.3 Percentage of people living with HIV currently receiving ART among the detected number of adults and children living with HIV	3.8.3 Percentage of people living with HIV currently receiving ART among the detected number of adults and children living with HIV
			3.8.4 Prevalence of hypertension among men and women age15–49 years (in percentage)	3.8.4 Prevalence of hypertension among men and women age 15–49 years (in percentage)
			3.8.5 Percentage of population in age group 15-49 who reported sought treatment out of total population inthat age group having diabetes	3.8.5 Proportion of population in age group15-49 years who are currently taking medication for diabetes (insulin or glycaemic control pills) among number of adults 15-49 years who are having random blood sugar level–high (>140 mg/dl)
			3.8.6 Percentage of women aged 15-49 who have ever undergone Cervix examinations	3.8.6 Proportion of women aged 30-49 years who report they were ever screened for cervical cancer and the proportion of women aged 30-49 years who report they were screened for cervical cancer during the last 5years
			3.8.7 Percentage of women aged 15-49 years and men aged 15-49 years with useof any kind of tobacco	3.8.7 Percentage of women aged 15-49 years and men aged 15-49 years with use of any kind of tobacco,
			3.8.8 Total physicians, nurses and midwives per 10,000 population.	3.8.8 Total physicians,nurses and midwives per 10,000 population.
3.9	By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	3.9.1 Mortality rate attributed to unintentional poisoning, (per 1,00,000 population)	3.9.1 Mortality rate attributed to unintentional poisoning, (per 1,00,000 population)	3.9.1 Mortality rateattributed to unintentional poisoning, (per1,00,000 population)
		3.9.2 Proportion of men and women reporting Asthma in the age group (aged 15-49 years) (in percentage)	3.9.2 Proportion ofmen and women reporting Asthma in the age group (aged15-49 years) (in percentage)	3.9.2 Proportion of men and women reporting Asthma in the age group (aged 15-49 years) (in percentage)
		3.9.3 Mortality rate attributed to unintentional poisoning		
3.a	Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate	3.a.1 Age - standardised prevalence of current tobacco use among persons aged 15 years and older.	3.a.1 Percentage of women aged 15-49 years and men aged 15-49 years who use any kind of tobacco	3.a.1 Prevalence of current tobacco usesamong men and women aged 15 -49 years

3.b	Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries touse to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health and in particular, provide access to medicines for all	3.b.1 Proportion of the target population cover by all vaccines included in their national programme	3.b.1 Budgetary allocation for Department of Health Research	3.b.1 Budgetaryallocation for Department of Health Research
		3.b.2 Total net official development assistance to medical research and basic health sectors		
		3.b.3 Proportion of health facilities that have a core set of relevant essential medicines available and affordable on a sustainable basis		
3.c	Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries andsmall island developing States	3.c.1 Health worker density and distribution	3.c.1 Total physicians, nurses and midwives per 10,000 population, in percentage	3.c.1 Total physicians,nurses and midwives per 10,000 population,in percentage
			3.c.2 Percentage of government spending (including current and capital expenditure) in health sector to GDP	3.c.2 Percentage of government spending (including current and capital expenditure) in health sector to GDP
3.d	Strengthen the capacity of all countries in particular developing countries for early warning risk reduction and management of national and global health risk	3.d.1 International Health Regulations (IHR) capacity and health emergency preparedness		
		3.d.2 Percentage of blood stream infections due to selected antimicrobial-resistant organisms		

Glossary

ABER	:	Annual Blood Examination Rate
AB-HWCs	:	Ayushman Bharath Health and Wellness Centres
ACD&RS	:	Active Case Detection and Regular Surveillance
ACM	:	Alphacypermethrin
AERB	:	Atomic Energy Regulatory Board.
AH	:	Area Hospital
AHCT	:	Aarogyasri Health Care Trust
AIDS	:	Acquired Immuno Deficiency Syndrome
ALOS	:	Average Length of Stay
AMC	:	Annual Maintenance Contract
AML	:	Additional Medicines List
ANC	:	Anti Natal Care
ANCDR	:	Annual New Case Detection Rate
ANM	:	Auxiliary Nurse Midwife
API	:	Annual Parasite Incidence
AR	:	Absconding Rate
ART	:	Anti-Retroviral Therapy
ASHA	:	Accredited Social Health Activist
AYUSH	:	Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy
BMW	:	Bio-Medical Waste
BOR	:	Bed Occupancy Rate
BPL	:	Below Poverty Line
BTR	:	Bed Turnover Rate
CCI	:	Container Corporation of India
CDAC	:	Centre for Development of Advanced Computing
CDSCO	:	Central Drugs Standard Control Organisation
CH&FW	:	Commissionerate of Health and Family Welfare
CHC	:	Community Health Centre
CHO	:	Community Health Officer
CMC	:	Comprehensive Maintenance Contract
CMS	:	Central Medicine Store
COE	:	Centre for Excellence
CoHFW	:	Commissioner of Health and Family Welfare
CSR	:	Corporate Social Responsibility
CSSD	:	Central Sterile Supply Department
CTD	:	Central Tuberculosis (TB) Division
DBT	:	Direct Benefit Transfer
DCA	:	Drugs Control Administration
DDT	:	Dichloro-Diphenyl-Trichloroethane
DG	:	Diesel Generator
DH	:	District Hospital
DME	:	Director of Medical Education
DMHO	:	District Medical & Health Officer

DNB	:	Diplomate of National Board
DND	:	Diploma of National Board
DoPH	:	Directorate of Public Health
DPCU	:	Dedicated Paediatric Care Unit
DPT	:	Diphtheria, Pertussis and Tetanus
DR	:	Discharge Rate
DVDMS	:	Drugs, Vaccine Distribution Management System
ECMO	:	Extra Corporeal Membrane Oxygenation
ECRP	:	Emergency COVID Response Package
EEG	:	Electro Encephalogram
EG	:	Empowered Group
eHMS	:	Electronic Health Management System
EML	:	Essential Medicines List
EMRI	:	Emergency Management and Research Institute
EMS	:	Emergency Medical Services
ENT	:	Ear, Nose and Throat
EPC	:	Empowered Programme Committee
ER	:	Emergency Room
FDC	:	Fixed Drug Combination
FDHS	:	Fixed Day Health Services
FNB	:	Fellow of National Board
FNO	:	Facility Nodal Officer
GDP	:	Gross Domestic Product
GGH	:	Government General Hospital
GHE	:	Government Health Expenditure
GHMC	:	Greater Hyderabad Municipal Corporation
GM	:	General Medicine
GNM	:	General Nursing and Midwifery
GoI	:	Government of India
GSDP	:	Gross State Domestic Product
HAI	:	Hospital Acquired Infections
HDN	:	Haemorrhagic Disease of the Newborn
HDU	:	High dependency unit
HFs	:	Health Facilities
HIV	:	Human Immuno Deficiency Virus
HLD	:	High Level Disinfection
HM&FW	:	Health, Medical and Family Welfare
HMIS	:	Health Management Information system
HoD	:	Head of the Department
HWC	:	Health Wellness Centre
HYD	:	Hyderabad
ICU	:	Intensive Care Unit
IDSP	:	Integrated Disease Surveillance Project

IFA	:	Iron Folic Acid
IMCA	:	Indian Medical Council Act
IMCC	:	Indian Medicine Central Council
IMR	:	Infant Mortality Rate
IPD	:	Inpatient Department
IPHS	:	Indian Public Health Standards
ITDA	:	Integrated Tribal Development Agency
JE	:	Japanese Encephalitas
JPV	:	Joint Physical Verification
LAMA	:	Left Against Medical Advice
LCDC	:	Leprosy Case Detection Campaign
LHV	:	Lady Health Visitor
LLIN	:	Long-Lasting Insecticide Nets
LMO	:	Liquid Medical Oxygen
LOT	:	Liquid Oxygen Tanks
LS	:	Laboratory Services
LSCS	:	Lower Segment Caesarean Section
MA&UD	:	Municipal Administration and Urban Development
MBBS	:	Bachelor of Medicine, Bachelor of Surgery
MBNR	:	Mahabubnagar
MCH	:	Mother and Child Hospital
MCI	:	Medical Council of India
MD	:	Doctor of Medicine
MDC	:	Medicine Distribution Centre
MDT	:	Multi Drug Therapy
MGM	:	Mahatma Gandhi Memorial Hospital
MGPS	:	Medical Gas Pipeline System
MHU	:	Mobile Health Unit
MIP	:	Men in Position
MLHP	:	Mid Level Health Providers
MMR	:	Maternal Mortality Rate
MNJ	:	Mehdi Nawaz Jung
MNO	:	Male Nursing Orderly
MO	:	Medical Officer
MoHFW	:	Ministry of Health and Family Welfare
MoU	:	Memorandum of Understanding
MPCE	:	Monthly Per Capita Expenditure
MPHA	:	Multi Purpose Health Assistant
MPHEO	:	Multi Purpose Health Extension Officer
MS	:	Master of Surgery
MSG	:	Mission Steering Group
MSR	:	Minimum Standard Requirements

NABH	:	National Accreditation Board for Hospitals and Health Care Providers
NAM	:	National Ayush Mission
NBE	:	National Board of Examination
NCI	:	Nursing Council of India
NCISM	:	National Council for Indian System of Medicine
NCVBDC	:	National Centre for Vector Borne Diseases Control
NFHS	:	National Family Health Survey
NHM	:	National Health Mission
NHP	:	National Health Policy
NIDDCP	:	National Iodine Deficiency Disorder Control Programme
NIMS	:	Nizam Institute of Medical Sciences
NITI	:	National Institution for Transforming India
NLEP	:	National Leprosy Eradication Programme
NMC	:	National Medical Commission
NMHP	:	National Mental Health Programme
NMR	:	Neonatal Mortality Rate
NPCB	:	National Programme for Control of Blindness
NPCDCS	:	National Programme for prevention and Control of Cancer, Diabetes, Cardio-Vascular Diseases and Stroke
NPHCE	:	National Programme for Health Care of the Elderly
NQAS	:	National Quality Assurance Standards
NRHM	:	National Rural Health Mission
NSP	:	National Strategic Plan
NSQ	:	Not of Standard Quality
NTCP	:	National Tobacco Control Programme
NUHM	:	National Urban Health Mission
NVBDCP	:	National Vector Borne Disease Control Programme
NVHCP	:	National Viral Hepatitis Control Programme
OBG	:	Obstetrics and Gynaecology
OMC	:	Osmania Medical College
OOPE	:	Out Of Pocket Expenditure
OPD	:	Outpatient Department
OPV	:	Oral Polio Vaccine
OT	:	Operation Theatre
PCPNDT Act	:	Pre-Conception and Pre-Natal Diagnostic Techniques (PCPNDT) Act, 1994
PD	:	Paediatrics
PHC	:	Primary Health Centre
PIP	:	Project Implementation Plan
PM CARES	:	Prime Minister's Citizen Assistance and Relief in Emergency Situations.
PMMVY	:	Pradhan Mantri Matru Vandana Yojana

PMSSY	:	Pradhan Mantri Swasthya Suraksha Yojana
PO	:	Purchase Order
PPSA	:	Patient Provider Support Agency
PR	:	Prevalence Rate/Panchayat Raj
PSA plant	:	Pressure Swing Adsorption plant
PW	:	Pregnant Women
QC	:	Quality Control
R&B	:	Road and Buildings
RC	:	Rate Contract
RCH	:	Reproductive and Child Health
RCS	:	Reconstructive Surgery
RFP	:	Request for Proposal
RHS	:	Rural Health statistics
RIMS	:	Rajiv Gandhi Institute of Medical Sciences
RMO	:	Resident Medical Officer
RNTCP	:	Revised National Tuberculosis Control Programme
ROP	:	Record of Procedings
ROR	:	Referral Out Rate
RTI(Act)	:	Right to Information Act
RT-PCR	:	Real-time reverse Transcriptase Polymerase Chain Reaction
SAAP	:	State Annual Action Plan
SAS	:	State Ayush Society
SBA	:	Still Birth Attendance
SC	:	Sub Centre
SCM	:	Supply Chain Management
SDG	:	Sustainable Development Goals
SDRF	:	State Disaster Response Fund
SHC	:	Sub Health Centres
SHM	:	State Health Mission
SHS	:	State Health Society
SHSRC	:	State Health System Resource Centres
SIHFW	:	State Institutes of Health and Family Welfare
SLAC	:	Sparsh Leprosy Awareness Campaign
SOP	:	Standard Operating Procedure
SPCB	:	State Pollution Control Board
SPMU	:	State Programme Management Unit
SRS	:	Sample Registration System
SS	:	Sanctioned Strength
STP	:	Sewage Treatment Plant
SW	:	Social Welfare
TB	:	Tuberculosis
TFR	:	Total Fertility Rate
THE	:	Total Health Expenditure

TIMS	:	Telangana Institute of Medical Sciences and Research
TLD	:	Thermo Luminescence Dosimeter
TSIIC	:	Telangana State Industrial Infrastructure Corporation
TSMSIDC	:	Telangana State Medical Services and Infrastructure Development Corporation
TSP	:	Tribal Sub Plan
TSPCB	:	Telangana State Pollution Control Board
TT	:	Tetanus Toxoid
TVVP	:	Telangana Vaidya Vidhana Parishad
U5MR	:	Under Five Mortality Rate
UCs	:	Utilisation Certificates
UPHC	:	Urban Primary Health Centre
UPS	:	Uninterrupted Power Supply
UT	:	Union Territory
VHSNC	:	Village Health, Sanitation and Nutrition Committee
VISHWAS	:	Village -based initiative to Synergizing Health Water and Sanitation
VLC	:	Voucher Level Computerisation
VNR	:	Voluntary National Review
WD&CHW	:	Women Development and Child Welfare
WGL(R)	:	Warangal (Rural)
WHO	:	World Health Organisation

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