

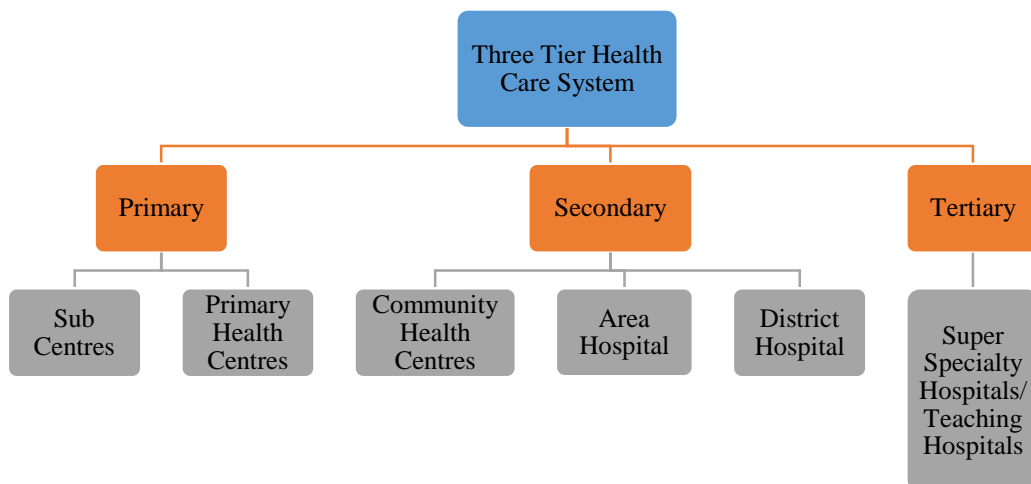
1.1 Introduction

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.

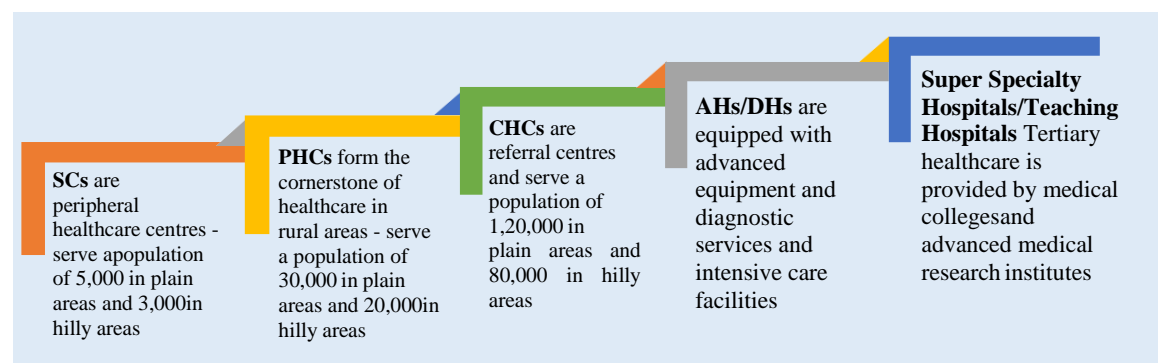
Chart 1.1 – Three Tier Health Care System in the State of Telangana



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 response 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

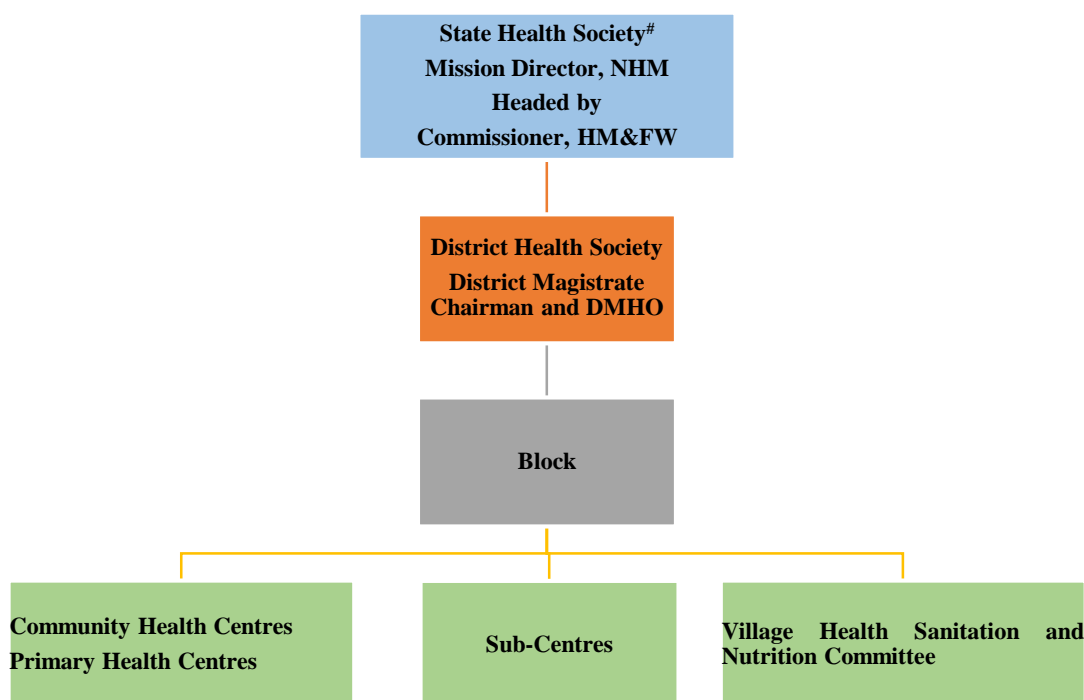
1.1.3 Schemes of the Government of India (GoI) implemented in the State

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) Kit³ scheme was implemented⁴ 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
1 st	₹3,000	<ul style="list-style-type: none"> 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.
2 nd	₹5,000 (For Female child) ₹4,000 (For male child) (KCR kit also be provided to the pregnant women after delivery)	<ul style="list-style-type: none"> Delivery in public health institution. The Child has to be administered BCG, OPV 0 dose and Birth Dose of Hepatitis B.
3 rd	₹2,000	<ul style="list-style-type: none"> 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.
4 th	₹3,000	<ul style="list-style-type: none"> 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

**Performance Audit Report on
Public Health Infrastructure and Management of Health Services in Telangana State**

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:

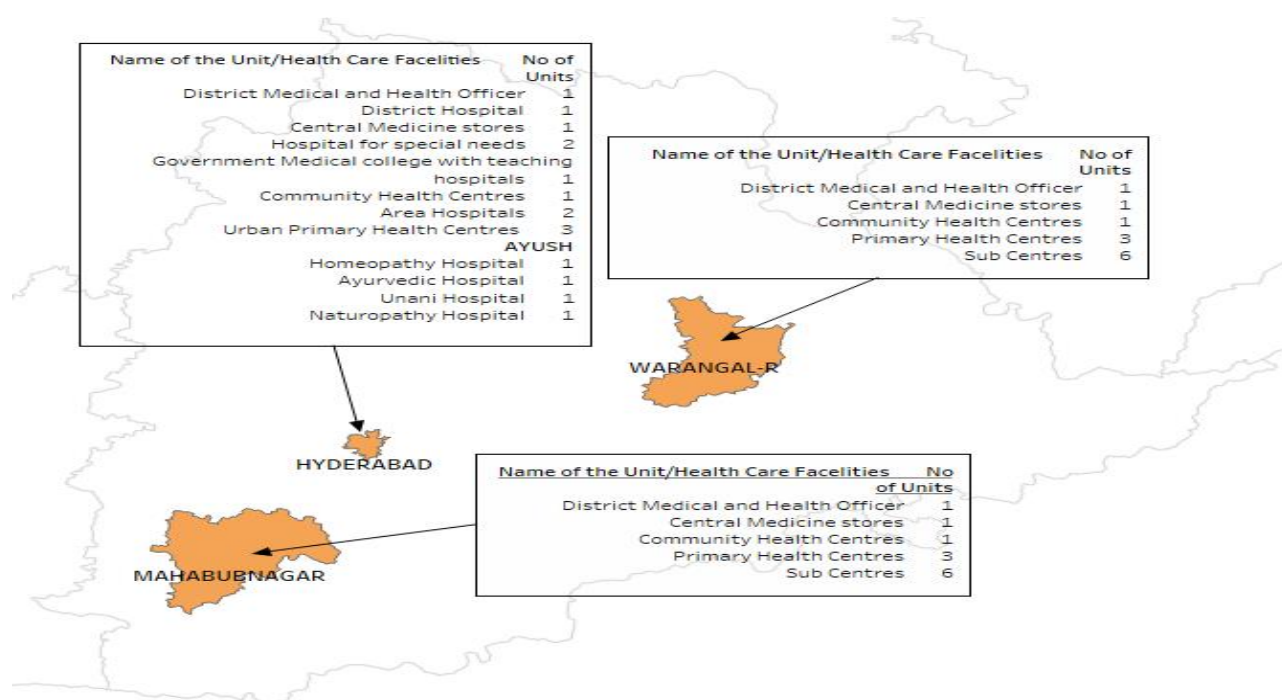


Table 1.6 - Details of test checked units

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 Management
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.