



SUPREME AUDIT INSTITUTION OF INDIA
लोकहितार्थ सत्यनिष्ठा
Dedicated to Truth in Public Interest

**Report of the
Comptroller and Auditor General of India
on Public Health Infrastructure and Management
of Health Services in Andhra Pradesh**



Government of Andhra Pradesh
Department of Health, Medical & Family Welfare
Report No. 3 of 2024
(Performance Audit - Civil)

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Preface

This Report has been prepared for submission to the Governor of Andhra Pradesh under Article 151 of the Constitution of India for being laid before the State Legislature.

This Report of the Comptroller and Auditor General of India contains significant results of the Performance Audit on '***Public Health Infrastructure and Management of Health Services in Andhra Pradesh***' covering the period 2017-18 to 2021-22.

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 assistance and co-operation extended by the officers and staff of Departments of Health, Medical & Family Welfare, Andhra Pradesh Pollution Control Board (APPCB).

Executive Summary

Public health is the science and art of preventing disease, prolonging, and promoting life through organised efforts of the Government and society. Public health infrastructure provides communities, States, and Nation the capacity to prevent disease, promote health, and prepare for and respond to both acute threats and chronic challenges to health. The framework for strengthening health infrastructure in India is guided by the National Health Policy (NHP), 2017, which aims to strengthen and prioritise the role of the Government, in shaping health systems in all its dimensions. The policy also recognises the pivotal importance of Sustainable Development Goal-3 in ensuring healthy lives and promoting wellbeing for all. The Indian Public Health Standards (IPHS) is a set of uniform standards, envisaged to improve the quality of healthcare delivery in the country and serve as a benchmark for assessing the functional status of healthcare facilities.

The Performance Audit on *'Public Health Infrastructure and Management of Health services in Andhra Pradesh'* was taken up to assess adequacy of funding, health infrastructure, human resources, availability of drugs and equipment, and management of healthcare and emergency services. This Report aims to identify the areas that require systemic corrections and improvement.

The major findings of the Performance Audit are presented below:

1. Shortfalls were noticed in all the cadres at Sub Centre level and in administrative cadres in PHCs. Further, 743 Specialists and Medical Officers' posts are vacant against sanctioned posts of 3,316 in secondary healthcare. Government should ensure to provide required human resources to deliver healthcare services effectively at primary and secondary levels.
2. In Andhra Pradesh, 149 posts out of 608 posts in Professor cadre and 156 posts out of 744 posts in Associate Professor cadre in 11 Government Medical Colleges (GMCs) were vacant. We recommend that Government should provide required human resources in Medical colleges for their smooth functioning.
3. Out of five test checked trauma care centres¹, we observed that staff were not provided in two² Health Care Facilities (HCFs). Other three Trauma care centres were functioning with minimal staff. We recommend that Government may provide adequate manpower in trauma care centres.
4. The department had not maintained centralised database of sanctioned strength, person in position and unit wise deployment of staff. We recommend that Government should develop a Human Resource Management System (HRMS) to track deployment of staff in all Health Care Facilities on real time basis.

¹ GGHs Anantapur, Nellore and Srikakulam, DH Tekkali, and CHC Naidupeta

² Naidupeta and GGH Anantapur

5. Intensive Care Units (ICUs) was not available in five out of 12 District Hospitals (DHs). Further, we observed that equipment in ICUs³ and obstetric High Dependency Units (HDUs)⁴, were non-functional due to shortage of manpower depriving the critical care and life support to patients. We recommend that Government should provide amenities, equipment, and manpower to the Health Care Facilities (HCFs) as per requirement for delivery of quality services for curative care.
6. Lack of full range laboratory services was noticed in all test checked secondary HCFs due to which the patients would be forced to avail these services from private labs. We recommend that Government should provide full range of tests/investigations in the laboratories along with adequate laboratory equipment as per Indian Public Health Standards (IPHS) in all Secondary Healthcare Facilities.
7. Need based indenting of drugs and surgical items was not done nor were the supplies made as indented.
8. Near expiry drugs of value ₹2.14 crore were distributed to the HCFs at three test checked Central Drug Stores (CDS). We recommend that Government should ensure timely return of near expiry drugs to suppliers for replacement of stock by all CDS.
9. There is no systematic need assessment of equipment in HCFs, even though the procurement policy had laid out clear guidelines. Lack of human resources, adequate space and financial resources resulted in idling and non-functional equipment worth ₹4.77 crore in eight test checked HCFs. We recommend that Government should streamline the system for need assessment of equipment to avoid wastage and idling.
10. We observed that there was no provision for local purchase of drugs and medicines, when the indented drugs and medicines were not provided or out of stock in primary and secondary HCFs. We recommend that flexibility shall be given to HCFs to meet emergency needs by providing local purchase budget for drugs and medicines.
11. We observed that there were only 175 CHCs as against required 412 CHCs in the State as per IPHS 2012. Hence, Government should increase the number of CHCs to reduce patient load at AHs and DHs and to ensure availability of timely and affordable healthcare.
12. We observed that there were delays in completion of upgradation works in the medical colleges for which medical seats were increased. This would impact the training of medical students and cause inconvenience to the patients. It is also

³ DHs Hindupur and Atmakur, AHs Kadiri and Kavali

⁴ DHs Atmakur and Tekkali, AHs Kadiri and Seethampet

recommended to provide required infrastructure whenever the intake capacity of a Medical College is increased.

13. During patient surveys, it was noticed that patients had to opt for private treatment due to shortage of equipment. Government should ensure that amenities and equipment are provided to the HCFs as per requirement to deliver quality services.
14. Against a target of health sector expenditure of more than eight *per cent* of State budget to be achieved by the year 2020, the State could achieve only 3.11 *per cent* (March 2022). Further the State had not achieved the initial targeted expenditure of 1.15 *per cent* of GSDP on health set in 2017 during the years 2017-22. We recommend that the Government may enhance expenditure on healthcare services to the expected level of eight *per cent* of total State Budget and to 2.50 *per cent* of GSDP to ensure that adequate and quality healthcare infrastructure and services are provided to the Public.
15. The State Government had not released the State share of ₹350.93 crore for the years 2017-22 towards various programmes under National Health Mission (NHM). The State Government did not avail financial assistance extended by NABARD and World Bank in full and funds received were also not fully utilised. The State Government may ensure optimum utilisation of funds available under NHM.
16. Though funds amounting to ₹6.25 crore were provided in 2018-19, State Blood Cell screened only one *per cent* of the targeted two lakh tribal children. This may increase the risk of disorders such as haemoglobin C disease, haemoglobin S-C disease, Sickle Cell anaemia, Thalassemia and other mutations. SBC may increase screening of tribal families and children to check and control blood disorder diseases such as haemoglobin C disease, haemoglobin S-C disease, Sickle Cell anaemia, Thalassemia and other mutations.
17. There was a vacancy of 107 posts out of 884 sanctioned (12.10 *per cent*) posts for implementing National Tuberculosis Elimination Programme (NTEP), in all the 13 cadres in the State. This hampered the implementation of NTEP programme as the case notification rate increased from 151 in 2019 to 174 per lakh population by October 2022. Regarding National Leprosy Eradication Programme (NLEP), prevalence Rate of G2D is more than two *per cent* against the target of one *per cent* and the proportion of child cases (5.46 *per cent* in 2021-22) among new Leprosy cases is a matter of concern. This indicates that the tracing, tracking, and reporting of the disease in the community are not adequate. Government may take appropriate action to address the shortfall in manpower, spend the allocated funds optimally, improve monitoring and surveillance to make the State TB free and Leprosy free as per Sustainable Development Goal (SDG) 3.

18. Third party clinical audits were not conducted in line with PMNDP scheme guidelines. Government should establish a mechanism to conduct third party clinical audits and to act upon the observations as per the scheme guidelines, and to maintain a database of such audit reports along with Action Taken Reports.
19. The Drug Regulatory mechanism was not efficient considering the shortfall in manpower to conduct inspections on the functioning of drug manufacturing facilities and sales units. In spite of provision of funds by GoI for strengthening of Drug Regulatory System, the funds were not released in full by GoAP and thereby prevented the Drug Control Administration from delivering functions effectively. Government needs to strengthen the Regulatory mechanism of Drug Control Administration by deploying more manpower for inspection of manufacturing/sale units of drugs.
20. Suspension/cancellation of registrations of Private Medical Care Establishments (PMCEs) was based on complaints received only. Thus, regular inspections would have brought more such cases and led to effective monitoring by the concerned District Registering Authorities (DRAs). The Department may strengthen the enforcement of Andhra Pradesh Allopathic Private Medical Care Establishments Act mechanism and ensure regular inspections, so that all the PMCEs should function with valid registration certificates.
21. Effluent Treatment Plants were not installed in the test checked secondary HCFs. The Sewage Treatment Plants (STPs) installed at Government General Hospitals Srikakulam and Nellore were non-functional. STPs were not installed in the test-checked DHs and AHs. There was delay in disposal of waste by some of the test checked HCFs. Bar coding system⁵ for monitoring the implementation of BMW Rules 2016, was implemented partially. Government may ensure installation of Effluent Treatment Plants in all secondary health care facilities. Government may make STPs functional for safe handling of liquid biomedical waste, where they were dysfunctional and ensure establishment in 100 and above bedded Government hospitals.
22. State Level Authority (SLA) which has to conduct inspections of the registered hospitals/diagnostic centres had covered only two *per cent* of the registered hospitals/ diagnostic centres/labs during 2017-22. Annual reports on BMW generation and disposal were not furnished to APPCB. Government should ensure that various regulatory bodies may adopt an adequate and effective monitoring mechanism to guarantee conformity with the necessary minimum standards.
23. About 37 *per cent* of the District Hospitals/ Area Hospitals, 7 *per cent* of CHCs and 28 *per cent* of the PHCs in the State are having accreditation certificates under National Quality Assurance Standards. Government may instruct all the

⁵ helps in accounting the quantity of Biomedical waste being collected, treated and disposed

HCFs to maintain minimum quality standards to give an assurance of quality health care to the intended population.

24. The State Government did not provide sufficient budgetary support for improvement of infrastructure facilities and enough drugs in Ayurveda, Yoga, Naturopathy, Unani, Siddha and Homeopathy (AYUSH) Hospitals, colleges and dispensaries. State Government did not release the approved funds under National Ayush Mission (NAM), thereby prevented the implementation of targeted activities proposed under State Annual Actions Plan (SAAP). The State Government needs to release the funds provisioned as per approved SAAP and ensure timely release of funds towards matching share under NAM for optimal utilisation of scheme funds.
25. The test-checked colleges and hospitals under AYUSH lacked infrastructure facilities, equipment, laboratories and development/farming of medicinal plants and there was shortfall in availability of drugs and medicines, thereby affected the performance of these institutes. The State Government may ensure that adequate infrastructure facilities, equipment, and drugs are provided to the hospitals/dispensaries under AYUSH.
26. Shortage of Medical and paramedical permanent staff in the test-checked AYUSH Hospitals and educational institutions was noticed. Vacancies in teaching, medical, paramedical and other posts would affect the quality of services and education. The State Government may take steps to recruit required staff for AYUSH medical and educational institutions.

As per the provisions of Clinical Establishment Act 2010 (CEA) for regulating Hospitals, Clinics, Diagnostic services and Laboratories should have Regulatory mechanism which was absent in HCFs under AYUSH. The State Government may ensure implementation of CEA for regulating Hospitals, Clinics, Diagnostic services and Laboratories under AYUSH.

Chapter I

Introduction

Chapter I

Introduction

1.1 Introduction

World Health Organisation defined health as a state of complete physical, mental, and social wellbeing rather than mere absence of disease and infirmity. Public health is the science and art of preventing disease, prolonging life and promoting life through organised efforts of the Government and society. Public health has made a significant impact on the health of the population, making people healthy and saving lives.

Public health infrastructure provides communities, States, and Nation the capacity to prevent disease, promote health, and prepare for and respond to both acute (emergency) threats and chronic (ongoing) challenges to health. It is the foundation for planning, delivering, evaluating and improving public health. Public health services depend on the availability of basic infrastructure.

Every public health program such as immunisation, infectious disease monitoring, cancer and asthma prevention, drinking water quality and injury prevention requires health professionals who are competent in cross-cutting and technical skills, up-to-date information systems and capacities to assess and respond to community health needs. Public health infrastructure is “the nerve centre of public health system”.

Adequate funds, drugs, equipment and human resource are essential for prudent management of health services.

Life expectancy refers to the number of years a person can expect to live. It is an important way of assessing the health of a population and is used to inform health policy and initiatives that impact everyday life.

The Life expectancy of India, Andhra Pradesh and its neighbouring states is shown in **Table 1.1**.

Table 1.1: Life Expectancy in Andhra Pradesh and India

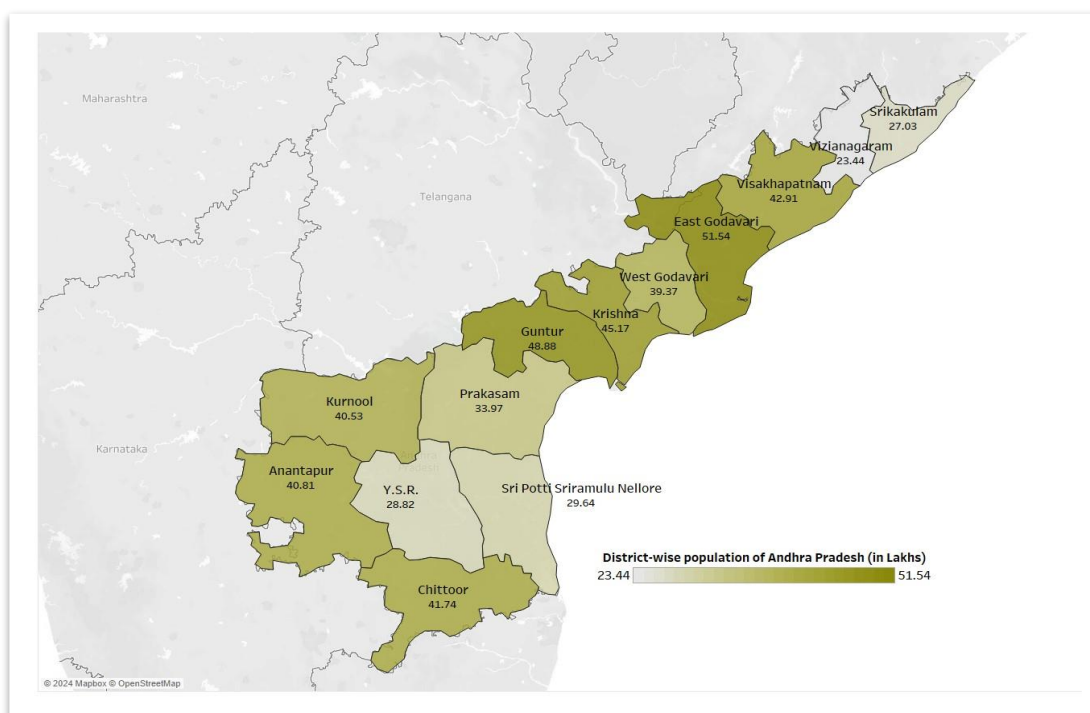
Life expectancy at birth	Andhra Pradesh	Kerala	Karnataka	Tamil Nadu	India
2014-18	69.7	75.2	69.2	71.7	69.0
2015-19	70.3	75.2	69.5	72.6	69.7
2016-20	70.6	75.0	69.8	73.2	70.0

Source: Office of the Registrar General of India, Ministry of Home Affairs

Though life expectancy at birth in Andhra Pradesh is above the country's average, it is below that of southern States of Kerala and Tamil Nadu.

1.2 Profile & demographics of Andhra Pradesh

The State of Andhra Pradesh has 26 districts after reorganisation of the erstwhile 13 districts with effect from April 2022. The population of the State as per census 2011 is 4,93,86,799. (Female 2.46 crore & Male 2.47 crore). Estimated population of the State in 2022 is 5,28,95,000. District wise population (2011 census) is shown in **Map 1.1**.

Map 1.1: Andhra Pradesh district wise population

1.3 Health indicators of Andhra Pradesh compared with National Health Indicators as per National Family Health Survey-5 (NFHS-5)

Government of India (GoI) designated the International Institute for Population Sciences (IIPS) as nodal agency to provide essential data for policy making and programme purposes. IIPS, collaborated with number of field organisations, conducted National Family Health Survey. Important health indicators of Andhra Pradesh and National indicators were compared in **Table 1.2**.

Table 1.2: Andhra Pradesh Health Indicators as per NFHS 5

Indicator	NFHS -4 (2015-16)		NFHS-5 (2019-21)	
	Andhra Pradesh	India	Andhra Pradesh	India
Sex ratio of the total population (females per 1,000 males)	1021	991	1045	1020
Sex ratio at birth for children born in the last five years (females per 1,000 males)	914	919	934	929
Total fertility rate (children per woman)	1.8	2.2	1.7	2.1
Neonatal mortality rate (NNMR)	23.6	29.5	19.9	24.9
Infant mortality rate (IMR)	34.9	40.7	30.3	35.2
Under-five mortality rate (U5MR)	40.8	49.7	35.2	41.9
Mothers who had an antenatal check-up in the first trimester (%)	82.3	58.6	81.7	70
Mothers who had at least 4 antenatal care visits (%)	76.3	51.2	67.5	58.1
Mothers whose last birth was protected against neonatal tetanus ⁶ (%)	94.9	89	92.8	92

⁶ includes mothers with two injections during the pregnancy for their last birth, or two or more injections (the last within three 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.

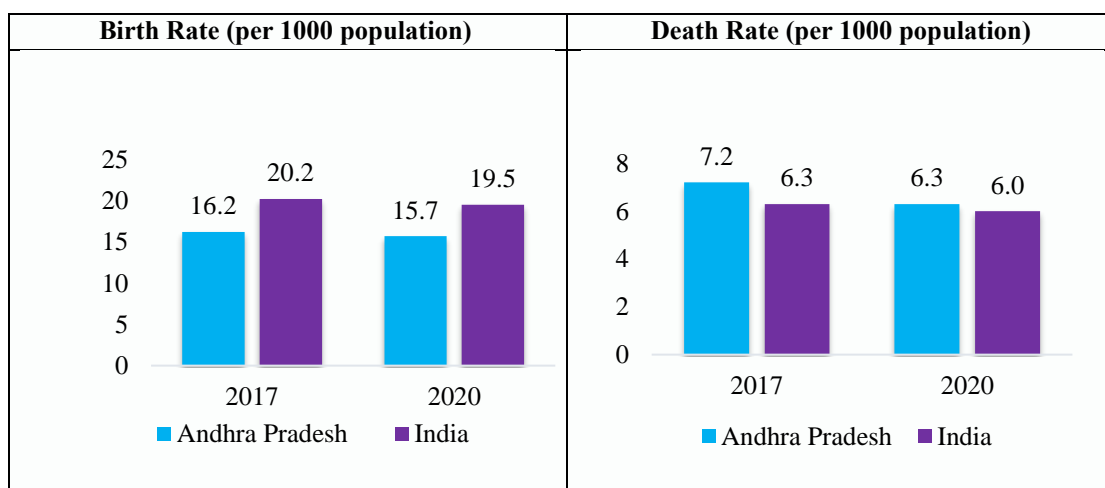
Indicator	NFHS -4 (2015-16)		NFHS-5 (2019-21)	
	Andhra Pradesh	India	Andhra Pradesh	India
Mothers who consumed iron folic acid for 100 days or more when they were pregnant (%)	56.1	30.3	70.3	44.1
Mothers who consumed iron folic acid for 180 days or more when they were pregnant (%)	30.6	14.4	41.1	26
Registered pregnancies for which the mother received a Mother and Child Protection (MCP) card (%)	92.6	89.3	96.5	95.9
Mothers who received postnatal care from a doctor/nurse/LHV/ANM/midwife/other health personnel within 2 days of delivery (%)	79.7	62.4	90.7	78
Average out-of-pocket expenditure per delivery in a public health facility (₹)	2322	3197	3105	2196
Children born at home who were taken to a health facility for a check-up within 24 hours of birth (%)	9.3	2.4	17.2	4.2
Institutional births (%)	91.5	78.9	96.5	88.6
Institutional births in public facility (%)	38.3	52.1	50.4	61.9
Births attended by skilled health personnel (%)	92.1	81.4	96.1	89.4
Births delivered by caesarean section (%)	40.1	17.2	42.4	21.5
Births in a private health facility that were delivered by caesarean section (%)	57	40.9	63	47.4
Births in a public health facility that were delivered by caesarean section (%)	25.5	11.9	26.6	14.3

Source: NFHS 4 and NFHS 5. State health indicators in green above have improved and in red deteriorated.

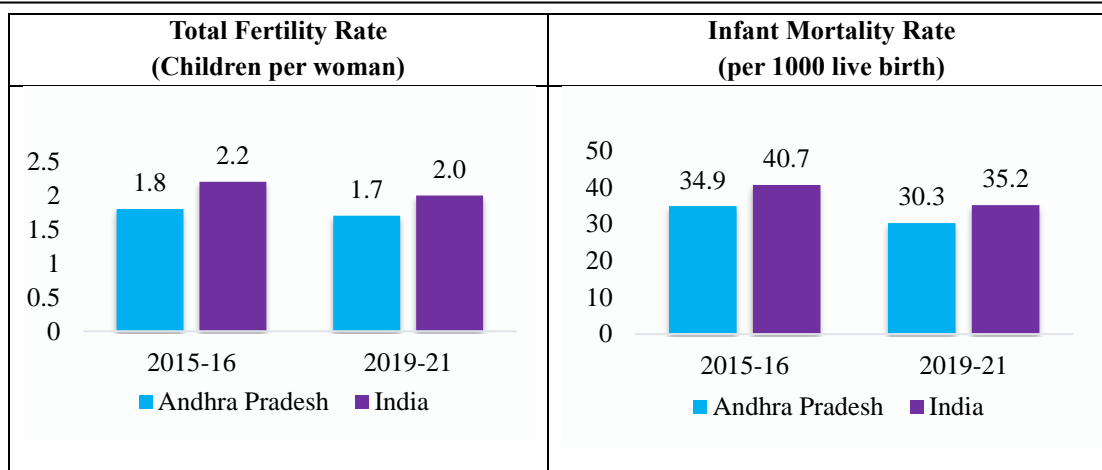
1.3.1 Status of Health Indicators in the State

Delivery of quality and efficient healthcare services in public health facilities plays a significant role in improving the health indicators of the public at large. Ministry of Health and Family Welfare conducts the periodic National Family Health Survey which captures various health indicators. The status of health indicators in the State is shown in **Chart 1.1** below:

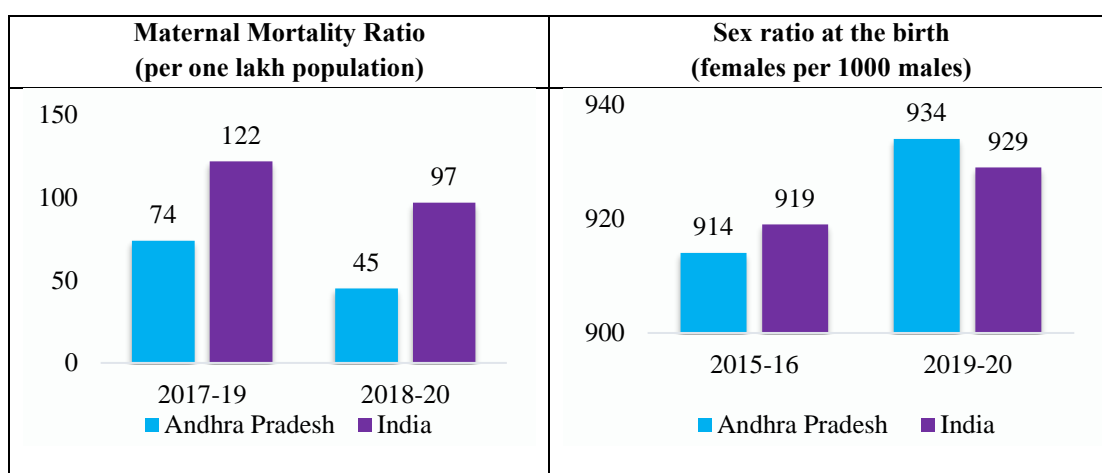
Chart 1.1: Health indicators in the State



Source: SRS Bulletin 2017 & 2020



Source: NFHS-5 2019-21



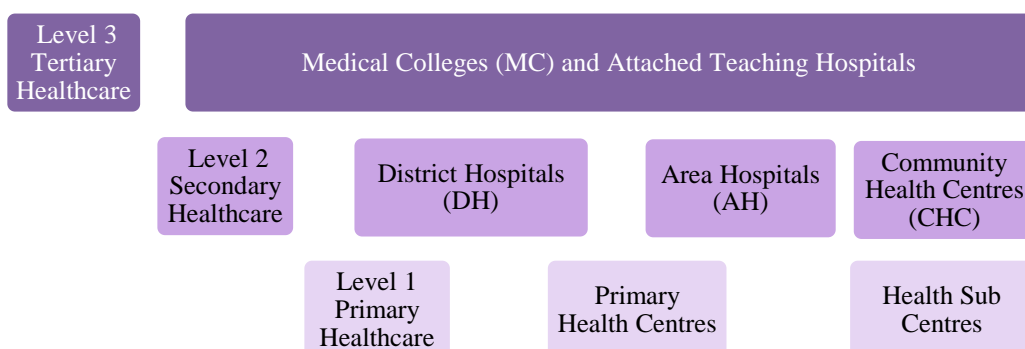
Source: SRS Bulletin on MMR 2017-19 and 2018-20

Source: NFHS-5

1.4 Public health organisational structure in the State

Availability, accessibility and usability of sound healthcare system is an essential requirement to meet the challenges in the field of Health. The Department of Health, Medical & Family Welfare (HM&FW) is the nodal department entrusted with the responsibility of providing health care in Andhra Pradesh. The public healthcare facilities in the State are divided into three levels (**Chart 1.2**) for providing primary, secondary and tertiary care.

Chart 1.2: Structure of Three tier healthcare facilities in the State



The Health Care Facilities available in Andhra Pradesh, as of March 2022 are given in **Table 1.3**.

Table 1.3: Healthcare facilities in the State

Type of Healthcare	Type of HCF	No. of HCFs
Primary Healthcare	Health Sub Centres (HSCs)	10,032
	Primary Health Centres (PHCs)	1,145
Secondary Healthcare	Community Health Centres (CHCs)	175
	Area Hospitals (AHs)	53
	District Hospitals (DHs)	12
Tertiary Healthcare	Government Medical Colleges and attached Hospitals	11
AYUSH	Dispensaries	735
	Hospitals	8
	Government Ayurvedic College	1
	Government Homeo Medical Colleges	3

Source: Data provided by the respective HoDs

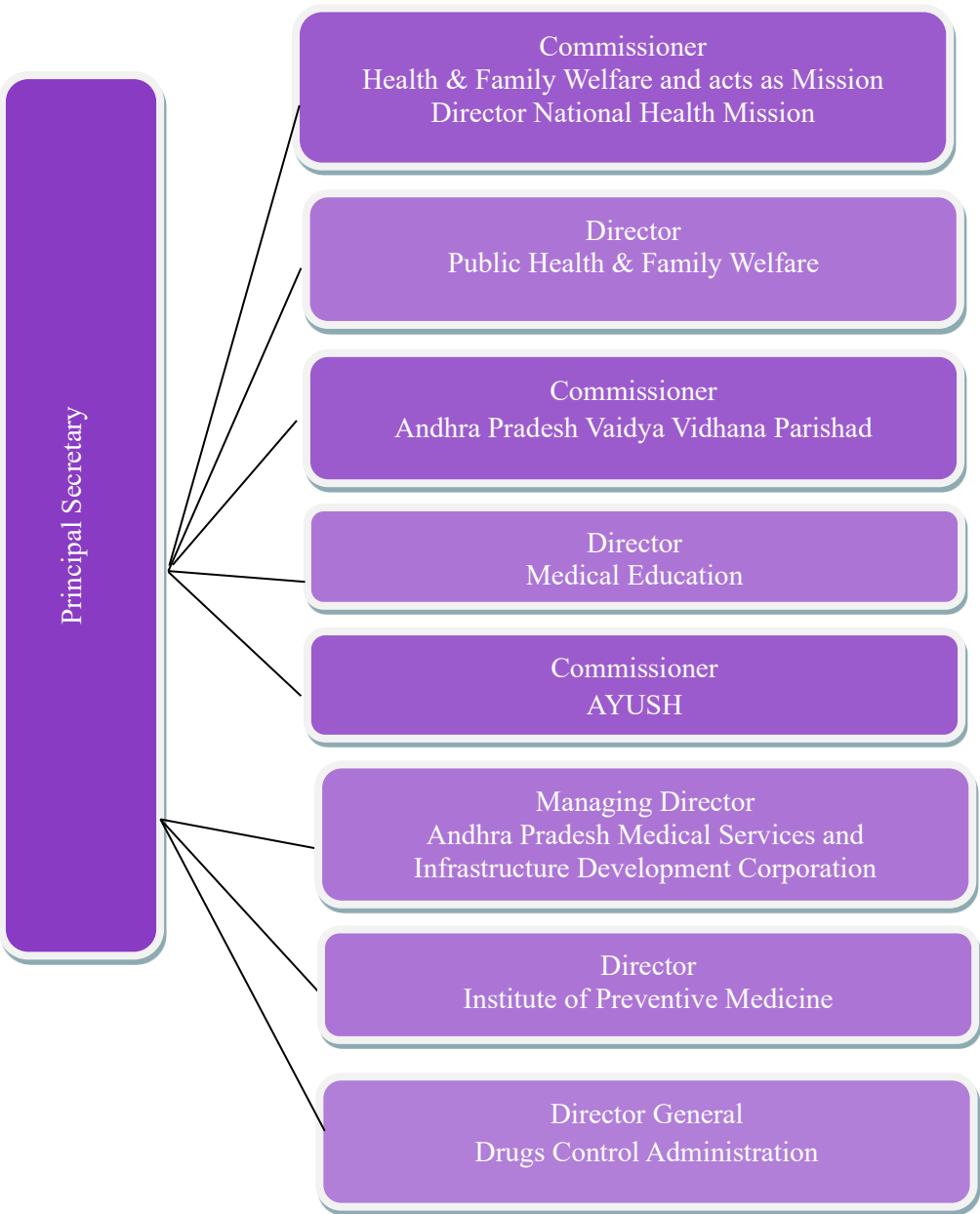
In addition to HCFs as above in western or allopathic system, HCFs exist in an indigenous system of medicine called AYUSH (Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy) being practiced in the Indian sub-continent.

Health care services include medical care, Maternal and Child Health (MCH) including family planning, Medical Termination of Pregnancy (MTP), management of Reproductive Tract Infection (RTI)/ Sexually Transmitted Infections (STI), nutrition, school health, adolescent health care, prevention and control of locally endemic diseases, collection and reporting of vital events, Physical Medicine and Rehabilitation(PMR), laboratory and diagnostic services, referral services, monitoring and supervision, Outpatient, In-Patient, 24 hours Emergency, Referral services proactively provide the community with designated ranges of curative, promotive and preventive services to address the health care needs of the catchment population.

The organisational structure of the Health, Medical and Family Welfare Department is given in **Chart 1.3** and detailed in **Appendix 1.1**.

Chart 1.3: Organisational Chart

ORGANOGRAM



1.5 Audit Objectives

This audit is aimed at assessing the performance of Government of Andhra Pradesh (GoAP) in planning and providing Public Health Infrastructure and Management of Health services in Andhra Pradesh. Audit also analysed the status with respect to achieving the intended outcomes envisaged in SDG 3 (Good Health and Wellbeing).

Audit was conducted to assess whether:

- Funding for healthcare is adequate at primary and secondary levels
- Availability of drugs, medicines, equipment, and other consumables in the health facilities is adequate,
- The availability and management of Healthcare Infrastructure is efficient and effective,
- The facilities/ hospitals have adequate human resources,
- Regulatory mechanisms for ensuring that quality health care services are provided by Public/ Private Health care facilities/ Practitioners were adequate and effective,
- Government spending on health has improved the health and wellbeing of people as per SDG 3, and
- Implementation of various schemes of Government of India including the assistance/ Grants/ equipment received by State is effective.

1.6 Audit criteria

The Performance Audit (PA) was benchmarked against the following Rules and Guidelines.

- National Health Policy, 2017
- United Nations Sustainable Development Goal-3
- Indian Public Health Standards (IPHS-2012 Revised)
- Drugs & Cosmetics Act, 1940 & Rules, 1945
- AP Allopathic Private Medical Care Establishment Act, 2002
- NHM Assessor's Guidebook for Quality Assurances, 2018
- Ayushman Bharat Comprehensive Primary Health Care guidelines, 2018
- National Quality Assurance Standards (NQAS)
- Minimum Standard Requirements for the Medical College Regulations, 1999
- Medical Council of India Act, 1956 as replaced by the National Medical Commission Act, 2019
- Bio Medical Waste Management Rules, 2016
- Indian Medicine Central Council (Requirement of minimum standard for undergraduate Ayurveda Colleges and attached hospitals) Regulations, 2016
- Homoeopathy Central Council (minimum standards requirement of Homoeopathic colleges and attached hospitals) Regulations, 2013

- Departmental Rules / Orders issued from time to time

1.7 Audit scope and methodology

The PA covering the period from 2017-18 to 2021-22, was conducted during May 2022 to November 2022. Audit covered the performance of HCFs of Primary, Secondary and Tertiary Healthcare of allopathy system of medicine. Besides, we have also examined the tertiary healthcare institutions of AYUSH.

Audit methodology involved scrutiny of relevant records in the following offices related to Public Health.

- Principal Secretary, Health, Medical & Family Welfare
- Commissionerate of Health & Family Welfare and Mission Director, National Health Mission (NHM)
- Commissioner of Andhra Pradesh Vaidya Vidhana Parishad (APVVP)
- Director of Public Health and Family Welfare
- Director of Medical Education
- Commissioner of AYUSH
- Managing Director, Andhra Pradesh Medical Services Infrastructure Development Corporation (APMSIDC)
- Director of Drugs Control Administration (DCA)
- District Medical and Health Offices

We selected three districts out of erstwhile 13 districts and 32 HCFs in these selected districts through SRSWOR⁷. In each selected district, offices of the AP Pollution Control Board (APPCB) and the Drugs Control Administration (DCA) were consulted, wherever the information was required. The detailed sample is given in **Appendix 1.2**.

For availability of drugs, equipment & kits, ten common ailments⁸ were selected and the findings of the test check in sampled hospitals for these ailments were discussed in the Report.

Apart from detailed examination in sampled HCFs, we included summary of Human Resources (HR), services and facilities in all District Hospitals. A summary of HR in all the PHCs of the State is also included.

Audit objectives, Sample and Methodology were explained to the representatives⁹ of the State Government in entry conference held on 6 April 2022. Audit findings were discussed with the Principal Secretary and Heads of the Departments in the exit conference held on 12 July 2023.

⁷ Simple Random Sampling without Replacement

⁸ Pregnancy and childbirth, Child health (Newborn/Infant/under five), Diabetes, Hypertension, Cardiovascular diseases, Diarrhoea, Malaria, Pneumonia (Both children & adults), Bite injuries (Snakes and dogs), Psychiatric conditions.

⁹ Dr V. Vinod Kumar, IAS- Commissioner, APVVP, Col. V.Ramulu, IPOS – Commissioner, Ayush, Dr. G.Hymavathi- Director of PH&FW and its representatives.

Government in its reply (August 2023) accepted some of the observations and assured compliance. Audit further visited 10 PHCs¹⁰ during September 2023 in the erstwhile Krishna and Guntur districts to verify the veracity of replies given by the Government.

1.8 Structure of the Report

Audit findings are discussed in the following nine Chapters of the report:

Chapter II	Human Resources
Chapter III	Healthcare Services
Chapter IV	Availability of Drugs, Medicines, Equipment, and other consumables
Chapter V	Availability and management of Healthcare Infrastructure in the State
Chapter VI	Financial Management
Chapter VII	Implementation of Centrally Sponsored Schemes
Chapter VIII	Adequacy and effectiveness of the regulatory mechanisms
Chapter IX	SDG 3 Good Health and Wellbeing
Chapter X	Functioning of AYUSH

¹⁰ Durgi, Mutukuru, Dhulipudi, Emani, Munnangi, Velagaleru, Agiripalli, Kondapalli, Kapileswarapuram and Srikakulam

Chapter II

Human Resources

Chapter II

Human Resources

In Primary Healthcare, the shortages in ANM posts and Mid-Level Health Providers in Sub-Health Centres were observed. Further, vacancy in the staff nurse cadre was 2.21 per cent (August 2023). Due to shortage in Public Health Nurse (Non-Technical) posts, the service area of 472 PHCs was deprived of sensitisation on primary health concerns. In Secondary Healthcare, the vacancy in the doctors cadre including specialists was 16 per cent (August 2023). In Tertiary Healthcare, 149 posts out of 608 posts of Professor cadre and 156 posts out of 744 posts of Associate Professor cadre were vacant (September 2022) in 11 GMCs. The shortfall in the posts of Professor and Associate Professor would increase workload on existing Professors and Associate Professors and thus would affect quality teaching in the teaching hospitals. Shortage of human resources in Medical College & Hospitals may hamper medical education and research work and compromise the quality of tertiary healthcare services.

2.1 Introduction

Human Resource (HR) is the most crucial resource towards the delivery of health services. The aim of HR planning is to make available the right kind of personnel in the right number with appropriate skills. HR includes various types of health resources such as doctors, nurses, pharmacists, lab technicians, radiographers *etc.*

Standards of health system are dependent on availability, accessibility, and quality of healthcare work force.

2.2 Human resource availability against sanctioned strength

IPHS, 2012 specified norms for availability of Human Resources for Primary and Secondary level Health care. However, Government stated (August 2023) that State had its own HR norms for each type of healthcare. Government Orders for approved staffing pattern was provided.

Audit observed shortfall in the posts of doctors, nurses, and paramedics in Primary Healthcare, Secondary Healthcare and Tertiary Healthcare sectors. Human resource position against the sanction in three sectors in the State is given below:

2.2.1 Primary Healthcare

To ensure round-the-clock access to public health facilities, Primary Health Centres are expected to provide 24-hour services with basic Obstetric and Nursing facilities.

2.2.1.1 Availability of Human Resources at Sub Centres / Sub Health Centres

Indian Public Health Standards (IPHS), 2012 service delivery norms recommended One Auxiliary Nurse & Mid-wife (ANMs) and one Multipurpose Health Worker-Male (MPHW-M) for each Sub Centre (SC). However, as per Ayushman Bharat Operational

Guidelines, 2018 for providing Comprehensive Primary Health Care, a key addition to the primary health team at the Sub-Health Centre (SHC), would be the Mid-level Health Provider (MLHP). Further, SHC should be equipped with two MPW (F) and one MPW(M).

As per information furnished by the Commissioner of Family Welfare, there were 18,212 ANMs out of 20,324 sanctioned posts. Staff requirement and availability in SCs is detailed in **Table 2.1**.

Table 2.1: Statement showing Human Resource position in SCs/SHCs

Sl. No.	Name of the Cadre	As per AB Guidelines	Required as per availability	Sanctioned Strength	Person-in-position	Vacancy against required	Percentage of vacancy
1	Auxiliary Nurse and Midwifery (ANM)/ Multi Purpose Health Assistant (MPHA) (F)	2	20,064	20,324	18,212	1,852	9.23
2	Multi Purpose Health Asst. (MPHA) (M)	1	10,032	5,046	2,559	6,639	66.18
3	Mid Level Health Provider (MLHP)	1	10,032	10,032	8,251	1,781	17.75

Source: Information furnished by CFW for ANMs& MLHPs and reply from DH for MPHs

Thus, 1,852 ANMs were required to be placed in vacancies to offer the services effectively to meet the requirement of AB-HWC norms. We observed only one¹¹ ANM, instead of requirement of two ANMs per SC/SHC, was available in seven test checked SCs/SHCs. Government (August 2023) was silent regarding the vacancies of ANMs.

Further, we observed huge vacancies *i.e.* 66 *per cent* in MPHA (Male) cadre. On this being pointed out Government replied (August 2023) that due to change in policy by Government recruitment in the cadre of MPHA (M) was stopped and the available are being utilised to work under Family Physician concept to cover three SCs/SHCs.

Government, further stated that MLHPs, with a qualification of BSc (Nursing) were recruited and more qualified than MPHAs and providing basic health services. However, this cadre is also not completely filled and about 18 *per cent* posts in the cadre are vacant.

Thus, the shortages in these cadres would impact the implementation of public health programmes and maternal & child health care respectively. These are the grass root health functionaries for the control of communicable diseases including Malaria, TB, Leprosy, Water Borne Diseases, as well as Environmental Sanitation, detection of disease outbreaks and their control, health education etc. They would be given a smaller population to meet the community health needs by establishing health linkages with the local community.

¹¹ Gorantla, under Kondapuramu PHC of Anantapur district

2.2.1.2 Availability of Human Resources for PHC Clinical Services

Clinical Health Service is defined as a single, diagnostic, therapeutic, rehabilitative, preventative, or palliative procedure or a series of such procedures that may be separately identified for the purpose of service.

We observed (October 2022) that shortfall of Human Resources for Clinical Services in test checked PHCs was as below.:

- Only one Medical Officer was available at two selected PHCs, Thummalapenta and Karajada PHCs against IPHS service delivery norms and AB-HWC norms of two Medical Officer/Civil Assistant Surgeon (CAS) posts to be available per PHC.
- Under NHM, PHCs are being operationalised for providing 24X7 services in various phases by placing at least three Staff Nurses in these HCFs. However, only three PHCs (Kondapuram, Kudair and Karajada) were provided with three staff nurses and the remaining five PHCs were functioning with two nurses only. Though all the PHCs were designated as 24X7 PHCs, due to non-availability of third staff nurse, no night services were available in five test checked PHCs¹². Medical Officers of two PHCs¹³, confirmed that they could not provide night services due to non-availability of third staff nurse, and
- Lab Technician post was vacant in Kondapuram PHC since February 2022, due to which only basic lab investigations for antenatal mothers were being offered by ANMs and Mid-Level Health Providers (MLHPs) as stated (August 2022) by the Medical Officer. Thus, due to non-availability of lab services, the patients were bound to visit other labs or to travel to other distant public labs and immediate treatment was denied.

Government accepted (August 2023) the audit observation and replied that presently the shortfall was reduced¹⁴ across all PHCs in the State. The status of PHC Human Resources as on August 2023 in the State is given in **Table 2.2**.

Table 2.2: Human Resource status in PHCs

Sl. No.	Name of the Cadre	As per IPHS 2012	As per GO Ms No 32		Person-in-position	Vacancy	Percentage of vacancy
			Staffing Pattern	Sanctioned Strength			
1	Civil Assistant Surgeon*	1	2	2,290	2,596	Nil	Nil
2	Staff Nurse	3	3	3,435	3,359	76	2.21
3	Lab-Technician Gr-II	1	1	1,145	1,129	16	1.40
4	Pharmacist Gr-II	1	1	1,145	1,127	18	1.57
5	Community Health Officer (CHO)/ Multi Purpose Health Officer (MPHEO)	1	1	1,145	1,572	Nil	Nil
6	Health Educator / Public Health Nurse (Non-	-	1	1,145	508	637	55.63

¹² Urlam, Inamadugu, Thummalapenta, Chennur and Kudair

¹³ Kondapuram and Inamadugu

¹⁴ GO Ms No. 32 of GoAP, HM&FW Dept. dated 24 Feb 2023

Sl. No.	Name of the Cadre	As per IPHS 2012	As per GO Ms No 32		Person-in-position	Vacancy	Percentage of vacancy
			Staffing Pattern	Sanctioned Strength			
	Technical) – PHN(NT)						
7	Multi Purpose Health Supervisor (Female) – MPHS (F)	1	1	1,145	1,540	Nil	Nil
8	Multi Purpose Health Supervisor (Male) – MPHS(M)	1	1	1,145	1,050	95	8.30
9	L.D computer/ Junior Assistant/Senior Assistant	1	1	1,145	1,145	Nil	0.00
10	Female Nursing Orderly (FNO)	3	1	1,145	1,145	Nil	0.00
11	Sanitary Attender cum Watchman		1	1,145	1,145	Nil	0.00
Total		13	14	16,030	16,316	842	

Source: Information furnished by Director, Public Health and Family Welfare

* As per AYUSHMAN BHARAT Operational Guidelines, 2018 for Comprehensive Primary Health Care through Health and Wellness Centres Two Medical Officers are required for a PHC

There was provision for either PHN-NT (Public Health Nurse -Nontechnical) or Health Educator to be filled in the PHC in the revised structure of PHCs. Against 673 posts of PHN-NT sanctioned, 508 posts were only available.

Since the post of PHN-NT is crucial in canvassing about child spacing methods, adolescent health, sanitation, oral health *etc.*, the service area of 472 PHCs¹⁵ would be deprived of sensitisation on primary health concerns. Further, the details of sanctioned strength and availability in Health Educators cadre was not furnished by the Government.

- Seventy six posts of Staff Nurses were vacant as of August 2023 in the State; however, night Services (24X7) were stated by the Government to be available in all the PHCs.

Since third post of staff nurse is required to provide Night Services, there is no scope in 76 PHCs to provide health services in the night.

- All the PHCs were provided with equipment and conducted 40 plus lab tests in their premises. There was no hub sample collection facility in Andhra Pradesh.

Since 16 posts of Lab technician were vacant, contention of Government to have conducted lab tests in all PHCs is not acceptable.

- As seen from the above table, all the posts under the cadre of LD Computer/ Junior Assistant / Senior Assistant are filled. However, during physical verification (September 2023) of selected PHCs, audit observed that the post was lying vacant in PHC, Mutukuru in Guntur district.
- As seen from above table, all the posts sanctioned across the State were occupied. However, during physical verification (September 2023), audit observed that the

¹⁵ out of 1145 PHCs only 673 posts were sanctioned

post of Female Nursing Orderly was vacant in two PHCs at Dhulipudi and Munnangi in Guntur district and the post of Attender-cum-watchman/ Sweeper was vacant in Dhulipudi PHC.

To overcome the time delays in lengthy recruitment process for filling up of posts at Health facility level, Government permitted¹⁶ the respective HoDs to fill the vacancies on real time basis without referring to Government, by following the rules in vogue.

However, the department had not maintained centralised database of sanctioned strength, actual person in position and unit wise deployment of staff. Shortfalls were noticed in filling the posts in all the cadres at Sub Centre level and administrative cadres at PHC level. This would affect the service delivery in providing Primary Healthcare services.

2.2.2 Secondary Healthcare

2.2.2.1 Doctors and specialists in secondary HCFs

The availability of Specialist doctors in APVVP hospitals (secondary healthcare) as of November 2022 in the State is shown in **Table 2.3** and availability of Doctors in the State is shown in **Table 2.4** below:

Table 2.3: Availability of Specialist Doctors in the State

Doctors	Sanctioned	Filled	Vacant	Shortfall in Percentage
General Medicine	308	193	115	37
Chest Disease	2	0	2	100
General Surgeon	307	243	64	21
Gynaecologist	444	387	57	13
Dermatology	64	59	5	8
Paediatrics	324	287	37	11
Anesthesia	316	273	43	14
ENT	125	110	15	12
Ophthalmic	130	117	13	10
Orthopedic	125	119	6	5
Radiologist	68	27	41	60
Pathology	74	59	15	20
Psychiatry	15	15	0	0
Microbiology	13	12	1	8
Forensic Science	12	9	3	25
Total	2,327	1,910	417	17.92

Source: Information furnished by Commissioner, APVVP

¹⁶ GO Ms No. 188 HM&FW Dept., dated 15 July 2022

Table 2.4: Availability of Doctors in the State

Doctors	Sanctioned	Filled	Vacant	Shortfall in Percentage
RMO	64	14	50	78
General doctors	676	511	165	24
Dental doctors	249	138	111	45
Total	989	663	326	32.96

Source: Information furnished by Commissioner, APVVP

- The shortfall in availability of doctors was 22 *per cent* in the State. However, the percentage of shortfall in the categories of Radiologist, RMO and general Medicine was 60, 78 and 37 respectively.
- Two Chest disease specialist posts were sanctioned for Chest Disease Hospital located at Anantapur. However, no chest disease specialist was deployed in the hospital since its inception *i.e.*, 2008.

The Government replied (August 2023) that recruitment drives were conducted in 10 spells from 10 June 2020 to 29 June 2023 and maximum efforts were made to fill all the vacancies. Further, it was stated that the vacancy position in specialist doctors as of July 2023 came down to 18 *per cent*.

It was further stated that all the sanctioned posts in Orthopedic, Psychiatry and Dental doctors were filled. Thus, Government accepted the observation and promised future compliance.

2.2.2.2 Availability of Doctors across the districts

The availability of specialists and medical officers in the State is shown in **Table 2.5**:

Table 2.5: District-wise availability of Specialists and Medical officers

Sl No	Name of the District	Doctors			
		Sanctioned	Filled	Vacancy	Percentage shortfall
1	Srikakulam	246	194	52	21
2	Vizianagaram	187	147	40	21
3	Visakhapatnam	272	201	71	26
4	East Godavari	335	236	99	30
5	West Godavari	256	199	57	22
6	Krishna	177	152	25	14
7	Guntur	279	247	32	11
8	Prakasam	264	199	65	25
9	SPSR Nellore	204	160	44	22
10	Chittoor	313	243	70	22
11	Anantapur	317	215	102	32
12	Kurnool	249	201	48	19
13	YSR	217	179	38	18
	Total	3316	2573	743	22

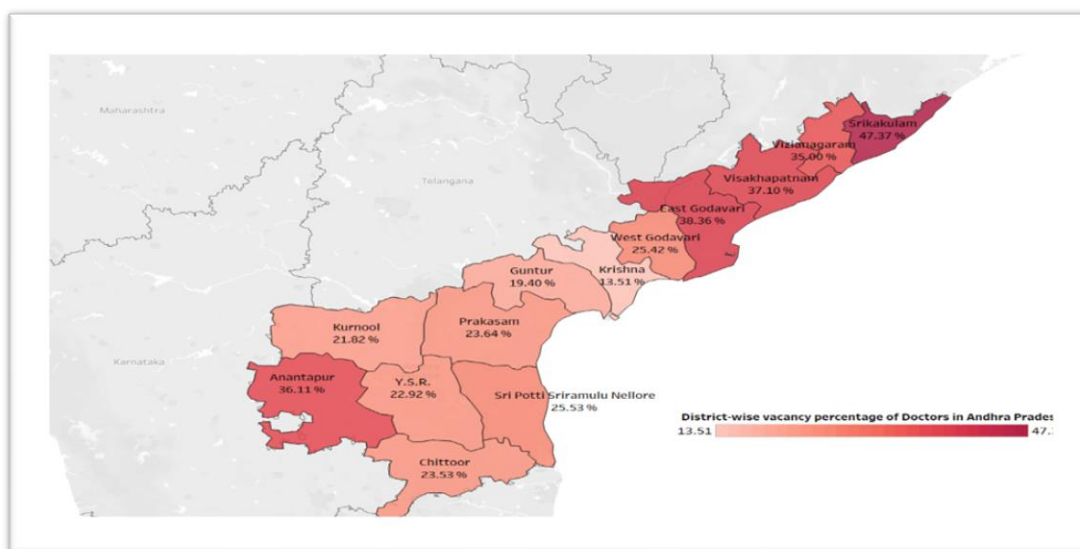
Source: APVVP records

The specialty-wise availability of doctors in the districts is given in **Appendix 2.1**.

Doctors' vacancy position across the State

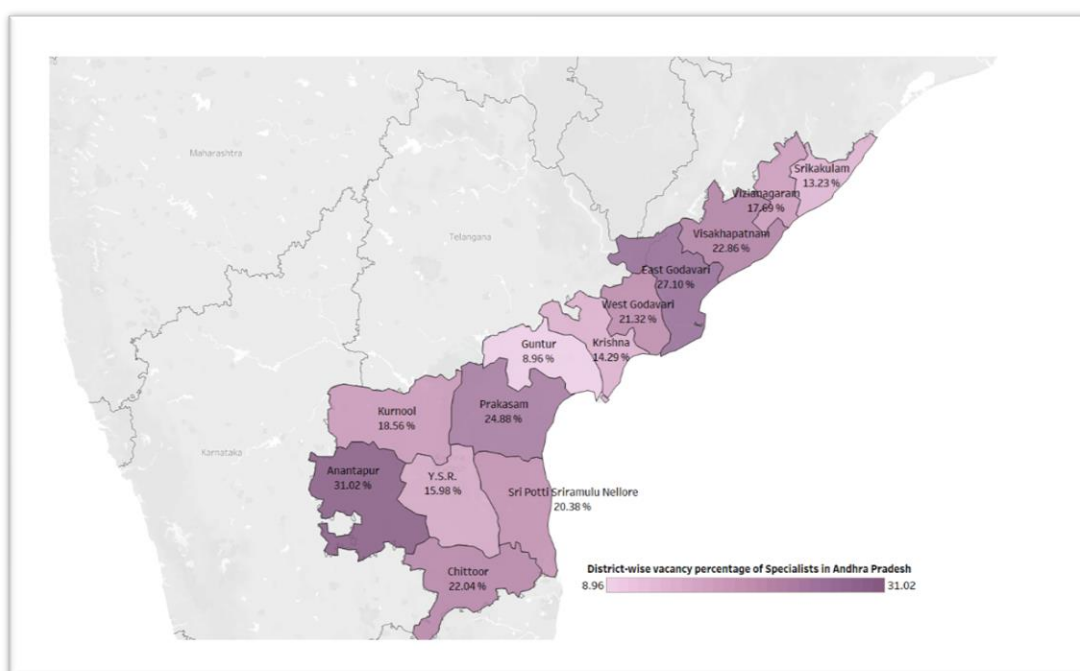
Vacancies were distributed across the State in respect of doctors. However, some disparities were noticed in vacancy percentages across the districts in secondary health care institutions as of November 2022, is shown in *Map 2.1*.

Map 2.1: Map showing the percentage of vacancies in doctors



Specialty wise availability of Specialist doctors in the districts in secondary health care institutions as of November 2022, is shown in *Map 2.2*.

Map 2.2: Map showing the percentage of vacancies in specialists in the State



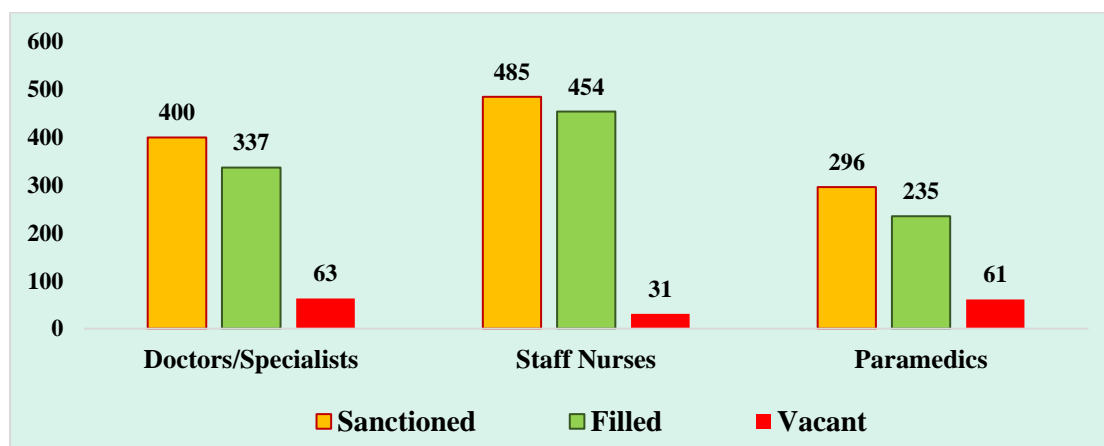
Government accepted (August 2023) the audit observation and stated that out of revised sanctioned posts of 3,339 doctors including specialist in districts, 2,794 were filled-in, 545 posts were lying vacant and thus vacancy was reduced to 16 per cent (18 per cent

in the case of specialists) and further promised future compliance. However, we observed from the reply that larger districts Anantapur (19 per cent), East Godavari (19 per cent), Visakhapatnam (19 per cent), West Godavari (18 per cent) and YSR (18 per cent) were having more vacancies.

2.2.2.3 Availability of Doctors in DHs

Human Resource position in the District Hospitals (excluding DH Chittoor) is given in **Chart 2.1**.

Chart 2.1: Chart showing Human Resources position in 11 District Hospitals



We observed (November 2022) from the above chart that,

- Against 400 sanctioned strength of doctors, 337 posts were filled-in with 63 posts (16 per cent) shortage.
- Against 485 sanctioned strength of Staff nurses, 454 posts were filled-in with 31 posts (6 per cent) shortage.
- Against 296 sanctioned strength of paramedics, 235 posts were filled-in with 61 posts (21 per cent) shortage.

Availability of Human resources at DH Chittoor operating in PPP mode

In addition to the above, at DH Chittoor, 152 specialist doctors, four causality medical officers, five ICU doctors, eight Junior Doctors, 230 staff nurses and 78 paramedical staff are available and working as of May 2023.

2.2.2.4 Staff Nurses in secondary health care institutions

As per the Indian Nursing Council Regulations, there should be one nurse for every six beds in the General wards. For in-patient wards, considering eight hours a shift, number of nurses needed in three shifts to cover a 24-hour period is four, which includes an additional nurse for OP of six beds. The requirement of staff nurses in secondary HCFs as per Nursing Council Regulation is shown below in **Table 2.6**.

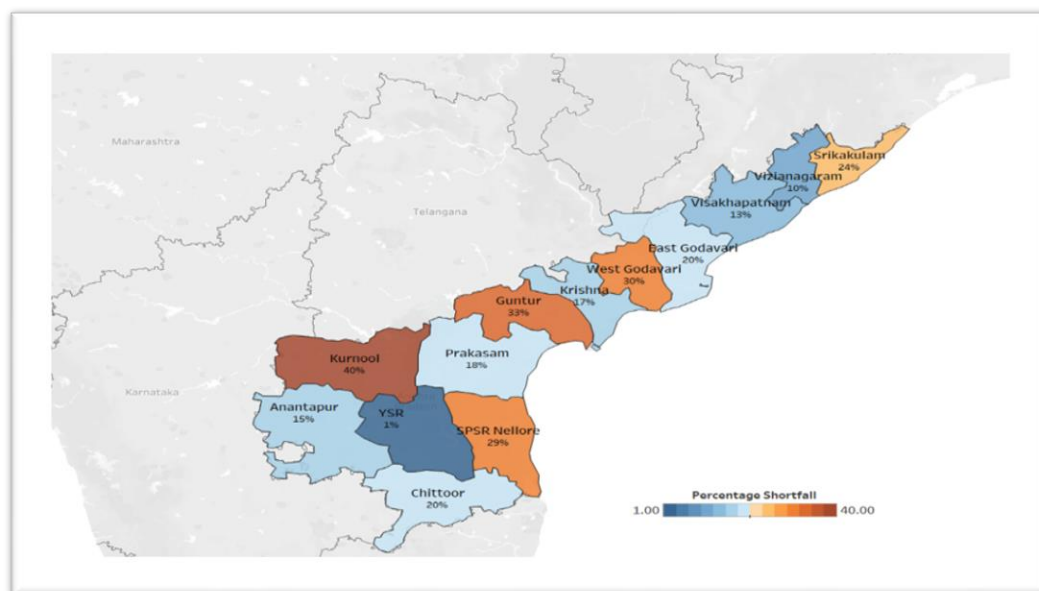
Table 2.6: Staff Nurses to be available as per Indian Nursing Council Regulations

Available beds	Requirement of staff nurse for OPD	Requirement of staff nurse for IPD	Total
1	2	3	4(2+3)
14,290	2,382	7,146	9,528

Source: INC Regulations

We observed that out of 3,551 sanctioned posts of Staff Nurses, only 2,808 were filled and 743 posts were vacant as of November 2022. However, when compared with INC regulations, the shortfall is 70.5 *per cent*. The staff nurse availability in secondary healthcare across the districts is given in **Appendix 2.2**. Vacancy percentage of staff nurse posts in secondary health care across the districts is shown in **Map 2.3**.

Map 2.3: Map showing the staff nurse vacancies across the districts



The shortfall of staff nurses increases the burden on the remaining nurses and adversely affects patient care.

Government replied (August 2023) that orders were issued¹⁷ to fill the vacancies in the department as and when the vacancy arises. It was further stated that 96 *per cent* of nursing posts were filled and recruitment for remaining vacancies was under process which would be completed by the end of July 2023. The number of vacancies in nursing cadre in APVVP institutions was 152 *i.e.* 4.21 *per cent* only of the sanctioned posts.

2.2.2.5 Paramedical staff in Secondary HCFs

Paramedical personnel provide clinical services to patients under the supervision of a physician. The availability of paramedical personnel in the State as of November 2022 is shown in **Table 2.7**.

Table 2.7: Availability of Paramedical staff in the State (November 2022)

Sl. No.	Name of the Post	Sanctioned	Filled	Vacancy	Percentage shortfall
1	Radiographers	249	175	74	30
2	Dietician	9	5	4	44
3	Pharmacist	671	476	195	29
4	Theatre Assistant	464	370	94	20
5	Junior Analyst	8	5	3	38

¹⁷ G.O.Ms. No. 188, HM&FW(D1) Dept., dated. 15.07.2022

Sl. No.	Name of the Post	Sanctioned	Filled	Vacancy	Percentage shortfall
6	Lab Technician	583	514	69	12
7	Dark Room Assistant	198	66	132	67
8	Ophthalmic Assistant	49	24	25	51
9	Biomedical Engineer	67	52	15	22
10	Audio metrician	57	18	39	68
11	Dental Technician	7	4	3	43
12	Lab Attendant	88	56	32	36
13	Physiotherapist	54	47	7	13
14	Counsellor	52	45	7	13
15	Postmortem Assistant	252	237	15	6
Total		2808	2094	714	25

Source: APVVP records

The shortfall in the availability of paramedical staff was 25 *per cent* in the State. However, the shortfall percentage was more than 50 in the categories of Dark Room Assistant, Audio metrician, Dietician and in respect of Dental Technician, shortfall was more than 40 *per cent*. The availability of Paramedical staff across the districts was shown in **Appendix 2.3**.

We observed that the vacancy in Radiographer posts in the State was 30 *per cent*. It was more than 50 *per cent* in East Godavari (55 *per cent*), Guntur (69 *per cent*) and Kurnool district (60 *per cent*).

The vacancy position in Pharmacist posts was 29 *per cent* in the State. However, it was 43 *per cent* in Srikakulam, 45 *per cent* in East Godavari, 39 *per cent* in West Godavari and 39 *per cent* in Prakasam district.

Government accepted (August 2023) the audit observation and stated that the percentage of vacancies in paramedical cadres was reduced from 25 *per cent* to nine *per cent* as on 22 July 2023. It was further stated that only one Dental Technician post was vacant out of seven sanctioned posts, there is no vacancy in Dietician posts out of nine sanctioned posts in the State and eligible candidates are not available for the post of Audiometrician. The recruitment of the post of Dark Room Assistant is redundant as reporting of X-Ray was being done through teleradiology programme under PPP mode in APVVP facilities.

As per reply submitted by the Government of AP, still there is 16 *per cent* vacancy in Pharmacist posts. As per IPHS 2012 and 2022, Dental technician and Dietician are essential for District Hospital. However, only seven Dental technician posts and nine Dietician posts were sanctioned for 11¹⁸ District Hospitals in the State. To assess the institution wise shortages district wise data was not furnished by the Government.

Shortage of paramedical staff may impact the service delivery to the patients. Government may closely monitor deploying appropriate HR at appropriate places to overcome deficiencies.

¹⁸ except DH Chittoor

2.2.2.6 Administrative and other staff in Secondary HCFs

The sanctioned strength, availability, and vacancies in administrative and other staff in the secondary healthcare in the State is shown in **Table 2.8**.

Table 2.8: Availability of Administrative and other staff in the State (November 2022)

Sl No.	Name of the Post	Sanctioned	Filled	Vacancy	Percentage shortfall
1	Hospital Administrator	52	0	52	100
2	Administrative Officer	57	8	49	86
3	Office Superintendent	64	34	30	47
4	Medical Record Assistant	49	36	13	27
5	Junior Assistant / DEO	591	413	178	30
6	Junior Accountant	67	0	67	100
7	Senior Assistant	181	82	99	55
8	General Duty Attendant /MNO/FNO	1,873	1,524	349	19
9	Electrician	57	46	11	19
10	Plumber	57	23	34	60
11	Office subordinate	270	203	67	25
	Total	3,318	2,369	949	29

Source: APVVP records

Though the shortfall in the State was 29 *per cent*, there were more than 80 *per cent* vacancies in Hospital Administrators, Administrative Officers and Junior accountant category. These cadres are important for assisting the doctors in smooth functioning of the support services in the hospitals. Lack of these cadres will affect the clinical services also. The availability of Administrative and other staff across the districts is given in **Appendix 2.4**.

Government replied (August 2023) that:

- Only 12 eligible candidates were available for Hospital Administrator post for 49 sanctioned posts and all of them joined duty.
- In respect of Administrative Officer which is a promotional post and issuance of promotion orders was under process for eligible employees.
- Office Superintendent is also a promotional post for which feeder cadre is Senior Assistant in which there were no eligible employees for promotion to the post. Out of 74 sanctioned Office Superintendent posts, 31 posts were vacant at present.
- In Senior Assistant cadre 55 posts were vacant out of 223 sanctioned posts and they were required to be filled by way of promotion from the category of Junior Assistant.
- There were 155 vacancies out of 648 sanctioned posts of Junior Assistant / DEO at present.
- Two posts of Junior Accountant were filled out of 70 sanctioned posts.
- Medical Record Assistant, General Duty Attender/ MNO/ FNO, Electrician, Plumber and Office Subordinate are district level direct recruitment posts for

which instructions were issued to fill up the vacancies as and when the vacancy arises without waiting for any approval from Government¹⁹.

Thus, Government accepted (August 2023) the audit observation and promised future compliance.

2.2.2.7 Availability of Human resource in CHCs

The Community Health Centre (CHC) provides referral as well as specialist healthcare to the rural population. IPHS envisages CHC to provide optimal specialised care to the community and achieve and maintain an acceptable standard of quality of care. The essential requirement for a minimum functional grade of a CHC is five medical specialists viz., General Surgeon, Physician, Gynaecologist/Obstetrician, Anaesthetist and Paediatrician along with a Dental Surgeon and two Medical Officers supported by 21 paramedical and administrative staff. Availability of human resources in all CHCs in the State is given in **Table 2.9**.

Table 2.9: Statement showing availability of Human resource in CHCs in the State

Speciality	Sanctioned	Filled	Vacant	Vacancy Per cent
Doctors				
General Medicine	175	92	83	47
General surgeons	175	128	47	27
Gynaecology	224	195	29	13
Paediatrics	175	141	34	19
Anaesthesia	175	157	18	10
ENT	49	41	8	16
Ophthalmic	49	43	6	12
Orthopaedic	49	45	4	8
General MBBS	350	277	73	21
Dental Asst. Surgeon and Dy. Surgeon	175	124	51	29
Paramedical staff				
Staff Nurse	1470	1085	385	26
Radiographer	175	108	67	38
Pharmacist	350	231	119	34
Theatre Assistant	175	161	14	8
Lab Technician	350	313	37	11
Ophthalmic assistant	49	24	25	51
Ministerial staff				
Junior Assistant	350	261	89	25

Source: Information furnished by Commissioner, APVVP

We observed that as of November 2022,

¹⁹ GO Ms. 188 HM&FW (D1) dept. Dt.15.7.2022.

- 842 Specialist doctors were working against sanctioned strength of 1,071 with a vacancy of 229 posts (21 per cent).
- 92 Specialist doctors in General medicine were working against sanctioned strength of 175 with a vacancy of 83 posts (47 per cent).
- 128 Specialist doctors in General surgery were working against sanctioned strength of 175 with a vacancy of 47 posts (27 per cent).
- 124 Dental assistant surgeon posts and Deputy dental surgeon posts were filled against sanctioned strength of 175 with a vacancy of 51 posts (31 per cent).
- 1085 Staff nurses were working against sanctioned strength of 1470 with a vacancy of 385 posts (26 per cent).
- 24 Ophthalmic assistants were working against sanctioned strength of 49 with a vacancy of 25 posts (51 per cent).
- 231 Pharmacists were working against sanctioned strength of 350 with a vacancy of 119 posts (34 per cent).
- 108 Radiographers were working against sanctioned strength of 175 with a vacancy of 67 posts (38 per cent).

Government replied (August 2023) that Specialist doctors were not inclined towards Government service as they felt that salary was less when compared to private/ corporate sector. Further it was stated that the consolidated remuneration and pay structure with regular pay scales with admissible allowances at par with regular post were implemented with effect from April 2022/ January 2023. Government permitted the Heads of Department including the Commissioner, APVVP to fill up the vacancies in the Department as and when they arise without seeking permission from the Government. Thus, the Government promised compliance.

2.3 Tertiary Healthcare: Human Resources in Government Medical Colleges

The staff requirement has been specified department wise in Schedule II, MSRR 1999 in respect of both clinical and Non- clinical Departments and further State Government issued Government Orders (GOs) from time to time for sanctioning posts based on the requirement.

2.3.1 Status of Teaching Staff in Medical Colleges

Men in Position and Vacancy Position in the State²⁰ are given in **Table 2.10**.

Table 2.10: Statement of Staff Position in GMCs in the State

Name of the medical college	Professors			Associate Professors		
	SS	MIP	V	SS	MIP	V
GMC Srikakulam	22	18	4	58	22	36
GMC Ongole	22	15	7	39	20	19

²⁰ Assistant Professor cadre strength not furnished by DME

Name of the medical college	Professors			Associate Professors		
	SS	MIP	V	SS	MIP	V
GMC Kadapa	36	25	11	90	36	54
AMC Visakhapatnam	95	76	19	85	55	30
RMC Kakinada	65	49	16	60	33	27
GMC Guntur	74	57	17	65	32	33
SMC Vijayawada	73	53	20	81	35	46
SVMC Tirupati	67	52	15	61	29	32
KMC Kurnool	73	57	16	70	32	38
GMC Anantapur	38	16	22	78	36	42
ACSR GMC Nellore	43	24	19	57	32	25
Total	608	442	166	744	362	382

Source: DME data August 2022

SS- Sanctioned Strength, MIP- Men in Position, V- Vacant

Audit observed that there was a shortage of 166 (27 per cent) and 382 (51 per cent) against sanctioned strength of 608 and 744 with respect to Professors and Associate Professors respectively. Information on Staff position of Assistant Professors across the State was not furnished by DME.

Government replied (August 2023) that 149 out of 608 posts in the cadre of professors and 156 out of 744 Associate professors were vacant. Thus, Government accepted the audit observation and promised future compliance.

Shortage in qualified teaching faculty would directly impact quality of medical education and produce under-skilled young doctors.

2.3.2 Paramedical Staff in Test Checked GGHs

Audit observed that there was a shortfall of paramedical staff as detailed in **Table 2.11**.

Table 2.11: Staff Position of Paramedical Staff

Name of the post	Sanctioned	Occupied	Vacant
GGH, Anantapur			
Staff Nurse	317	258	59
Lab Tech	5	5	0
Radiographer	6	5	1
ECG Tech/Eco	6	5	1
Audio metrician	1	1	0
Dietician	2	2	0
Physiotherapist	3	2	1
O.T Technician	9	6	3
Darkroom Asst	4	2	2
GGH, Nellore			
Staff Nurse	360	311	49
Lab technician Gr. I	7	4	3
Lab technician Gr. II	23	22	1
Cardiology Technician	3	1	2
Nuclear Physicist	1	0	1
Operation Theatre Tech.	4	3	1
Anesthesia Technician	4	1	3
Clinical Psychologist	2	1	1
Paediatric Psychologist	2	0	2

Name of the post	Sanctioned	Occupied	Vacant
Occupational Therapist	2	0	2
Dental Technician	4	1	3
GGH, Srikakulam			
Head Nurse	41	35	6
Staff Nurse	474	346	128
Anaesthesia technician	6	0	6
Anaesthesiologist	2	0	2
Cath Lab Technician	2	0	2
CT Technician	2	0	2
Dark Room Asst	8	6	2
Dialysis technician	7	3	4
ECG Technician	14	8	6
EEG Technician	1	0	1
Emergency Medical Department Technician	3	0	3
ENMG Technician	1	0	1
Lab technician Gr II	29	22	7
Lab technician Gr I	1	0	1
MRI Technician	2	1	1

Source: Information furnished by Commissioner, APVVP

Nuclear physicist, paediatric psychologist and occupational therapist were not available in GGH, Nellore.

Anesthesia technician, Anesthesiologist, Cath lab. Technician, CT technician, EEG technician, Emergency medical department technician, ENMG technician and lab technician Grade-I were not available in GGH, Srikakulam.

Government accepted (August 2023) the audit observation and promised future compliance.

2.4 Trauma Care

2.4.1 Capacity building for developing Trauma Care Facilities in Government Hospitals on National Highways

Accidental injury is one of the leading causes of mortality and morbidity. Traffic crashes are one of the major causes of disability, morbidity and mortality in India. Government strives to ensure that the victims in road accidents benefit from speedy and effective trauma care and health management. The essential functions of such a service would include the provision of rescue operation and administration of first aid at the site of an accident and the transport of the victim from accident site to an appropriate nearby trauma care hospital. As the creation of new integrated and isolated trauma care system is highly cost intensive in terms of infrastructure and manpower, Government of India decided to:

1. Upgrade and strengthen existing Hospitals,
2. Provide rapid mode of transportation of trauma victim under supervision to reach the hospital early.

3. Provide state of the art communication, rather than simply focusing on creation of new infrastructure for trauma care in a piecemeal manner.

The overall objective of the scheme is to bring down preventable deaths because of road accidents to ten *per cent* by developing a pan-India trauma care network in which no trauma victim has to be transported for more than 50 kilometers and a designated trauma Care centre is available at every 100 kilometers.

In the test checked HCFs trauma care facility was sanctioned at DH Tekkali and CHC Naidupet under this scheme.

Government of AP (March 2009)²¹ sanctioned 41 and 42 additional posts on a contractual basis for the Trauma care centre in District Hospital Tekkali and Community Health Centre Naidupet respectively. In DH Tekkali, Equipment worth ₹1.63 crore was received during March 2013 to March 2015.

We observed that, out of the sanctioned manpower of 41, only eight persons were working in the Trauma care centre as of June 2022 at DH Tekkali. The trauma care facility sanctioned at DH Tekkali was not functional due to shortage

The building for the Trauma Care Centre (level-3) in CHC Naidupet was constructed at a cost of ₹67 lakh and inaugurated in April 2013. However, the same was not functional due to non-supply of equipment and non-deployment of manpower.

In the absence of trauma care, injured patients requiring intensive and immediate care need to be referred or transported to tertiary care/trauma care centres located at distant places, which may lead to life threatening situation.

2.4.2 Human resource position in Test-checked Trauma care centres

Government sanctioned²² strength separately to Trauma Care Centres in ten Government Hospitals including GGHs, Nellore and Srikakulam as detailed in **Table 2.12.**

²¹ GO. Ms no 85 dated 26/03/2009

²² Vide G.O.MS No 85 dated 26/03/2009

Table 2.12: Details of vacancy position in trauma care Centres at Nellore and Srikakulam districts

Sl. No.	Name of the post	GGH, Srikakulam			GGH, Nellore		
		Sanctioned	Occupied	Vacant	Sanctioned	Occupied	Vacant
1	General Surgeon trained in Neurosurgeon	2	0	2	2	0	2
2	Orthopedic Surgeon	2	0	2	2	0	2
3	Anesthesiologist	2	0	2	2	0	2
4	CMO	5	0	5	5	0	5
5	Staff Nurses	21	2	19	25	2	23
6	Nursing orderlies	18	15	3	12	5	7
7	Lab Technician	3	1	2	4	0	4
8	Radiographers	6	4	2	4	2	2
9	Drivers	3	2	1	3	3	0
10	Data Entry Operators	2	2	0	2	2	0
11	Mani fold Technicians	3	3	0	3	2	1
12	ECG Technicians	3	3	0	2	1	1
13	Bio-Medical Technicians	3	1	2	3	3	0
14	Pharmacists	2	1	1	3	0	3
15	Electrician	3	3	0	3	1	2
Total		78	37	41	75	21	54

Source: Hospital records

We observed that:

- No staff was sanctioned for GGH Anantapur, the largest district in Andhra Pradesh, hence Trauma care Centre was not functional.
- In GGHs Nellore and Srikakulam, no staff were recruited in the cadres of General and Orthopedic surgeons, Anesthetists and Casualty Medical Officers.
- In GGH Nellore, staff were not recruited in the cadres of Lab technicians and pharmacists.

Government accepted (August 2023) the audit observation and the need to create posts for Trauma care centres in GGHs Kurnool, Anantapur and Kakinada, and CHC, Penukonda and recruitment process to be conducted in all Trauma care Centres.

Manpower shortage in trauma care facilities deprive the critical care and life support to the acutely ill and injured patients.

2.5 Capacity building activities at NHM

IPHS prescribes that Medical Officer should ensure that all the staff are sent for appropriate training, and he should maintain and update the database of staff and the training undergone by each of them. NHM Guidelines stipulate six *per cent* of the NHM budget to be allocated to capacity building and training of the human resources in the health sector. For the years 2017-18 to 2021-22, an amount of ₹144.95 crore was

allocated towards training under NHM. However, an amount of ₹91.53 crore (63.15 per cent) only was spent on trainings as indicated in **Table 2.13**.

Table 2.13: Budget allocation and Expenditure towards capacity building

(₹ in Crore)

Year	Budget allotted	Expenditure	Percentage of expr.
2017-18	1.614	1.092	67.64
2018-19	16.275	8.621	52.97
2019-20	43.251	35.973	83.17
2020-21	64.570	34.973	54.16
2021-22	19.238	10.874	56.52
Total	144.948	91.533	63.15

Source: As per FMRs furnished by State Project Monitoring Unit

Further, as indicated in **Table 2.14** the following training programs were conducted by the State Project Monitoring Unit (SPMU) during the years 2017-18 to 2019-20.

Table 2.14: List of Training programs conducted

Details of Trainings	For whom	2017-18		2018-19		2019-20	
		T	A	T	A	T	A
BEMONC	Medical Officer (MO)	336	55	104	90	104	90
RTI/STI	Medical Officer	390	106	0	0	0	0
Dakshata	MO & Staff Nurse	2,496	985	1,248	1,083	1,248	1,083
NSSK	MO, SN & ANM	2,496	710	1,248	939	1,248	939
PPIUCD	MO & Staff Nurse	520	156	0	0	0	0
Induction	MO	0	0	1,133	1,012	1,133	1,012
Laqshya	MO & Gynaecologist	0	0	0	68	0	68
SBA	SN & ANM	0	0	243	228	243	228
BiMNCi	ANM & HVs	0	0	312	219	312	219
Skill Lab	Lab Technician	0	0	288	105	288	105

Source: Data furnished by NHM

T-Target, A-Achieved.

Further, scrutiny of data indicated that no trainings were conducted during the years 2020-21 and 2021-22.

We observed from the above table that,

- As per IPHS norms, all the health staff of PHC must be trained in Immunisation and Management of Environment Protection (IMEP). From the above table it can be noticed that no such trainings were provided in any of the years.
- Services for Prevention, Management and control of Reproductive Tract Infection (RTI) and Sexually Transmitted Infections (STI) are to be available at PHCs. However, these trainings were not provided to the MOs since 2018-19.
- During the year 2020-22, online trainings were conducted at an expenditure of ₹45.84 crore, however, the expenditure details of trainings were not furnished to Audit.
- **PPIUCD**²³: Spacing is one of the family planning methods. Training on Post-partum family planning is necessary for ANMs, Staff Nurses and MOs for

²³ Post-partum Intra Uterine Contraceptive Device

promotion of safe deliveries and encourage the spacing techniques during the first 12 months from the delivery among delivered mothers. However, we observed that no training was provided to ANMs, Staff nurses and MOs since 2018-19.

- All the PHCs were provided with physiotherapy equipment as part of upgrading them as HWCs under the Ayushman Bharat program. However, no basic training was given to the PHC staff to offer these services to the patients.

Government replied (August 2023) that an amount of ₹18.61 crore was utilised towards bridge course to Mid-Level Health Providers (MLHPs) as a part of training programme. Further, an amount of ₹22.94 crore was released towards conducting various training programmes under various activities of NHM.

Referring to expenditure made on online training as observed, Government stated that the trainings were only offline trainings conducted at various occasions. However, records in support of the reply was not provided to audit.

Further, Government accepted that no training sessions were recorded for the years 2020-21 and 2021-22.

2.6 Recommendations

- *Government should ensure to provide required human resources to deliver healthcare services effectively at primary, secondary levels and trauma care centres.*
- *Government should provide required human resources in Medical colleges for their smooth functioning.*
- *Government should develop a Human Resource Management System (HRMS) to track the deployment of staff in all Health Care Facilities on real time basis.*

Chapter III

Health Care Services

Chapter III

Healthcare Services

Out of eight test checked PHCs, primary management of fracture is not available in four PHCs and the services of tubectomy and vasectomy are not available in five PHCs. Out of 175 CHCs in the state, 83 CHCs are functioning without having OPD services for General Medicine, 47 CHCs without General Surgery, 15 CHCs without Gynaecology and 34 CHCs without Paediatrics. ICUs are not available in five out of twelve DHs. Obstetric High Dependency Units (HDUs) are functioning without dedicated manpower in two test-checked DHs. Equipment for HDU were received in two test checked DHs. Due to non-completion of civil works, HDUs are not functional. Laboratory services are deficient in test checked HCFs. Dietary services, fire safety, mortuary services, dedicated ambulance services and provision of linen are also deficient in test checked HCFs.

3.1 Introduction

Services provided by the Healthcare Institutions are 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/ Laboratory 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.

3.2 Service Delivery in Primary Healthcare

Outpatient Department (OPD) is the first point of contact between patient and the hospital. To avail the 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 treatment and/or medicines/ drugs are prescribed or admission to In-Patient Department (IPD) is advised based on the requirement.

3.2.1 Service Delivery at PHCs

As per IPHS 2012, PHCs are required to provide services such as out-patient department (OPD), antenatal care (ANC), postnatal care (PNC), immunisation, and treatment of diarrhoea, emergency obstetric care, primary management of fractures, management of low-birth-weight babies, facility for tubectomy and vasectomy.

We observed in test-checked PHCs that availability of services such as out-patient department (OPD), antenatal care (ANC), postnatal care (PNC), immunisation and

treatment of diarrhoea, *etc.* were adequate. However, services such as emergency obstetric care, primary management of fractures, management of low-birth-weight babies, facility for tubectomy and vasectomy were absent, as detailed below, which need to be addressed.

- Primary management of fracture was not available in four PHCs²⁴ out of eight test checked PHCs. Further, the services of tubectomy and vasectomy were not available in five²⁵ PHCs. PHC Chennur did not provide sterilisations though OT was functional. PHCs stated that family planning services were not available and attributed the reasons to non-functional Operation Theatres.
- Service of Management of Low-Birth-Weight Babies was not available in five²⁶ out of eight test-checked PHCs.

3.2.2 Laboratory Services in PHCs

Under Ayushman Bharat Scheme, Operational Guidelines require 63 tests to be provided at AB-HWC-PHCs in order to provide essential diagnostic services to ensure early detection of disease conditions and also to monitor the treatment outcomes of chronic illness. Ministry of Health and Family welfare (MoHFW), GoI issued guidelines for providing these tests and essential equipment along with the manpower requirements during July 2019.

As per Ayushman Bharat Guidelines, labs in PHC should conduct 21 tests. For Hub Laboratory at CHC/ Area Hospital/ District Hospital, samples for 45 tests are to be collected at the PHC and transported to Hub Laboratory. We observed in the test checked PHCs that only 10 to 15 tests²⁷ were being conducted by them. PHC Kondapuramu stated that due to non-availability of equipment, requisite tests were not performed. PHC Chennur stated that Hub sample collection vehicle or sample collection person was not available to transport the samples to the hub laboratory.

Government in their reply (August 2023) stated that now all the PHCs were provided with Equipment, and they were conducting 40+ tests in their own premises. As there are no Hub sample collection facilities in Andhra Pradesh, all the tests that can be conducted with the equipment were being done at PHC level only.

However, during the visit of PHCs in Guntur and Krishna districts (September 2023) we observed that only the following number of tests were available: PHCs Durgi-30, Mutukuru-8, Dhulipudi-35, Emani-37, Munnangi-37, Velagaleru-36, Kondapalli-19, Agiripalli-33, Kapileswarapuram-40 and Srikakulam-42 tests.

In PHC Mutukuru, the post of lab technician was not sanctioned.

²⁴ Chennur, Kondapuramu, Kudair and Thummalapenta

²⁵ Inamadugu, Karajada, Kudair, Narpala and Urlam.

²⁶ Inamadugu, Kondapuramu, Kudair, Narpala and Urlam.

²⁷ tests for blood grouping, Haemoglobin, bleeding time & clotting time, malaria, dengue, hepatitis B, HIV, Urine for pregnancy, pH, glucose, ketone, protein, sputum, syphilis and Rapid test for pregnancy.

As the essential laboratory services were not available, evidence based treatment cannot be ensured. Though equipment was made available, it is clear that the same was not put to use to extend the services.

3.3 Service delivery in Secondary Healthcare

As per IPHS, the secondary level of health care essentially includes Community Health Centres (CHCs), constituting the First Referral Units (FRUs) and the Sub-district/ Area Hospitals (AHs) and District Hospitals (DHs).

Patient load in Secondary Healthcare Facilities

During the years 2017-18 to 2021-22, total number of outpatients registered, inpatients admitted, and surgeries performed in secondary HCFs in Andhra Pradesh is given in **Table 3.1**.

Table 3.1: Patient load in Secondary HCFs in Andhra Pradesh

Year	No. of outpatients registered	No. of inpatients admitted	No. of surgeries performed
2017-18	2,27,88,700	19,20,654	91,995
2018-19	2,39,03,222	18,95,026	91,207
2019-20	2,43,46,056	20,19,868	91,038
2020-21	1,36,88,784	14,20,029	76,926
2021-22	1,84,05,676	18,43,502	79,150

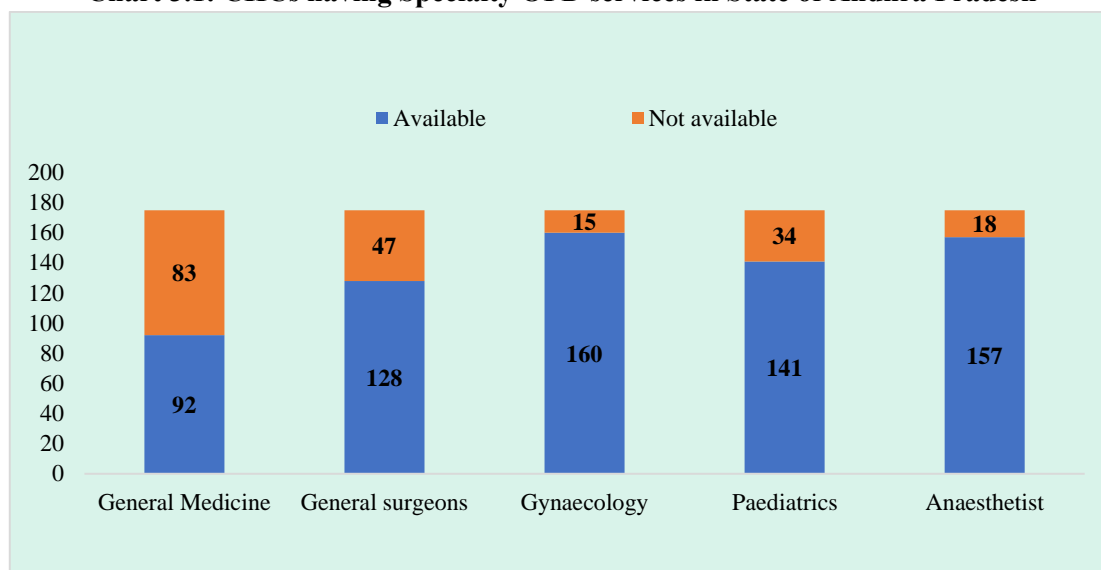
Source: Commissioner APVVP records

The Commissioner, APVVP attributed decrease in number of surgeries in Secondary HCFs during the years 2020-21 and 2021-22, to COVID-19 pandemic.

3.3.1 Availability of Services in CHCs

The Community Health Centres (CHCs) constitute the secondary level of healthcare to provide referral as well as specialist healthcare to the rural population. IPHS envisages CHC to provide optimal specialised care to the community and achieve and maintain an acceptable standard of quality of care. The essential requirements for a minimum functional grade of a CHC are five medical specialists viz., General Surgeon, Physician, Gynaecologist/Obstetrician, Anaesthetist and Paediatrician along with one Dental Surgeon and two Medical Officers supported by 21 paramedical and administrative staff. It serves as a referral centre for PHCs within the block and provides facilities for obstetric care and specialist consultations. CHC should be provided with 30 beds along with an Operation Theatre, Labour room, X-ray, ECG and Laboratory facilities.

There are 175 CHCs available in the State as of November 2022 and the Specialist OPD services available in the CHCs of the State are given in **Chart 3.1**.

Chart 3.1: CHCs having Specialty OPD services in State of Andhra Pradesh

Source: Data furnished by the Commissioner, APVVP

As seen from the above chart, out of 175 CHCs, 83 CHCs are functioning without having OPD services for General Medicine, 47 CHCs without General Surgery, 15 CHCs without Gynaecology and 34 CHCs without Paediatrics. Further, it was observed that 18 CHCs are functioning without Anesthetist services.

3.3.1.1 Inpatient admissions and availability of beds

As per IPHS 2012, every CHC should have 30 indoor beds. We observed shortfall in availability of beds in two CHCs out of three test checked CHCs. The number of inpatients registered and availability of beds in the test checked CHCs is shown in **Table 3.2**.

Table 3.2: Inpatients registered and beds available in test checked CHCs

Year	CHC Sompeta		CHC Naidupet		CHC Kothacheruvu ²⁸	
	No. of inpatients registered	No. of beds available	No. of inpatients registered	No. of beds available	No. of inpatients registered	No. of beds available
2017-18	3,067	30	4,349	18	--	--
2018-19	3,241	30	4,180	18	--	--
2019-20	3,333	30	6,568	18	--	--
2020-21	2,555	30	3,912	18	2,662	06
2021-22	2,430	30	2,672	18	1,598	06

Source: Hospital records

Though these test checked CHCs are to be 30 bedded, the bed availability at CHC Naidupet and CHC Kothacheruvu are eighteen and six respectively, due to insufficient space.

Government (August 2023) accepted the audit observation and promised future compliance.

²⁸ Upgraded to CHC from PHC during 2019-20

3.3.1.2 Availability of essential services in test checked CHCs

As per IPHS, 2012, the essential services and its availability in test checked CHCs as of August 2022 is given in **Table 3.3**.

Table 3.3: Availability of essential services in test checked CHCs

Sl No	Services	Test checked CHCs		
		Sompeta	Naidupet	Kothacheruvu
Specialist/Doctors in OPD services				
1	General surgeon	No	Yes	No
2	Physician	No	Yes	No
3	Obstetrician & Gynaecologist	No	Yes	No
4	Paediatrician	Yes	No	No
5	Anesthetist	No	Yes	No
6	General duty Medical Officer	No	Yes	Yes
7	Dental Surgeon	Yes	Yes	Yes
Essential Services				
1	Full range of Family planning services including Laparoscopic Services	No	Yes*	No
2	Safe abortion services	No	No	No
3	Emergency Obstetric Care including surgical interventions like Caesarean Sections and other medical interventions	No	No	No
4	Emergency care of sick children	Yes	No	No
5	Treatment for STI / RTI	Yes	Yes	No
6	Integrated Counselling and Testing Centre	Yes	No	No

* Only mini-Lap sterilisation available

Source: Hospital Records

It can be seen from the above that out of 13 essential services, eight services in CHC Sompeta (June 2022) and five services in CHC Naidupet (July 2022) were not available. Only two services were available in CHC Kothacheruvu (August 2022).

Government replied (August 2023) that all the 13 essential services were available at CHCs Sompeta and Naidupet. Further, Government accepted that essential services of Physician, full range of Family planning services including Laparoscopic Services and Emergency Obstetric Care were not available in CHC Kothacheruvu.

However, the respective services were not available in Sompeta and Naidupet at the time of our physical verification. As a result, patients would be forced to seek the services outside the service area which would increase Out of Pocket Expenses (OOPE).

3.3.1.3 Clinical Laboratory Facilities

IPHS prescribed 36 types of laboratory services/investigations (**Appendix 3.1**) for Community Health Centres (CHCs) to be carried out in the categories involving clinical pathology, pathology, microbiology, serology and biochemistry. A shortfall in the availability of laboratory services was observed in test checked CHCs.

Shortfall of laboratory services under each category in three test checked CHCs is given in **Table 3.4**.

Table 3.4: Shortfall of Laboratory Services in test checked CHCs

Types of laboratory services	No. of tests required	Number of tests/investigations not available in CHC at		
		Sompeta	Naidupet	Kothacheruvu
Clinical Pathology				
a) Haematology	14	4	8	12
b) Urine Analysis	8	4	6	6
c) Stool Analysis	3	3	3	3
Pathology	1	1	1	1
Microbiology	2	2	2	1
Serology	3	0	1	1
Biochemistry	5	2	5	4
Total	36	16	26	28

Source: Information provided by test checked CHCs

The following tests, which are essential to diagnose certain diseases, were not available under laboratory services:

- Sputum cytology test (pathology) helps to diagnose pneumonia, Tuberculosis, interstitial lung diseases, etc.,
- Differential Leucocyte count test is to diagnose/ monitor other diseases and conditions that affect one or more different types of white blood cells.
- Platelet count test is to measure the number of platelets available in the blood for diagnosing Dengue haemorrhagic fever.
- Hanging drop for V. cholera test (stool analysis) is a crucial test for diagnosing Cholera.
- Occult blood is an important test in screening and diagnosing of Cancer.
- Liver function test (LFT) (Biochemistry) is a blood test that measures different enzymes, proteins and other substances made by the liver.

In the absence of proper diagnosis, doctors cannot treat immediately and in cases of emergency, patients would be forced either to seek the services outside the service area which would increase Out of Pocket Expenses (OOPE).

Government replied (August 2023) that 55 types of tests were being conducted as on July 2023 in all CHCs as per IPHS 2022 and added that in CHC Kothacheruvu, the equipment-such as Bio-chemical analyser, Urine analyser, Calorimeter and the 3-cell & 5-cell counters provided was not installed, pending completion of the civil works.

3.3.1.4 Status of surgeries performed at CHCs

The Surgeries performed at CHCs in the State are given in **Table 3.5**:

Table 3.5: Status of surgeries performed at CHCs in the State

Year	Total no. of CHCs	Surgeries performed	No. of CHCs performed surgeries	No. of CHCs not performed surgeries
2017-18	190	23,860	108	82
2018-19	195	19,441	117	78
2019-20	195	20,889	122	73
2020-21	196	21,486	128	68
2021-22	175*	12,626	102	73

Source: Hospital Activity Indicator Reports over the years furnished by Commissioner, APVVP

* 21 CHCs were upgraded as Area Hospitals

As per IPHS 2012, every CHC shall have one operation theatre (OT) for performing surgeries. During test check of three²⁹ CHCs, we observed that OTs were available only at CHC Sompeta, Srikakulam district and CHC Naidupet, SPSR Nellore district. OT was not available at CHC Kothacheruvu. CHC Kothacheruvu hence did not perform surgeries and MO confirmed the same.

Government accepted the audit observation and added that CHC Kothacheruvu was functioning in the old building where OT was not available and new building for CHC was under construction and expected to be completed by December 2023.

- Only five and three surgeries were performed in 2019-20 and 2021-22 respectively in CHC Naidupet, though OT and General Surgeon³⁰, Gynaecologist³¹, Anaesthetist³² and Orthopaedician³³ were available. MO stated that due to non-availability of sufficient equipment in OT, surgeries were not performed. However, we observed that the minimum equipment required for general surgeries was available as shown in **Table 5.4**.

Government replied (August 2023) that PHC Naidupet was upgraded to 30 bedded CHC in June 2019 and attributed non-performance of surgeries to public unawareness about its upgradation and services during 2019-2020 and added that sufficient equipment was provided and at present all surgeries are being done and 57 surgeries were performed during FY 2022-2023.

As per hospital records new OPD case load during 2019-20 is 57,037 and IPD case load is 6,568. Therefore, the reply of the Government that public were not aware of availability of surgical services, is not acceptable in view of patient inflow, availability of OT and equipment along with dedicated medical officers.

3.3.1.5 Deliveries at CHCs

Every CHC should provide 24-hour delivery services including normal and assisted deliveries. Complicated deliveries are referred to CHCs by the PHCs. All referred cases

²⁹ CHCs Kothacheruvu, Naidupeta and Sompeta

³⁰ Available since August 2017

³¹ Available since April 2017

³² Available since February 2019

³³ Available since August 2019

of complications in pregnancy, labour and post-natal period must be adequately treated in the CHC. Facilities should be provided for a minimum of 48 hours of stay after delivery or/and three-to-seven days stay for managing post-delivery complications.

Number of deliveries conducted in CHCs and CHCs which did not conduct deliveries across the State are given in **Table 3.6**:

Table 3.6: Details of deliveries at CHCs in the State

Year	No. of CHCs	No. of deliveries including C-sections conducted	No. of CHCs not conducted deliveries
2017-18	190	65,886	3
2018-19	195	68,280	5
2019-20	195	65,294	2
2020-21	196	67,742	5
2021-22	175	45,077	3

Source: Commissioner APVVP records

The deliveries conducted at test checked CHCs are detailed in **Table 3.7**.

Table 3.7: Details of deliveries in test checked CHCs

Year	Sompeta			Naidupet		Kothacheruvu	
	Normal deliveries	LSCS ³⁴ (C-section)	Total	Normal deliveries	LSCS (C-section)	Normal deliveries	LSCS (C-section)
2017-18	403	395	798	150	0	-	-
2018-19	247	213	460	167	0	23	0
2019-20	259	499	758	162	0	21	0
2020-21	119	183	302	167	0	4	0
2021-22	50	49	99	59	0	17	0

Source: Test checked CHCs records

- Decrease in deliveries was attributed to non-availability of Gynaecologists by CHC, Sompeta. One Gynaecologist post was vacant from April 2021 to March 2022 and another was vacant from March 2022 to April 2023. The number of deliveries in the first three years in the CHC indicated demand, which declined during 2020-22.

Government accepted (August 2023) the audit observation.

Priority should be given to fill the gaps in Human Resources to address the service demand in the backward areas. Non-availability of services of Gynaecologist would compel pregnant women to seek services outside service area and may increase out-of-pocket expenditure for them.

³⁴ Lower Segment Cesarean Section

- CHC Naidupet cited lack of proper infrastructure viz., space for wards and washrooms as reasons for decrease in number of deliveries from 150 in 2017-18 to 59 in 2021-22. Government stated (August 2023) that 144 deliveries were conducted in 2021-2022, however, the Hospital records showing only 59.



Figure 3.1: Labour Room at CHC Naidupeta (July 2022)



Figure 3.2: Operation Theatre at CHC Naidupeta (July 2022)

- Though Gynaecologist³⁵ and Anesthetist³⁶ were available in CHC Naidupeta, Lower Segment Caesarean Section (LSCS) was not performed during 2017-2022. The Medical Officer attributed the same to non-availability of required equipment in the operation theatre.

The Government accepted the audit observation and added (August 2023) that CHC Naidupeta functioned as PHC till May 2019, OBG specialist was available from 2017, and Anaesthetist joined in February 2019. During 2021-2022, this facility was fully converted into COVID care centre, where every doctor was involved in providing COVID care services. Sufficient infrastructure and fully equipped OT were made available only in 2022. As on date this HCF had Paediatrician (from November 2022) and Anesthetist (from July 2023) also.

However, the Government did not furnish reasons for non-performing LSCS during the non-COVID period, though equipment, infrastructure and human resources were available.

- In CHC Kothacheruvu, out of 65 deliveries, 36 delivered mothers were discharged within 48 hours of delivery during the period from 2018-19 to 2021-22. The Medical Officer replied that due to the lack of facilities for night stay of inpatients in the CHC, the delivered mothers were discharged within 48 hours of delivery. Further, it was replied that the decrease in deliveries was due to pregnant women preferring to go to other hospitals due to unavailability of necessary services.

Government accepted (August 2023) the audit observation and stated that due to lack of night stay facilities, electrical and lighting facilities patients were discharged within 48 hours. Further, Government stated that electricity was provided for the CHC in September 2022 and the services were increased.

3.3.1.6 Newborn Care and Child Health at CHCs

Though FRUs are not intended to provide any intensive care, they should be equipped to ensure safe care of the baby prior to appropriate transfer. Newborn care at CHC level

³⁵ Available since April 2017

³⁶ Available since February 2019

includes routine and emergency care of sick children including facility based IMNCI³⁷ strategy and Prevention and management of routine childhood diseases, infections, and anaemia, *etc* (IPHS 2012).

Out of three test checked CHCs, Newborn care facility was not available at two CHCs, Naidupeta and Kothacheruvu.

Newborn care units are intended to provide early initiation of breast-feeding practices within one hour of birth, counselling on Infant and young child feeding, emergency care of sick children, immunisation of infants, prevention and management of childhood diseases, infections and anaemia. In the absence of a newborn care unit, the above services are not adequately provided which may lead to infant mortality due to lack of quality care at birth or lack of treatment immediately after birth and first days of life.

Reply awaited (March 2024) from Government.

3.3.1.7 Oral Health in CHCs

IPHS 2012 prescribes that a Dental Unit consisting of Dental Chair and set of dental Equipment for examination, extraction and management of Dental and related problems should be available in the CHCs.

Dental Assistant Surgeon and equipment for dental services were available in CHC Sompeta and CHC Naidupeta. Though Dental Assistant surgeon was available in CHC Kothacheruvu, equipment³⁸ for dental services was not provided.

Dental care and Dental Health education services as well as root canal treatment and filling/ extraction of routine and emergency cases are essential services at CHCs as per IPHS norms. However, these services were not available at Kothacheruvu due to lack of equipment though Human resources are available.

Government stated (August 2023) that CHC Kothacheruvu was upgraded from PHC in 2021 and a new Dental Chair was installed and Dental materials for treatment modalities were however under procurement.

3.3.2 Availability of Services in Area Hospitals

3.3.2.1 Specialty Services in Area Hospitals

AH shall provide the following 13 specialty services as per IPHS 2012. However, we observed (August 2022) a shortfall in specialty services in test checked AHs as stated in **Table 3.8**.

Table 3.8: Shortfall in the availability of specialty services in the test checked AHs

Sl No	Specialty	Seethampeta	Kavali	Kadiri
1	General Medicine	Yes	Yes	Yes
2	General Surgery	No	Yes	Yes

³⁷ Integrated Management of Neonatal & Childhood Illness

³⁸ Dental Unit consisting of Dental Chair and set of dental Equipment for examination, extraction and management of Dental & related problems.

Sl No	Specialty	Seethampeta	Kavali	Kadiri
3	Obstetrics & Gynaecology	Yes	Yes	Yes
4	Dermatologist/Venereologist	No	No	No
5	Paediatrician	Yes	Yes	Yes
6	Anaesthetist (Regular/trained)	Yes	Yes	Yes
7	Orthopaedician	No	Yes	No
8	ENT Surgeon	No	Yes	Yes
9	Ophthalmologist	Yes	No	Yes
10	Radiologist	No	No	No
11	Casualty Doctors/General Duty Doctors	Yes	Yes	Yes
12	Dental Surgeon	Yes	Yes	Yes
13	Pathologist with DCP/MD /MD (Path)/MD (Biochemistry)	No	No	No
	Number of specialty services not available	6	4	4

Source: Test checked Area Hospital records

As seen from the above, following services were not available in three test checked AHs:

- In **AH Seethampeta**, Dermatologist/Venereologist, Radiologist, Orthopaedician, Pathologist, Surgery specialist (General surgery) and ENT surgeon posts were vacant since February 2019.

Government accepted the observation and replied (August 2023) that since September 2022, the services of Dermatologist, Radiologist, Orthopaedician, Pathologist, General surgeon and ENT surgeon were available in AH Seethampeta.

Though Dental Assistant surgeon was available in AH Seethampeta, equipment was not available.

- In **AH Kadiri**, LSCS were not performed during period from 26th March 2020 to 25th August 2021. Due to non-availability of O&G specialist, out of 3,391 admissions in maternity ward, 647 cases were referred for LSCS to GGH, Anantapur.

Government accepted (August 2023) the audit observation and stated that two Gynaecologists were available and also performed LSCS at AH Kadiri. It was further stated that the services of Dermatologist, Orthopedics and Pathologist were also available since September 2022. Radiologist was not posted (August 2023). Government promised future compliance.

- In **AH Kavali**, Ophthalmologist, Dermatologist, Pathologist and Radiologist were not available (August 2022).

Government accepted (August 2023) the audit observation and added that the services of Ophthalmologist, Dermatologist and Pathologist were made available at AH Kavali since September 2022. Radiologist was not posted (August 2023). Government promised future compliance.

3.3.2.2 Laboratory services in Area Hospitals

Medical laboratory testing plays a crucial role in the early detection, diagnosis and treatment of disease in patients.

IPHS prescribed 39 types of laboratory services/investigations for Area Hospitals (AHs) to carry out in the categories of clinical Pathology, Pathology, Microbiology, Serology and Biochemistry (*Appendix 3.2*). The summarised position of laboratory services available required and shortfall in test checked AHs is shown in *Table 3.9*.

Table 3.9: Shortfall in the availability of laboratory Services in test checked AHs

Types of laboratory services	No. of tests required	Number of tests/investigations not available		
		AH Kadiri	AH Seethampeta	AH Kavali
Clinical Pathology	24	6	6	8
Pathology	1	1	0	0
Microbiology	4	4	3	3
Serology	4	0	1	0
Biochemistry	6	2	2	1

Source: Information provided by test checked AHs

In detail, we observed that:

- Hanging drop for V. cholera test, a Stool analysis for diagnosing cholera, was not available in the two test checked AHs, Kadiri and Kavali
- Occult blood in stool test used in screening and diagnosing for cancer was not available in AH Seethampeta and AH Kavali.
- Semen analysis, a basic test for treating infertility was not available in AH Kavali and AH Kadiri.
- Cerebrospinal Fluid analysis (CSF Analysis) for diagnosing and treating meningitis was not available in three test checked AHs. This infection is quite common among children. Delay in diagnosis may lead to high mortality.
- Cell count and cytology tests under aspirated fluids were not available in any of the three test checked Area Hospitals. Hence, aspirated fluids management is compromised in the test checked Area Hospitals. In many conditions, ascitic fluid is aspirated from abdomen to diagnose the condition and treat the patient.
- Grams stain throat swab, sputum *etc.*, a test to identify bacterial infection was not available in three test-checked AHs.
- RPR card test for syphilis, a basic test done in pregnancy was not available in AH Seethampeta.
- The Ortho toline (OT) test is important in determining the amount of residual chlorine and is useful during outbreak of diarrhoea. This test is not available in two test checked AHs, Kadiri and Seethampeta.

Due to non-availability of tests, doctors may not prescribe proper preventive treatment and save the patient in time.

Government in its reply stated that 75 laboratory tests were being done as of August 2023 in AHs. Further, it was stated that reagents for the analysers were made available and recruitment of Lab technicians and lab attendants was also completed. Government further accepted that TSH was not being done at AH, Seethampeta due to non-availability of equipment and reagents for some tests such as APTT, D-dimer, ASO Titre and HbA1c and procurement of equipment and reagents was under process.

3.3.2.3 Surgeries performed in the test checked AHs

As per NHM Assessor's Guidebook, surgeries performed per surgeon is an indicator to measure efficiency of the hospitals.

Surgeries performed and surgeries per surgeon per annum in the test checked area hospitals during 2021-22 are shown in **Table 3.10**:

Table 3.10: Surgeries conducted per surgeon

2021-22	AH Seethampeta			AH Kavali			AH Kadiri		
	No of Surgeries performed	No of Surgeons available	Surgeries per Surgeon	No of Surgeries performed	No of Surgeons available	Surgeries per Surgeon	No of Surgeries performed	No of Surgeons available	Surgeries per Surgeon
Gynec	47	2	24	524	5	105	52	1	52
Ortho	0	0	0	15	2	8	16	1	16
Ophthalmic	0	1	0	70	1	70	61	1	61
ENT	0	0	0	1	1	1	0	1	0
General	23	2	12	13	2	7	68	2	34

Source: Hospital records

ENT and Ortho surgeries were not performed in AH Seethampeta during 2019-20 to 2021-22. Gynec surgeries were not performed in AH Kadiri during 2020-21 due to lack of Gynaecologists.

3.3.3 Availability of Services in District Hospitals

IPHS 2012 defines District hospital as a hospital at the secondary referral level responsible for a district of a defined geographical area containing a defined population. DHs provide all basic specialty services and need to be ready for epidemic and disaster management. In addition, it should provide facilities for skill-based training for different levels of health care workers.

3.3.3.1 Specialist Services in DHs

As per IPHS 2012, District Hospitals shall provide the following 14 specialty services. In test checked DHs, we observed a shortfall in the availability of services as detailed in **Table 3.11**.

Table 3.11: Availability of Specialty services in test checked DHs

S.No	Specialty	DH Tekkali as in May 2022	DH Atmakur as in July 2022	DH Hindupur as in June 2022
1	Medicine Specialist	Yes	No	Yes
2	Surgery Specialist	Yes	Yes	Yes

S.No	Specialty	DH Tekkali as in May 2022	DH Atmakur as in July 2022	DH Hindupur as in June 2022
3	O&G Specialist	Yes	Yes	Yes
4	Dermatologist/Venerologist	No	No	Yes
5	Paediatrician	No	Yes	Yes
6	Anaesthetist (Regular/trained)	Yes	Yes	Yes
7	Orthopaedician	No	Yes	Yes
8	ENT Surgeon	Yes	No	Yes
9	Ophthalmologist	Yes	Yes	Yes
10	Radiologist	No	No	Yes
11	Casualty Doctors/General Duty Doctors	Yes	Yes	Yes
12	Dental Surgeon	Yes	Yes	Yes
13	Pathologist with DCP/MD (Micro)/MD (Path)/MD (Biochemistry)	No	No	No
14	Psychiatry	No	No	Yes

Source: Hospital Records

Government furnished (August 2023) the present status of availability of specialty services. According to it out of 14 specialist services, Radiologist was not available in DH Tekkali and General Medicine Specialist (since 2018) and Pathologist (since June 2022) were not available at DH Atmakur and Government promised future compliance. Government further stated that in DH Atmakur, two ENT³⁹ posts, one Dermatologist⁴⁰, Psychiatrist, Radiologist were filled in September 2022.

In respect of DH Hindupur, Government stated (August 2023) that the services of Pathologist were available and another Pathologist (MD) was appointed on regular basis in July 2023.

The availability of Specialist Doctors in the nine DHs (other than test-checked DHs) is shown in **Table 3.12**:

Table 3.12: Availability of out-patient services (specialty-wise) in nine DHs (as of May 2023)

S.No.	OPD Specialty / Department available in District Hospital	Paderu	Parvatipuram	Anakapalli	Tanuku	Tenali	Markapur	Madanapalle	Chittoor	Proddatur
1	General Medicine	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	General Surgery	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

³⁹ (1 DCS + 1 CAS) were sanctioned in ENT specialty in DH Atmakur vide G.O.MS.No.227, HM&FW(D1) Dept., dt.12.09.2022

⁴⁰ vide G.O.MS.No.227, HM&FW(D1) Dept., dt.12.09.2022

S.No.	OPD Specialty / Department available in District Hospital	Paderu	Parvatipuram	Anakapalli	Tanuku	Tenali	Markapur	Madanapalle	Chittoor	Proddatur
3	Obstetrics & Gynaecology	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	Paediatrics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	Eye	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	ENT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	Skin and Venereal Diseases	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
8	Psychiatry	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No
9	Orthopaedics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	Dental	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Source: Hospital records

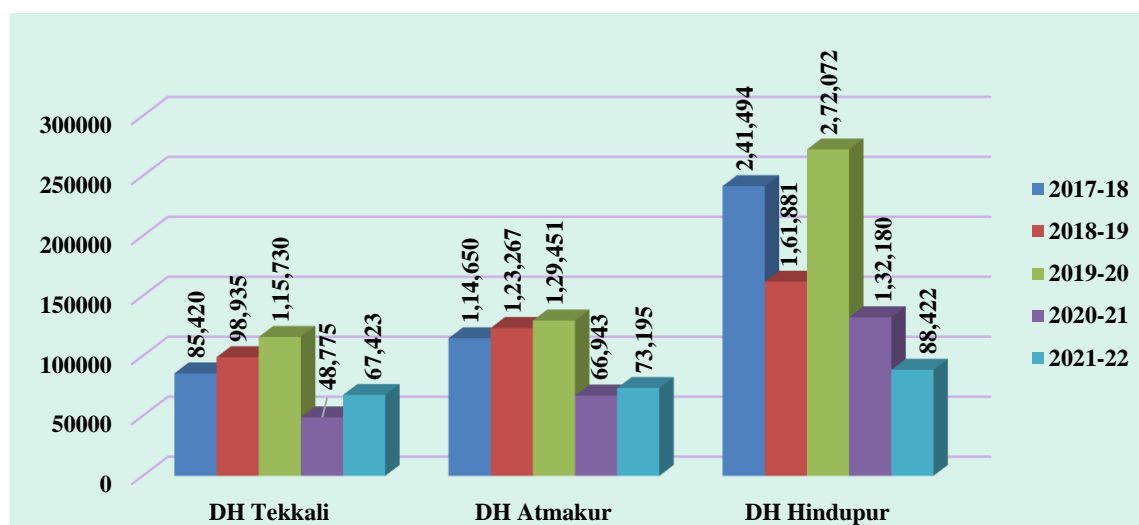
Government replied (August 2023) that DH, Chittoor was under lease to M/s. Apollo Hospital Education and Research Foundation⁴¹ for a period of 33 years which shall provide specialists in respective departments and hence the performance was not included in the data of APVVP. DH Paderu and DH Madanapalli were upgraded as Government General Hospitals and would be handed over to DME, AP. The Psychiatry services (under NHM) are available from January 2023 in DH Tenali. The Psychiatry services (under District Mental Health Programme) are available in DH Proddatur since January 2023.

3.3.3.2 Out-patient cases in test checked DHs⁴²

The number of out-patients registered in the test checked three district hospitals during 2017-18 to 2021-22 is shown in **Chart 3.2**:

⁴¹ vide G.O.Ms.No.2, HM&FW(D) Dept., dated 4 January 2016 and G.O.Ms.No.42, HM&FW(D) Dept., dated 28 April 2016

⁴² Tekkali, Atmakur and Hindupur

Chart 3.2: Number of out-patients in test checked DHs

3.3.3.3 Clinical Laboratory services

- As per IPHS (2012), the DH 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 public health point of view.
- IPHS prescribes 70 types of laboratory tests/investigations for DHs to be carried out in the five categories of clinical pathology, pathology, microbiology, serology and biochemistry (*Appendix 3.3*).
- The summarised position in terms of the availability of laboratory services provided under each category in all twelve⁴³ DHs is shown in **Table 3.13** below:

Table 3.13: Shortfall in the availability of Laboratory Services in DHs in Andhra Pradesh

No. of tests not available in DHs													
Types of laboratory services	No. of tests prescribed	Tekkali	Atmakur	Hindupur	Paderu	Parvatipuram	Anakapalli	Tanuku	Tenali	Markapur	Madanapalle	Chittoor	Proddatur
Clinical Pathology	29	14	16	15	3	10	8	12	3	8	8	0	13
Pathology	8	8	8	8	6	8	8	8	4	8	8	0	6
Microbiology	7	7	6	7	2	6	7	6	7	7	7	0	6
Serology	7	4	4	3	3	5	2	5	2	3	3	0	2
Biochemistry	19	13	10	15	5	10	6	10	9	6	9	0	11

Source: Information provided by the District Hospitals

Government stated (August 2023) that in DH Atmakur, 80 types of tests / investigations were being carried out in the categories of Clinical Pathology 14, Hematology 18, Serology 12, Biochemistry 36.

⁴³ Paderu, Parvatipuram, Anakapalli, Tanuku, Tenali, Markapur, Madanapalle, Chittoor, Proddatur, Tekkali, Atmakur and Hindupur

Further, Government stated (August 2023) that equipment⁴⁴ and reagents for the analysers were received and recruitment of Lab technicians and lab attendants was completed. All the 130 types of tests are being conducted at District Hospitals at present. However, the Government had not furnished the list and quantity of reagents supplied to HCFs to ensure sufficiency.

Significant tests:

- Hanging drop for V. cholera test, a crucial test for diagnosing cholera was not available in DHs Tekkali, Atmakur, Hindupur, Paderu, Parvatipuram, Anakapalli, Markapur, Madanapalle, Proddatur.

Government accepted (August 2023) that Hanging drop for V. cholera test was not available in DH Atmakur as Microbiologist post was vacant and promised future compliance. Reply for other DHs is awaited (March 2024).

- Occult blood is an important test in screening and diagnosing for cancer, which is not available in DHs Tekkali, Atmakur, Hindupur, Parvatipuram, Madanapalle and Proddatur.

Government replied (August 2023) that Occult blood in stool test was available in DH Atmakur from April 2023. Reply for other DHs is awaited (March 2024).

- Semen analysis a basic test for treating infertility is not available in DHs Atmakur, Hindupur, Paderu, Parvatipuram, Tanuku, Madanapalle and Proddatur.

Government replied (August 2023) that Semen analysis test was available in DH Atmakur from July 2023. Reply for other DHs is awaited (March 2024)).

- CSF analysis is critical in diagnosing and treating meningitis. The infection is quite common among children and delay in diagnosis can lead to high mortality. This is not available in DHs Tekkali, Atmakur, Hindupur, Parvatipuram, Tanuku, Markapur, Madanapalle and Proddatur.
- Cell count, cytology tests under Aspirated fluids were not available in DHs Tekkali, Atmakur, Hindupur, Parvatipuram, Anakapalli, Tanuku, Markapur, Madanapalle and Proddatur.

Government replied (August 2023) that CSF analysis, Cell count, cytology tests were conducted previously by the Pathologist of DH Atmakur from July 2020 to May 2022. At present the post is vacant and promised to fill the vacancy.

- Grams Stain Throat Swab, Sputum test *etc.* to identify bacterial infections was not available in DHs Tekkali, Atmakur, Hindupur, Parvatipuram, Anakapalli, Tanuku, Tenali, Markapur, Madanapalle, Proddatur.

⁴⁴ Fully automatic analyser, Semi-automatic analyser, TSH, T3, T4 analyser, Hot air oven, Incubators, Urine Analyser, Cell Counter, Electrolyte analyser, Bilirubinometer, Centre-fuse, U.V.Chambers, Bio Safety cabins and Microscopes.

Government accepted (August 2023) the audit observation in respect of DH Atmakur and promised future compliance. Reply for other DHs is awaited. Thyroid (T3, T4, TSH) test are not available in test checked DHs except in DH Paderu and DH Chittoor.

Government replied (August 2023) that Autobio-Autolumo A1000 equipment for testing thyroid were installed in March 2023 and hence Thyroid (T3, T4, TSH) tests were available in DH Atmakur.

- Availability of seven⁴⁵ types of Endoscopy tests/investigations as required under IPHS 2012 in DHs were examined in test checked DHs. Endoscopy tests were not carried out in DHs Atmakur and Hindupur. In DH Tekkali, four tests/investigations viz., Bronchoscopy, Arthroscopy, Laparoscopy (Diagnostic) and Colposcopy were not carried out.

Non-availability of the above tests in the Healthcare facilities would result in increase of OOPE as the patients have to approach private/far away HCFs for these non-available tests.

3.3.3.4 Surgeries performed in test checked DHs

As per NHM Assessor's Guidebook, surgeries performed per surgeon is an indicator to measure efficiency of the hospitals.

Surgeries performed and surgeries per surgeon per annum in the test checked DHs during 2021-22 are shown in **Table 3.14**.

Table 3.14: Surgeries conducted in test checked DHs & Surgeries per Surgeon in 2021-22

Department	DH Tekkali			DH Atmakur			DH Hindupur		
	Surgeries	Surgeons	Surgeries per surgeon	Surgeries	Surgeons	Surgeries per Surgeon	Surgeries	Surgeons	Surgeries per Surgeon
Gynec	587	3	196	917	5	183	448	2	224
Ortho	58	2	29	31	1	31	35	2	18
Ophthalmic	270	2	135	391	1	391	188	3	63
ENT	20	1	20	2	1	2	45	2	23
General	100	2	50	15	2	8	199	2	100

Source: Hospital records

Note: Arithmetical accuracy is not a concern for surgeries per surgeon

3.3.4 Availability of other services in Secondary Healthcare

3.3.4.1 X-Ray facility

As per Para 5.3 of the Safety Codes provided by the Atomic Energy Regulatory Board (AERB) viz., Regulatory requirements for use of X-ray equipment stipulates that no diagnostic X-ray equipment shall be operated for patient diagnosis unless a license for operations was obtained from a competent authority.

⁴⁵ Oesophagus, Stomach, Colonoscopy, Bronchoscopy, Arthroscopy, Laparoscopy (Diagnostic) and Colposcopy

Obtaining a license for the operation of Medical Diagnostic X-ray equipment is a statutory requirement as per Atomic Energy (Radiation Protection) Rules, 2004. This is to ensure that equipment meets the quality requirements to acquire an acceptable diagnostic image with optimum radiation dose to the patient.

Commissioner APVVP stated that 85 CHCs out of 175 CHCs did not report any X-rays. We observed that in eight out of nine test checked secondary HCFs, X-ray service was available except AH Seethampeta. However, AERB certificate was available in six⁴⁶ secondary HCFs only. CHCs Sompeta and Kothacheruvu were functioning without the mandatory requirement of AERB license.

The details of AMC (Annual Maintenance Contract) and AERB certification for X-ray machine are given in **Table 3.15**:

Table 3.15: Availability of AERB certificate for X-ray machine in test checked secondary HCFs

Name of the Health facility	Whether Service available	AMC/CMC	AERB certificate
CHC Sompeta	Yes	No	No
CHC Kothacheruvu	Yes	No	No
CHC Naidupeta	Yes	No	Yes
DH, Hindupur	Yes	Yes	Yes
DH, Atmakur	Yes	3 Machine-YES, 2 Machine-NO	Yes
DH, Tekkali	Yes	No	Yes
AH, Kavali	Yes	3 Machine-YES, 3 Machine-No	Yes
AH, Seethampeta	No	No	--
AH, Kadiri	Yes	Yes For 10 MA X-ray & 10 MA Dental X-ray-No AMC	Yes

Source: Hospital records

Andhra Pradesh Medical Services Infrastructure Development Corporation (APMSIDC) installed (September 2018) 'Siemens 300mA, X-ray machine' worth ₹11.14 lakh in AH Seethampeta. As Computed Radiography Unit (CRU), which is essential for developing digital imaging, was not supplied, the X-ray machine was kept idle (June 2022) since its installation.

The Government accepted (August 2023) the observation and replied that the CRU along with accessories were not supplied till date. AH Seethampeta received one CRU (February 2023) from the AH Palakonda and is being utilised for taking X-Rays.

The reply is not tenable as the X-Ray unit supplied to AH Seethampeta was kept idle from September 2018 to February 2023 (52 months) and lack of service would cause more Out of Pocket Expenditure (OOPE) for the patients.

3.3.4.2 Intensive care Unit (ICU)

As per IPHS 2012, an intensive care unit shall be available in the DH. Critically ill patients requiring highly skilled lifesaving medical aid and nursing care are

⁴⁶ CHC Naidupeta, AH Kavali, AH Kadiri, DH Tekkali, DH Atmakur, DH Hindupur

concentrated in ICU. These should include major surgical and medical cases, head injuries, severe haemorrhage, acute coronary occlusion, kidney and respiratory catastrophe, poisoning *etc.* It should be the ultimate medical care the hospital can provide with highly specialised staff and equipment.

Audit observed that at the State level, five⁴⁷ out of 12 DHs did not have ICUs. Due to non-availability of ICU facilities in the DHs, the critically ill patients had to be referred to far away tertiary care facilities.

The ICUs available in seven⁴⁸ DHs were found to be deficient in consumables and equipment as shown in **Table 3.16**.

Table 3.16: DHs where consumables and equipment were not available in ICUs

Name of consumables /equipment	Non Available DHs
Chest Tube	Parvathipuram, Anakapalli and Tenali
Endo Tracheal Tubes	Tenali
Deep Vein Thrombosis prevention devices	Parvatipuram, Anakapalli, Tenali, Madanapalle, Chittoor and Proddatur

Source: Hospital records

ICUs in three test checked DHs

- ICU was not established in DH Tekkali and non-functional in DH Hindupur due to non-availability of trained Manpower.
- Equipment worth ₹21.61 lakh was received in DH Atmakur for establishment of ICU. However, the same was non-functional due to lack of trained manpower and incomplete civil works.

Government replied (August 2023) that four bedded ICU was established, with equipment and trained staff at DH Tekkali. Government reply was however, not supported by documentary evidence.

ICU facility in test checked AHs

- AH Kadiri was donated equipment for a 10 bed ICU by Nirmaan Organisation on 31 October 2021. However, ICU was not functional due to non-availability of trained human resources and non-functioning of Pressure swing adsorption (PSA) plant. The details of equipment in ICU at AH Kadiri is shown in **Table 3.17**.

Table 3.17: Availability of equipment in ICU at AH Kadiri

Sl No	Particulars	Units
1	ICU Flower Beds with mobility-2 Folded	10
2	Suction Apparatus	5
3	Multi-Channel Monitors	5
4	Infusion Pumps	2
5	ICU Bed-5 Folded	2
6	Stainless Steel Silver Crash Cart	3
7	Oxygen D-type Cylinders	25

Source: Hospital records

⁴⁷ Paderu, Tanuku, Tekkali, Atmakur, Hindupur

⁴⁸ Parvatipuram, Anakapalli, Tenali, Markapur, Madanapalle, Chittoor, Proddatur

Government replied (August 2023) that ICU equipments received in donation was in use at AH Kadiri and cases of poisoning, CVA head injury, terminally ill patients were being treated.

As the equipment received (October 2021) for ICU was kept idle till the date of functioning of ICU, patients during that period were deprived of the ICU services.

- (b) In AH Kavali, equipment for the establishment of ICU was donated by the Nirmaan organisation (October 2021). However, the ICU was not functional due to the non-availability of trained staff.

Government replied (August 2023) that at present two bedded ICU was functional with necessary equipment and promised future compliance.

Thus, the State had not met the norms of the IPHS, in terms of providing ICU services in all the DHs. In the absence of adequate ICU services in DHs, patients were referred to far away tertiary care hospitals, which eventually increased the patient load in the tertiary care hospitals as well as the OOPE to the patient.

3.3.4.3 Special Newborn Care Unit

As per IPHS 2012, Special Newborn Care Unit (SNCU) is meant primarily to reduce the case fatality among sick children born within the hospital or outside, including home deliveries within the first 28 days of life.

Mini SNCU with five beds was established and functional under PPP mode at DH Tekkali (September 2018) and AH Seethampeta (March 2018).

SNCUs at DH Atmakur (with 10 beds) and DH Hindupur were sanctioned during ROP⁴⁹ 2018-19. Administrative sanction was given by Government of Andhra Pradesh in 2019⁵⁰, and accordingly equipment was supplied to both SNCUs in 2020-2021.

We observed (August 2022) equipment worth ₹87.70 lakh supplied during the period from November 2020 to August 2021 was kept idle due to non-completion of the building construction in DH, Atmakur.

Government replied (August 2023) that construction of the Special Newborn Care Unit (SNCU) was completed and handed over and the unit was functioning with 10 beds since November 2022 and the equipment was being utilised.

Further, we observed (August 2022) that equipment worth ₹65.48 lakh was supplied during the period from December 2020 to December 2021 for the establishment of SNCU was being utilised for New Born Stabilisation Unit (NBSU) due to non-completion of the SNCU building construction in DH, Hindupur.

Government replied that 80 *per cent* of construction of SNCU building at Hindupur was completed as of August 2023.

⁴⁹ Record of Proceedings (RoP): the budgetary approvals under NHM for the financial year and a reference document for implementation.

⁵⁰ Letter Dated 12.09.2019 RC.No.178/CH&I/2019

3.3.4.4 Availability of beds in the district hospitals

IPHS 2012 prescribes that a 100 bedded DH should have a minimum of 8,000 sq.m. of plinth area (80 to 85 sq.m. per bed) and for 200 bedded DH, the plinth area should be 16,000 sq.m.

Government in June 2018⁵¹ accorded administrative sanction to upgrade the following AHs to DHs with 424 additional posts.

- 1) AH Tekkali, Srikakulam District into 200 bedded District Hospital
- 2) AH Hindupur Anantapur District into 200 bedded District Hospital
- 3) AH Markapur, Prakasam District into 150 bedded District Hospital
- 4) AH Madanapalle, Chittoor District into 150 bedded District Hospital
- 5) AH Atmakur, SPSR Nellore District into 150 bedded District Hospital.

We observed (June-August 2022) the following shortfall in availability of beds in DHs as shown in **Table 3.18**.

Table 3.18: Availability of beds in DHs

Sl. No.	District Hospital	Sanctioned beds	Available beds (Ward-wise)
1	Tekkali	200	112
2	Atmakur	150	134
3	Proddatur	350	283

Source: Hospital records

District Hospital, Tekkali

DH, Tekkali requires an additional space of 6,958 sq.m to become a fully functional 200 bedded DH in addition to the existing plinth area of 9,042 sq.m.

Government accepted (August 2023) the observation and promised future compliance.

District Hospital, Atmakur

DH, Atmakur requires an additional plinth area of 3183.35 sq.m. in addition to the existing 8186.65 sq.m. (12,000 sq.m⁵² plinth area for 150 bedded). However, building and infrastructure was not upgraded to 150 bedded hospital and Hospital was functioning in the building which was constructed for a capacity of 100 beds (as of August 2022).

Government accepted (August 2023) the observation and promised future compliance.

Thus, upgradation of AHs to DHs was taken up without enhancing the plinth area and bed capacity as per the requirement.

The availability of beds in existing 12 DHs, including the five upgraded AHs is given in **Appendix 3.4**.

⁵¹ G.O.Rt no 229 date 04.06.2018(HM&FW)

⁵² IPHS 2012 (80 sq meters *150)

3.3.4.5 Obstetric High Dependency Unit

The concept of Obstetric High Dependency Units (HDU) in Public Health facilities was rolled out by the Government of India in 2016 to address the need for critical care units within the Obstetric Department. The Establishment of HDUs increases access to intensive care for mothers suffering from life-threatening obstetric complications through the coordinated efforts of obstetricians and intensive care specialists and to continue obstetric care during this period. Operational guidelines for Obstetric ICU and HDU (2017) stipulate that three Medical officers and six staff Nurses are required for four bedded HDU.

Out of nine⁵³ test checked secondary HCFs, HDUs were sanctioned for four⁵⁴ secondary HCFs only. For the Maternal health programme under NHM, four bedded obstetric HDUs were sanctioned for DH Tekkali, and DH Atmakur at a cost of total ₹58.92 lakh⁵⁵ each in 2020-21. Further, four bedded HDUs were sanctioned for AH Seethampeta and AH Kadiri in 2021-22. Accordingly, the Commissioner of Health and Family Welfare requested⁵⁶ APMSIDC to procure the equipment with a condition that all equipment being procured shall be with warranty and should have annual maintenance for at least three to five years.

The status of HDUs In the four sanctioned hospitals is commented below, and for which the Government also replied as in **Table 3.19**.

Table 3.19: Status of HDUs in four sanctioned hospitals

Sl. No.	DH/AH	Equipment received in	Equipment worth ₹ in lakh	Observation	Government reply
1	DH Atmakur	June 2021 to August 2022	32.14	Equipment remained idle as manpower was not recruited (2023).	HDU started functioning with the staff of DH from August 2022.
2	DH Tekkali	December 2021 to January 2022	23.83	HDU was non-functional as dedicated manpower was not provided.	Functioning with ten out of twenty essential equipment and with available staff in one room in the existing building
3	AH Seethampeta	December 2021 to February 2022	27.09	HDU was non-functional as dedicated manpower was not provided.	Government accepted (August 2023) the observation and added that construction of HDU was not yet completed

⁵³ CHC Sompeta, CHC Naidupeta, CHC Kothacheruvu, AH Seethampeta, AH Kavali, AH Kadiri, DH Tekkali, DH Atmakur and DH Hindupur

⁵⁴ DH Tekkali, DH Atmakur, AH Seethampeta and AH Kadiri

⁵⁵ ₹43.92 lakh for equipment and ₹15 lakh towards physical infrastructure

⁵⁶ Rc No. HMF04-12021 (31)/36/2021-MHN-CHFW dated 16 August 2021

Sl. No.	DH/AH	Equipment received in	Equipment worth ₹ in lakh	Observation	Government reply
4	AH Kadiri	December 2021 to May 2022	34.10	HDU was not established due to incomplete civil works and non-provision of manpower.	Government accepted (August 2023) the observation.
Total			117.16		

Source: Hospital records

Thus, NHM had released funds for the establishment of four bedded obstetric HDUs. However, due to the non-availability of manpower, incomplete civil works, and partial receipt of equipment, HDU in DH, Tekkali functioning with limited equipment and HDUs in two AHs, Seethampeta and Kadiri remain non-functional. Further, if the delay in civil works continues then the warranty period for the equipment received may also expire without its utilisation.

Thus, the objective of providing intensive care to mothers suffering from life-threatening obstetric complications was not achieved due to incomplete civil works and limited availability of equipment.

3.3.4.6 District Public Health Laboratory (DPHL)

Under Integrated Disease Surveillance Programme (IDSP), Strengthening public health labs is an important component with focus on developing lab capacity in the country so that states have the diagnostic facilities to conduct surveillance of epidemic prone diseases in a decentralised manner.

To decentralise and integrate the surveillance activities, District Public Health Laboratories (DPHL) were established at the district level. Laboratories at District hospitals are being strengthened for the diagnosis of epidemic prone diseases with respect to deficient equipment, manpower and funds for consumables. DPHL under IDSP are expected to Perform testing for lab confirmation of epidemic prone diseases for both outpatients and inpatients, attend the hospital to generate lab confirmed surveillance data, support outbreak investigations in the district and report weekly surveillance data.

DPHLs were established at DH, Hindupur (June 2021) and DH Tekkali (October 2021). DPHL unit was not sanctioned to DH Atmakur (July 2022).

We observed that:

- In DH Tekkali, out of 15 types of equipment required, only four types were received whereas one Microbiologist, one Lab Technician and one Lab Assistant were recruited. Due to insufficient/ partial equipment, DPHL at Tekkali was also non-functional.
- In DPHL Hindupur, out of 15 items of equipment required, only seven items were available. Though microbiologist and lab Assistant were recruited, equipment was not fully supplied.

Government replied (August 2023) that in DH Tekkali at present out of 15 items of equipment, 11 items were available and tests⁵⁷ were being conducted at District Public Health Laboratory (DPHL) under Integrated District Surveillance Programme (IDSP). Four items of equipment⁵⁸ were still not available in DH Tekkali.

Government replied (August 2023) that equipment⁵⁹ available in DH Hindupur, culture media, reagents and antibiotic *etc.* were available at present and Culture and Sensitivity tests were being done at DPHL. Six items of equipment⁶⁰ were still not available in DH Hindupur.

Reply is not tenable as insufficient/partial equipment would impact the quality of service delivery for effective functioning of DPHLs.

3.3.4.7 Dietary services to in-patients

GoAP (November 2011) stipulated⁶¹ that the District Diet Management Committee (DDMC) will be responsible for calling tenders and selecting the most competent diet contractor and monitoring the quality of food supplied to the inpatients/ duty doctors. The Superintendent of Community Health Centres was responsible for administering the Diet contract without deviation from the conditions.

A State level committee⁶² was entrusted to standardise the bid documents, contract documents, contract conditions, *etc.* and oversee the funds flow to the Hospitals/Institutions. This committee would also monitor the implementation of diet supplied to all hospitals across the State and take appropriate remedial measures. Diet is being provided to inpatients in all 12 DHs.

There are 16, 14 and 13 CHCs and four, two, four AHs available in test checked districts of Anantapur, SPSR Nellore and Srikakulam districts respectively.

We observed the following shortfalls in providing dietary services in CHCs and AHs of test checked districts:

Anantapur district

- Out of 16 CHCs (including Chest disease hospital⁶³) CHC Penukonda only was providing diet to inpatients during 2017-2022.
- Out of four AHs, only in two AHs *i.e.* Madakasira and Kadiri, diet was being provided to inpatients.

⁵⁷ Dengue Rapid, Dengue (1gm ELISA), Dengue (NS1 ELISA), Chikungunya (ELISA IGM), WIDAL, Malaria (Slide method), Malaria (Rapid) being HbsAg (Rapid), HCV (Rapid), VDRL, HbsAg (Viral load), HCV (Viral load), ASO Titre, CRP, R A Factor, MTB-RTPCR

⁵⁸ Bio-safety cabinet Class I, Deep Freezer (-20°C), Centrifuge, Micro pipette set (0.2 - 10 n1, 20 -200 w1, 100-1000p 1)

⁵⁹ VITEK and BACT alert 3D machine, Elisa Reader, washer, Binocular Microscopes, Bio-safety Cabinet, Incubators and Hot air oven, Measuring scales.

⁶⁰ Autoclave sterilisation, Autoclave (Decontamination) Vertical, Hot air oven, Refrigerator (285 liters), Weigh scale & mixer, Computer scanner & Printer

⁶¹ vide GO MS No. 325 dated 01 November 2011

⁶² under the Chairmanship of the Commissioner of Health and Family Welfare with the Director of Medical Education, Commissioner, A.P. Vaidya Vidhana Parishad, Commissioner of AYUSH, and Director of Public Health & Family Welfare, as members and Director of Medical Education as the Member-Secretary

⁶³ In Chest Disease Hospital, Anantapur, diet had not been provided to inpatients since 2011.

SPSR Nellore district

- In all 14 CHCs, diet was not provided during 2017 to 2022.
- The diet contract expired for AH Kavali in March 2021 and for AH Gudur in December 2021.

Srikakulam district

- Out of 13 CHCs, diet was not provided in nine⁶⁴ CHCs during 2017-2022. The validity of diet contract for four⁶⁵ CHCs expired during the period from August 2020 to April 2022.
- Out of four AHs⁶⁶ available in the district, diet was not being provided in AH Seethampeta. The validity of the diet contract expired for AH Narasannapeta in August 2021.

Test checked Healthcare Facilities (HCFs)

- Diet was not being provided in three⁶⁷ out of nine test checked HCFs⁶⁸ under APVVP.
- Diet/food supplied to the inpatients was not patient-specific such as diabetic, semi-solid and liquid in six⁶⁹ Secondary HCFs.
- In DH Tekkali, the validity of the diet contract expired in November 2021.

Certification of Food Safety and Standards Authority of India (FSSAI)

Food Safety and Standards Act, 2006, Section 31 stipulates that no person shall commence or carry on any food business⁷⁰ except under a licence.

The food supply contractors in six⁷¹ test checked HCFs did not obtain Food Safety and Standards Authority of India (FSSAI) registration certificate or license under Food Safety and Standard Act, 2006.

Government replied (August 2023) that Government issued orders⁷² for enhancement of diet charges from ₹40 to ₹80 to provide the quality diet to the various categories of patients. Government also stated that directions were issued to all District Co-ordinator of Hospital Services (DCHSs) to select the diet suppliers from local available voluntary groups/ Zilla Samkyas, NGOs and other local bodies duly passing the resolutions in their Hospital Development Societies (HDSs) and to ratify the same by the concerned Chairman of District Management Committee.

⁶⁴ CHCs Kotabommali, Ranasthalam, Kotturu, Kaviti, Amadalavalasa, Palasa, Haripuram, Icchapuram and Baruva

⁶⁵ CHCs Sompeta, Ponduru, Budithi and Pathapatnam

⁶⁶ AHs Rajam, Palakonda, Narasannapeta and Seethampeta

⁶⁷ AH Seethampeta, CHC Naidupeta and CHC Kotha Cheruvu

⁶⁸ CHC (Sompeta, Naidupeta, Kothacheruvu), AH (Kadiri, Kavali, Seethampeta), DH (Atmakur, Hindupur, Tekkali)

⁶⁹ CHC Sompeta, AH Kadiri, AH Kavali, DH Atmakur, DH Hindupur, DH Tekkali

⁷⁰ Food safety and standards Act, 2006 (Act no. 34 of 2006) defines Food Business as any undertaking, whether for profit or not and whether public or private, carrying out any of the activities related to any stage of manufacture, processing, packaging, storage, transportation, distribution of food, import and includes food services, catering services, sale of food or food ingredients

⁷¹ CHC Sompeta, AH Kadiri, AH Kavali, DH Atmakur, DH Hindupur and DH Tekkali

⁷² G.O.Ms.No.325, HM&FW(M1) Dept., Dt: 02.12.2022.

3.3.4.8 Availability of linen in the District Hospitals

IPHS prescribes 21 types of linen⁷³ that are required for patient care services, for hospitals with 101 beds and above. An efficient and effective linen and laundry services can enhance patient experience and reduce the risk of cross contamination.

In 12 DHs, we compared all DHs with minimum requirement of different types of linen and observed shortages in bedspreads, doctor's overcoats, paediatric mattresses, hospital worker OT coats, mortuary sheets *etc.* There were shortages of linen ranged from 1 to 16 items as shown in **Appendix 3.5**. Further, one dhobi was engaged on out-sourcing basis for laundry services in each of the test checked DHs⁷⁴.

Thus, as all the DHs did not provide all prescribed types of linen for patients, doctors and staff in the hospitals as required by IPHS, and the risk of cross contamination cannot be avoided.

3.3.4.9 Blood bank/storage Units in secondary health care facilities

As per the Drugs and Cosmetics Rules, 1945, Under Section 122, a license from the Drug Control Administration is required for the operation of the Blood Bank in the State.

Application for the grant and/or renewal of license for the operation of a Blood Bank/processing of human blood for components/manufacture of blood products⁷⁵, shall be made to the Licensing Authority appointed under Part VII in 1 (Form 27- C) or 5 (Form 27-E or Form 27-F), as the case may be, and shall be accompanied by license fee and inspection fee.

We observed that CHC Kothacheruvu and AH Seethampeta did not have blood storage units. The validity of license for operating Blood Bank/Blood Storage Centre in the test checked HCFs is shown in **Table 3.20**.

Table 3.20: Validity of license for Blood Banks/ Blood Storage Centres in CHCs/AHs

Name of the facility	License valid up to	Category of the Unit	Remarks
AH, Kavali	03/07/2021	Blood Bank	Functioning without license
AH, Kadiri	Expired on 30/04/2022	Blood Bank	Functioning without license
CHC, Sompeta	Expired on 18/02/2022	Storage Unit	Not functioning

Source: Hospital records

⁷³ Abdominal sheets for OT; Bed sheets; Bedspreads; Blankets (Red and Blue); Doctor's overcoats; Draw sheets; Hospital workers' OT coats; Leggings; Mackintosh sheets; Mats (nylon); Mattresses (Foam) for adults; Mortuary sheets; Over-shoe pairs; Paediatric mattresses; Patient's coats (Female); Patient's Pyjamas and Shirts (Male); towels; Perennial sheets for OT; Pillows; Pillow covers; Apron for cook; Curtain cloth for windows and doors; Uniform/Apron and Table cloth.

⁷⁴ DH Tekkali, DH Atmakur and DH Hindupur

⁷⁵ Collection, processing, testing, storage, banking and release of umbilical cord blood stem cells

Status in DHs

Blood banks/blood storage units/blood centres were available in 12 DHs. Out of these, the validity of license was expired in six⁷⁶ DHs and they were functioning without authorisation of license for operation of Blood Bank/Blood Storage Centre in HCFs as shown in **Table 3.21**.

**Table 3.21: Validity of license expired for Blood Bank/
Blood Storage Centre in DHs**

SI No	Name of District Hospital (DH)	Category of the Unit	License valid up to
1	Tenali	Blood bank	05/06/2021
2	Markapur	Blood bank	30/04/2022
3	Chittoor	Blood bank	31/12/2022
4	Proddatur	Blood bank	31/12/2022
5	Hindupur	Blood Bank	30/04/2022
6	Tekkali	Blood Storage Centre	31/01/2022

Source: Information furnished by DHs

Further, we observed that:

- Blood bank Technician was available in all DHs except at Blood Storage Centre in DH Atmakur.
- In AH Seethampeta, though equipment worth ₹5.50 lakh was received during December 2021 to February 2022 for Blood Storage Unit, equipment was not installed due to non-completion of civil works as of June 2022.
- In CHC Kothacheruvu, equipment was not installed as of August 2022 though equipment worth ₹4.87 lakh was received in December 2021 and one Binocular Microscope worth ₹17,000 was received in April 2022.

Thus, BSUs in AH Seethampeta and CHC Kothacheruvu were non-functional as of June 2022 and August 2022 respectively though the equipment was available. Due to non-availability/ non-functioning of blood storage units in the above two CHCs⁷⁷ and one AH, patients requiring blood administration were either to be referred to higher facilities or arranged the blood units on their own.

Government accepted the observation and replied (August 2023) that license was renewed for DH Tekkali (up to January 2025), DH Tenali (up to June 2026) and DH Hindupur (December 2027) and the renewal process of DH Markapur and DH Proddatur is under process.

3.3.4.10 Ambulance Services in DHs

As per IPHS 2012, round the clock ambulance services with basic life support shall be available in the DHs.

⁷⁶ Tenali, Markapur, Chittoor, Proddatur, Hindupur, Tekkali

⁷⁷ CHCs Sompeta and Kothacheruvu, AH Seethampeta

Dedicated ambulance service was available only in five out of twelve DHs viz., Anakapalli, Chittoor, Paderu, Proddatur and Tanuku.

Medical Superintendents of DHs replied that Dial-108 linked services were available for transporting the patients. This is discussed in this Chapter at **Para 3.5 Ambulance Services**.

3.3.4.11 Post-mortem & Mortuary Services in DHs

As per IPHS 2012, Post-mortem room shall have stainless steel autopsy table with sink, a sink with running water for specimen washing and cleaning and cupboard for keeping instruments. A separate room for body storage shall be provided with at least two deep freezers for preserving the body. There shall be a waiting area for relatives and a space for religious rites.

As per IPHS 2012, Post-mortem equipment shall be available in DH. Mortuary facility was available in seven⁷⁸ DHs out of 12 DHs.

We observed that;

- Mortuary table was not available in Paderu, Parvatipuram, Tenali, Markapur, Madanapalle, Proddatur, Atmakur and Hindupur.
- Sink with running water facility was not available in DHs Hindupur and Tekkali.
- Spotlight was not available in DHs Paderu, Parvatipuram, Anakapalli, Tenali, Madanapalle, Proddatur, Tekkali, Atmakur and Hindupur.
- Weighing machine (organs) was not available in DHs Paderu, Parvatipuram, Anakapalli, Markapur, Madanapalle, Proddatur, Atmakur and Hindupur.
- Deep Freezers for preserving bodies were not available in DHs Markapur and Hindupur, while they were non-functional in DHs Parvatipuram, Madanapalle and Tekkali.
- Waiting area for relatives and a space for religious rites were not available in DHs Anakapalli, Madanapalle, Hindupur and Tekkali.

Thus, mortuary services in the test-checked DHs lacked minimum infrastructure.

Government accepted the audit observation (August 2023).

3.3.4.12 Firefighting Services

As per the National Building Code 2016, all the buildings shall obtain No Objection Certificate (NOC) from Fire safety department.

We observed during joint Physical verification:

⁷⁸ Tanuku, Chittoor, Anakapalle, Paderu, Atmakur, Tenali and Proddatur

- DH Tekkali and CHC Sompeta did not obtain NOC from the Fire Safety Department. Smoke detectors were also not available in eight HCFs⁷⁹.
- Fire hydrant was not available in CHC, Sompeta.
- Evacuation plans in the event of a fire were not displayed in five⁸⁰ HCFs.
- Fire extinguishers were not installed at power back up area (Diesel Generator Room) in four⁸¹ HCFs.

Government accepted the observation and replied (August 2023) that the process of HCFs seeking Fire NOC had commenced.

3.4 Availability of services in Tertiary Healthcare

Every Medical College & Teaching Hospital should have 23 departments *i.e.*, eight non-clinical and 15 Clinical Departments respectively, as detailed in **Table 3.22**.

Table 3.22: Details of Non-clinical & clinical Departments

Medical College Departments (Non-Clinical)	Teaching Hospital Departments (Clinical)
1. Human Anatomy	1. General Medicine
2. Human Physiology	2. Paediatrics
3. Biochemistry	3. Psychiatry
4. Pathology (including blood)	4. Dermatology, Venerology & Leprosy
5. Micro-Biology	5. TB&RD
6. Pharmacology	6. General Surgery
7. Forensic Medicine	7. Orthopaedics
8. Community Medicine	8. Radio-Diagnosis
	9. Radiotherapy (Optional)
	10. Oto-rhinolaryngology
	11. Ophthalmology
	12. Obstetrics & Gynaecology
	13. Anaesthesiology
	14. Physical Medicine & Rehabilitation (optional)
	15. Dentistry

Source: MSRR, 1999

In addition to the above departments, the Medical Colleges having Postgraduate degree/diploma courses in various specialties may have other departments to meet the teaching needs of the college and healthcare needs of the public, as per MSRR, 1999.

3.4.1 Laboratory Services in Tertiary Healthcare

The MSRR, 1999 prescribed the availability of 20 laboratory services in eight departments at a Medical College. The laboratory services available in the test-checked Government Medical Colleges are given in **Table 3.23**.

⁷⁹ CHC Sompeta, CHC Naidupeta, CHC Kothacheruvu, AH Seethampeta, AH Kavali, AH Kadiri, DH Atmakur and DH Hindupur

⁸⁰ CHC Sompeta, AH Kavali, CHC Naidupeta and CHC Kothacheruvu, DH Tekkali

⁸¹ CHC Sompeta, AH Kavali, CHC Naidupeta and CHC Kothacheruvu

Table 3.23: Shortfall in Laboratory Services in Non-clinical Departments of test checked GMCs

S.No	Name of Dept	Name of the Lab services	Nellore	Anantapur	Srikakulam
1	Human Anatomy	Research Lab	Yes	Yes	Not furnished
2	Microbiology	Tuberculosis Lab	Yes	No	Yes
3	Pharmacology	Research Lab	Yes	Yes	Not furnished
4	Forensic Medicine	Histopathology Lab	No	Not furnished	Yes
		Serology Lab	No	Not furnished	Yes
		Anthropology Lab	No	Not furnished	Yes
		Toxicology lab	No	Not furnished	Yes

Source: Medical College records

We observed that: -

- Lab services such as Histopathology, Serology, Anthropology and Toxicology were not available in Forensic Medicine Department at GMC, Nellore.
- Tuberculosis Lab was not available in Microbiology Department at GMC, Anantapur.

Government accepted (August 2023) the audit observation and promised future compliance.

3.4.2 Special Services in Tertiary Healthcare

Special services include services provided for burns injuries, trauma care and all the services provided by the Super Specialty hospital.

3.4.2.1 Burns & Injuries Ward

The main purpose of Burns unit in a hospital is to provide comprehensive burn care and minimise the incidence of infections among burn patients.

National Programme for Prevention and Management of Burn Injuries is an initiative by Director General of Health Services, Ministry of Health and Family Welfare, Government of India, to strengthen preventive, curative and rehabilitative services for burn injuries under Central Sponsored Scheme at 60:40 ratio between Centre and State Governments.

The Government of Andhra Pradesh accorded⁸² administrative sanction (May 2018) for ₹39.47 crore for burn units in six medical colleges,⁸³ with ₹6.58 crore, for each unit. Out of ₹6.58 crore provided, ₹2.18 crore was for construction purpose and ₹1.29 crore for equipment *inter-alia*. As a part of the first installment, Central Government released an amount of ₹2.08 crore as its 60 *per cent* share and GoAP released an amount of ₹0.83 crore as 40 *per cent* share. The work was awarded (18 February 2019) by APMSIDC and the site was handed over to the contractor⁸⁴ on 28 June 2019.

APMSIDC stated that the construction of Burns ward was incomplete, and the contractor initiated the work and stopped the work (February 2022) after receiving payment of ₹45.07 lakh on 21 February 2022. The building was incomplete as shown in **Figure 3.3** above and the balance funds provided for this were available at APMSIDC.



Figure 3.3: Abandoned work of burns ward at GGH, Anantapur (September 2022)

Government accepted the observation and replied (August 2023) that action would be taken to complete the Burns and Injuries ward in coordination with APMSIDC.

3.4.2.2 Trauma care Centre

Keeping in view the increasing number of road accidents and to provide immediate medical treatment to affected/injured people, Government of India decided to upgrade and strengthen existing hospitals and provide rapid mode of transportation of trauma victim under supervision to reach the hospital early supported by state of the art communication, rather than simply focusing on creation of new infrastructure for trauma care in a piece meal manner and bring down the death rate from road accidents to 10 *per cent* by developing a Pan-India trauma care network in which no trauma victim has to be transported more than 50 kilometres and a designated Trauma Care Centre would be available at every 100 Km.

We observed that GoI released⁸⁵ ₹80 lakh to GGH, Anantapur for establishment of a Trauma Care Centre, out of which ₹60 lakh was spent for construction of Trauma Care Centre. After construction of the Trauma Care Centre, the building was allotted (August 2019) to the Ophthalmology Department. The specific purpose to establish Trauma

⁸² Vide G O R T No. 158 dated 03/05/2018

⁸³ KMC Kurnool, GMC Guntur, SVMC tirupathi, ACSR GMC Nellore, GMC Anantapur, AMC Visakhapatnam

⁸⁴ on tender basis with a tender premium of 0.45 *per cent* less over the ECV of ₹. 1,69,94,220 (SSR 2081-19). The agreement No. 97(B)/APMSIDC/2018-19 was concluded on 18.02.2019 with a stipulated period of 12 months for its completion

⁸⁵ vide Rc No.2-28016/110/2008-H dated 03/02/2010

Care Centre at GGH was defeated as the same was given to Ophthalmology Department.

GoI had sanctioned ₹5 crore to GGH, Anantapur and ₹2 crore to GMC Srikakulam (March 2018) for procurement of equipment. GMC Srikakulam did not utilise the ₹2 crore sanctioned in March 2018.

3.4.2.3 Nutrition Rehabilitation Centre

Nutrition Rehabilitation Centre (NRC)⁸⁶ is a health facility where children with Severe Acute Malnutrition (SAM) are admitted and managed. NRC at a medical college hospital should have 20 beds. The unit should be a distinct area within the health facility and should be in proximity to the paediatric ward/inpatient facility. The approximate covered area of the NRC should be about 150 square feet per bed, plus 30 *per cent* for ancillary area. A 20 bedded NRC should have a covered area of about 3,900 square feet, which will include the patient area, play and counselling area, nursing station, kitchen, storage space, two bathrooms and two toilets.

The plinth area of NRC facility with 20 beds in all three test-checked Government General Hospitals was less as indicated in *Table 3.24*.

Table 3.24: Statement showing plinth area requirements and availability at NRCs of test checked Government General Hospitals

Name of the Teaching Hospital	Plinth area required for 20 beds in Sq.ft	Plinth area available for 20 beds in Sq.ft	Shortfall in Sq.ft.
GGH, Anantapur	3900 (150x20 + 3000x30%)	1012.5	2887.5
GGH, Nellore	3900	2068	1832
GGH, Srikakulam	3900	1527.4	2372.6

Source: Hospital records

We observed that

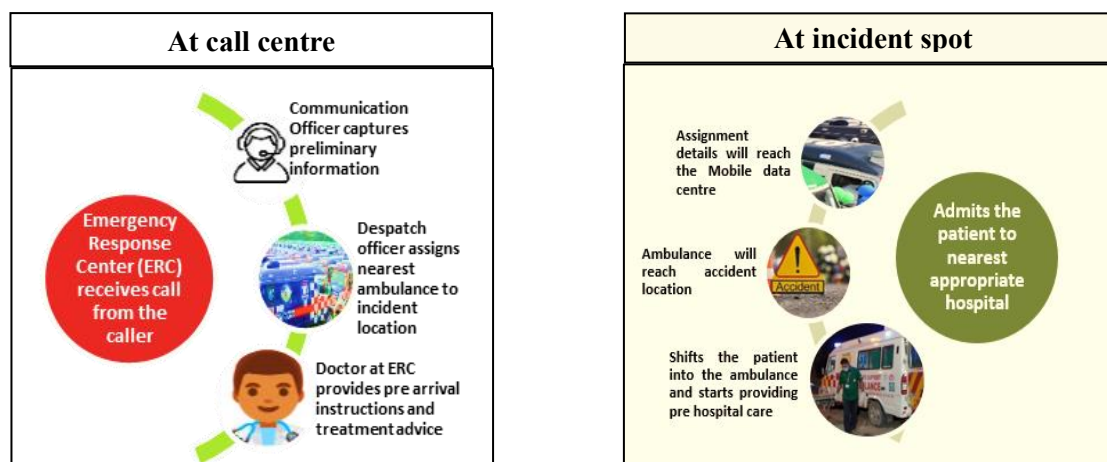
- **Play & Counselling area** with toys, audio-visual equipment like TV, DVD player and –EC material - Counselling area was not available in GGHs Anantapur and Srikakulam. Play area was not available in all three test checked GGHs.
- **Kitchen and food storage** area attached to ward, or partitioned in the ward, with enough space for cooking, feeding and demonstration were not available at GGH, Anantapur. Kitchen area was not adequately ventilated at GGH, Anantapur.
- **Attached toilet and bathroom facility** for mothers and children along with two separate hand washing areas were not available in all three test checked GGHs.
- **Mosquito and fly screen:** Windows were not covered with mosquito and covers.

3.5 Ambulance Services

Dial 108 is a 24X7 emergency response system, primarily designed to attend to patients of critical care, trauma and accident victims *etc.* It is a free service for any emergency involving people. Toll free helpline numbers are accessible to both landline and mobile

⁸⁶ Operational Guidelines on Facility Based Management of Children with Severe Acute Malnutrition (2011)

phones. Implementation of National Ambulance Service (NAS) guidelines has been made mandatory for all the ambulances whose operational cost is supported under NHM.



District wise number of vehicles mounted is given in **Table 3.25**.

Table 3.25: District wise number of Ambulances available in Andhra Pradesh

S. No.	Name of the district	Basic Life Support (BLS) Ambulances available	Advanced Life support (ALS) Ambulances available	Neonatal ambulances available	Total availability
1	Srikakulam	22	10	1	33
2	Vizianagaram	35	9	3	47
3	Visakhapatnam	46	15	3	64
4	East Godavari	49	16	2	67
5	West Godavari	36	14	2	52
6	Krishna	39	16	1	56
7	Guntur	58	22	2	82
8	Prakasam	33	11	1	45
9	SPSR Nellore	31	10	2	43
10	Chittoor	60	17	2	79
11	YSR	51	18	3	72
12	Anantapur	52	16	2	70
13	Kurnool	43	13	2	58
Total		555	187	26	768

Source: Information furnished by the 108 cell

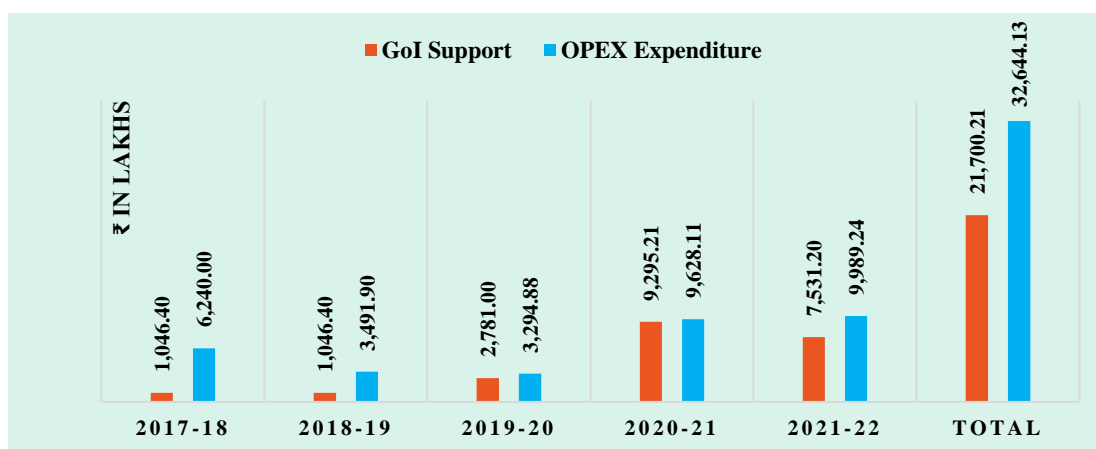
3.5.1 Funds for operation of Ambulances

GoI is supporting under NHM for 105 ALS ambulances at ₹1.40 lakh and 523 BLS ambulances at ₹1.20 lakh per month per ambulance towards operational cost along with maintenance cost of ₹64,980/- per feeder ambulance per month.

As per budget figures of the GoAP, ₹326.44 crore were spent towards operational expenditure (OPEX) on Dial-108 service during the years 2017-22. GoI provided an amount of ₹217 crore towards OPEX support through NHM, which is 66.47 per cent

of the expenditure incurred by GoAP. Expenditure on operation of Ambulances is depicted in **Chart 3.3**.

Chart 3.3: Operational expenditure on 108 services



Further, we observed that dedicated ambulance was not available in any of the HCFs in plain areas. However, the service of 108 was being utilised by these HCFs.

3.5.2 Coverage in hilly or tribal areas

There are 159 PHCs (RHS 2021-22) in tribal areas of Andhra Pradesh. However, there are 84 ambulances available and operated by ITDAs, along with 122 feeder ambulances (two-wheeler).

During physical verification of Area Hospital, Seethampeta, a tribal area, we noticed that three BLS ambulances supplied by the ITDA, Seethampeta were available and the ambulances were without air flow meters to provide oxygen to patients though equipped with oxygen cylinders.

3.5.3 Response time

Minimum response time of ambulance for urban, rural and tribal areas as per request for proposal (RFP) while inviting tenders for engagement of Ambulance operator is 15 min, 20 min and 30 min respectively. We observed that the average response time of ambulance in urban areas is 3.23 minutes more than stipulated.

Though penalties are being imposed for not maintaining the response time as per RFP, longer response time that may lead to loss of lives is a matter of concern.

3.5.4 Free referral transport for pregnant women

Under NHM, it is expected that each and every pregnant woman gets timely access to health care system for the required quality of antenatal, intra-natal, post-natal care and immunisation services free of cost.

For reducing out of pocket expenses, follow up and constant supervision over pregnant woman by ANMs/ASHA is required to maintain adequacy of services.

Reduction of Maternal Mortality Ratio and Infant Mortality Rates is a high priority area for the Government. Providing referral transport to pregnant women is one of the

interventions for reduction of MMR. To ensure provision of drop back service to every pregnant woman from hospital to home, a dedicated fleet of 279 vehicles were positioned by GoAP.

Talli-Bidda Express is a scheme that provides transportation service (from hospital to home through dedicated vehicles) to new mothers who deliver at Government Hospitals. This service is coordinated by 102 call centre which operates round the clock.

GoI is providing funds for this free referral transport for pregnant women at ₹250 from home to health facility and ₹250 for drop back facility. Total institutional deliveries and the number of pregnant women who availed this facility along with the approvals made by GoI are detailed in **Table 3.26**.

Table 3.26: Statement showing Institutional deliveries and drop back services availed by pregnant women

Year	Total Institutional deliveries	Pregnant Woman who availed the free transport facility			GoI provision (No. of PWs)	Less availed over provision	Excess claimed at ₹500 (in ₹ lakh)
		Home to facility	Dropback facility	Total availed			
2017-18	7,37,140	86,874	1,17,758	2,04,632	5,41,900	3,37,268	16,86.34
2018-19	7,42,638	91,485	2,16,853	3,08,338	5,41,900	2,33,562	11,67.81
2019-20	7,32,248	1,74,709	2,26,528	4,01,237	5,41,900	1,40,663	7,03.32
2020-21	7,09,539	1,37,363	2,23,432	3,60,795	5,41,900	1,81,105	9,05.53
2021-22	7,51,447	2,12,990	2,32,691	4,45,681	5,41,900	96,219	4,81.10
Total	36,73,012	7,03,421	10,17,262	17,20,683	27,09,500	9,88,817	49,44.09

Source: Information furnished by CFW and RoP data

From the above table, it can be seen that the proposals made under this head in the PIPs were not based on the actual trends of previous years. Further, the utilisation of these services by the pregnant women is partial. Against 36.73 lakh institutional deliveries, drop back service was provided to only 10.17 lakh women. Thus, the drop back service was not extended in 26.56 lakh delivery cases.

Ambulance services were available in three test checked Hospitals as detailed in **Table 3.27**.

Table 3.27: Details of Ambulances in test checked GGHs

S.No.	Ambulances details	Anantapur	Srikakulam	SPSR Nellore
1	No. of ambulances available	8	6	8
2	Working condition	2	3	7
3	Not in working condition	6	3	1

Source: Hospital Records



Figure 3.4: Equipment not available in ambulance in GGH, Nellore (July 2022)



Figure 3.5: Equipment not available in ambulance in GGH, Anantapur (Sept 2022)

Physical verification of the Ambulances revealed that:

- NABH prescribes certain essential life support equipment such as stretcher, portable oxygen, suction devices, first aid kit, AMBU bags, transport ventilators, suction unit, Infusion Syringe Pumps, Nebuliser and Oxygen Supply Units. These were not available in the ambulances in GGHs, Anantapur and Nellore.



Figure 3.6: Ambulance without essential equipment, GGH, Anantapur (inside pic) (September 2022)



Figure 3.7: Ambulance without essential equipment, GGH, Anantapur (outside pic) (September 2022)

- Call Received Register containing details of calls received and attended to were not available in the test checked hospitals.

The DME replied that the requirement of life saving equipment would be intimated to Government for budget provision and would be procured through APMSIDC.

Government replied (August 2023) that 108 ambulance services were being used for the purpose of interfacility transfers.

Reply is not tenable as 108 services are not dedicated to Government General Hospitals. GGHs require specialised and continuous services to be provided to the patients in transits of interfacility. Due to lack of equipment in 108 ambulances, emergency medical care and life support system to sustain the stability of the patient in transit to and from the hospital cannot be ensured.

3.6 Miscellaneous services

Joint inspections of three GGHs revealed shortfalls in various other services, as listed below.

3.6.1 Firefighting Services

As per the National Building Code 2016, all the buildings shall obtain fire NOC from Fire safety department.

We observed during joint Physical verification.

- All three-test checked GGHs did not obtain No objection certificate (NOC) from fire safety department.
- Smoke detectors were not in place and fire extinguishers were not refilled on timely basis in GGH, Anantapur.
- Underground backup water for fire was not available in GGH, Anantapur.

Fire extinguishers were not installed at power back (DG room) up area in GGH, Anantapur.

Government accepted (August 2023) the audit observation and stated that NOC was obtained for GGH Srikakulam and applied for NOC in the remaining two Hospitals.

3.6.2 Diet Services

Food Safety and Standards Act, 2006, Section 31 stipulates that no person shall commence or carry on any food business⁸⁷ except under a licence.

The food supply contractors in all three-test checked GGHs did not obtain Food Safety and Standards Authority of India (FSSAI) registration certificate or license under Food Safety and Standard Act, 2006.

Government accepted (August 2023) the audit observation and stated that instructions would be issued to all the Hospitals for obtaining FSSAI registration certificate.

3.7 Recommendations

- ***Government should provide amenities, equipment, and manpower to the Health Care Facilities as per Indian Public Health Standards (IPHS) for delivery of quality services for curative care.***
- ***Government should provide full range of tests/investigations in the laboratories along with adequate equipment as per Indian Public Health Standards in all Secondary Healthcare Facilities.***

⁸⁷ Food safety and standards Act, 2006 (Act no. 34 of 2006) defines Food Business as any undertaking, whether for profit or not and whether public or private, carrying out any of the activities related to any stage of manufacture, processing, packaging, storage, transportation, distribution of food, import and includes food services, catering services, sale of food or food ingredients.

Chapter IV

Availability of Drugs, Medicines, Equipment and other consumables

Chapter IV

Availability of Drugs, Medicines, Equipment and other consumables

Andhra Pradesh Medical Services and Infrastructure Development Corporation (APMSIDC) procured 70 to 88 per cent types of required drugs and medicines during the period 2018-22 and 65 to 88 per cent types of required surgical items during the period 2017-22. The indenting of drugs and surgical items was not made on need basis and the supplies were not made to Health Care Facilities (HCFs) as indented and the whole process was carried out on ad-hoc basis without any standardised protocol. Since Director of Public Health and Family Welfare (DPH&FW) and Andhra Pradesh Vidya Vidhana Parishad (APVVP) did not seek earmarked funds for local purchases, they were not given provision for purchase of emergency drugs during the period 2017-18 to 2021-22. Thus, the HCFs under their control were neither provided with all the drugs nor given the provision for the local purchase. Medical Equipment worth of ₹4.77 crore were lying idle at nine selected HCFs due to non-availability of manpower, incomplete civil works and non-availability of accessories.

4.1 Introduction to Andhra Pradesh Medical Services and Infrastructure Development Corporation

Efficient procurement, distribution and utilisation of medicines, equipment and consumables are key parameters in providing quality services in Health Care Facilities (HCFs).

The government of AP adopted a centralised model of procurement and management of medicines, equipment and consumables. Andhra Pradesh Medical Services and Infrastructure Development Corporation (APMSIDC) is entrusted with (i) procurement and distribution of medicines, surgical items, and medical equipment and (ii) providing infrastructure *etc.*, to the HCFs in Andhra Pradesh. The medicines are procured by APMSIDC and distributed to HCFs through Central Drug Stores (CDS) located in various districts and medical equipment which is required for health facilities are also procured and arranged to be installed. Brief History of APMSIDC is given in **Appendix 4.1**.

4.2 Utilisation of funds

During the years from 2017-18 to 2021-22, an amount of ₹2,187.80 crore was provided in the Budgets for procurement of medicines and equipment. However, an amount of ₹2,041.90 crore only was released to APMSIDC, of which ₹1,716.33 crore (78 *per cent*) only was utilised.

Government while furnishing the reply (August 2023) accepted the fund utilisation and furnished the releases made by the Government as detailed in **Table 4.1**.

Table 4.1: Utilisation of Funds

(₹ in Crore)

Year	Opening Balance	Budget Provision	Funds Released	Funds utilized	Funds unutilised	Funds lapsed
2017-18	219.88	411.17	325.27	244.50	80.77	10.19
2018-19	290.46	482.30	482.30	294.33	187.97	16.54
2019-20	461.89	288.33	228.33	294.25	(-)65.92*	Nil
2020-21	395.98	486.00	486.00	433.24	52.76	0.54
2021-22	448.19	520.00	520.00	450.01	69.99	Nil
Total			2,041.90	1,716.33	391.49	27.27

*Excess utilised funds were drawn from previously available funds.

Source: Budget Release Orders and data provided by APMSIDC

It was observed that an amount of ₹27.27 crore lapsed over the years. It was further observed that the available funds were not fully utilised in any of the years except in 2019-20, in which excess expenditure was met from the funds accumulated previously. This indicates absence of coordination among various organs involved in the budgetary process.

Government had not furnished any material facts about these improper provisions and utilisations in its reply.

4.3 Procurement of medicines

As per Para 4.1 of Procurement Policy (2009) of GoAP, the Medical Officer or Superintendent in-charge of HCF shall estimate the annual requirement of various types of medicines from the Essential Medicines List (EML) and Additional Medicines List (AML).

The estimated requirement of the next procurement year⁸⁸ shall be submitted to HoDs⁸⁹ by 31st March of each year. Keeping in view of the budget estimated to be available in the ensuing year, the HoDs shall limit the quantities of medicines to be indented. The HoDs shall indicate a quarterly delivery schedule to enable effective inventory management at APMSIDC level.

As per Procurement Policy (2009)⁹⁰ of GoAP, APMSIDC has to ensure timely availability and adequate quantities of required medicines in all HCFs. Based on purchase orders placed by APMSIDC, the supplier firms directly supply the medicines and surgical items to Central Drug Stores in Divisions. The medicines and surgical items are stored in the warehouses and issued to the HCFs as per the indents placed by them.

⁸⁸ from 1st July of the year to 30th June of next year

⁸⁹ Directorate of Medical Education, Directorate of Health and AP Vaidya Vidhana Parishad.

⁹⁰ GO Rt No.1357, Health, Medical & Family Welfare (M1) Department, dated 19 October 2009

We observed that the formula⁹¹ mentioned in Procurement Policy (2009) for estimation of annual requirement of Medicines during 2017-18 to 2021-22 was not followed by all test checked HCFs and instead, requirement of medicines was being placed based on previous years/previous quarters consumption. This resulted in short supply of Medicines and surgical items discussed in the **Paragraph 4.3.1**.

We also observed that e-aushadhi, the software application being used for the procurement and distribution of medicines, did not incorporate the formula prescribed in the Procurement Policy (2009). The HCFs upload the demand by restricting themselves to the extent of budget and medicines available in the portal and not according to the actual requirement as there was no such provision in the application. The supply chain mechanism can be seen in **Appendix 4.2**.

4.3.1 Coverage and issue of medicines/surgical items

Essential medicines⁹² are the medicines that address the priority health care requirements of a given population in HCF service area. A Standing Expert Committee⁹³ is responsible for preparation of Essential Medicines List (EML), Additional Medicines List (AML), Essential Surgical List (ESL) and Additional Surgical List (ASL) which shall be published widely for information of doctors working in HCFs and shall also be published on the website of Government for wide publicity. APMSIDC mandates procuring all medicines and surgicals listed in EML/ AML and ESL/ASL and supply of the same based on the demands of HCFs.

It was stated by APMSIDC that during the years 2017–18 to 2021–22, only 69.7 per cent to 88 per cent of the required essential and additional medicines and 65 per cent to 88.2 per cent of the required essential and additional surgical items were made available to HCFs through centralised procurement as detailed in **Table 4.2**.

Table 4.2: Availability of medicines & Surgical items

Year	No. of types of medicines				No. of types of surgical items			
	Requirement	Procured	not procured	Availability (in per cent)	Requirement	Procured	not procured	Availability (in per cent)
2017-18	564	Data not made available to audit			357	232	125	65.0
2018-19	564	393	171	69.7	357	246	111	68.9
2019-20	608	535	73	88.0	357	283	74	79.3
2020-21	608	533	75	87.7	357	315	42	88.2
2021-22	608	524	84	86.2	372	328	44	88.2

Source: APMSIDC records

APMSIDC did not provide reasons for not procuring the remaining medicines and surgicals. Thus, the objective of the Procurement Policy, which emphasises availability of medicines and surgicals in all HCFs, was not fulfilled by the APMSIDC.

⁹¹ $Q_e = [Q \times (1.1 + V)] - B$

Qe: Quantity of estimated annual requirement of each medicine. Q: Quantity consumed (under CDS+DPS+HDS) during last year (April to March) (in case of PHC it includes consumption of sub-centres) B: Opening Balance of each medicine (excluding expired medicines) V: Vacancy factor (only for PHCs/CHCs and APVVP Hospitals and not for Tertiary Hospital)

⁹² Those medicines that are selected through an evidence-based process with due regard to Public Health relevance, quality, safety, efficacy, and comparative cost effectiveness.

⁹³ Director of Medical Education (Chairperson), Director of Health, Commissioner, APVVP, Director of IPM, MD, APMSIDC (Member Convener), Director General, Drugs Control Administration, etc., as members and three Professors of Surgery, Professor of Pharmacology, three Professors of Medicine, Medical Officers / Superintendents of hospitals, etc., as nominated members

We observed in eight-test checked PHCs that medicines and surgical items were not issued by APMSIDC as indented as detailed in **Table 4.3**.

Table 4.3: Supply of indented medicines/surgical items to PHCs

Year	Total requisitions placed by test checked PHCs		Not at all supplied		Partially Supplied		Partially supplied (in per cent)		Totally Supplied		Totally Supplied (in per cent)	
	Medicines	Surgicals	M	S	M	S	M	S	M	S	M	S
	(M)	(S)										
2017-18	731	184	18	14	656	169	89.74	91.85	57	1	7.80	0.54
2018-19	728	178	49	9	679	166	93.27	93.26	0	3	0.00	1.69
2019-20	896	183	44	7	849	176	94.75	96.17	3	0	0.33	0.00
2020-21	856	288	32	29	821	259	95.91	89.93	3	0	0.35	0.00
2021-22	966	196	33	19	929	177	96.17	90.31	4	0	0.41	0.00
Total	4,177	1,029	176	78	3,934	947	94.18	92.03	67	4	1.60	0.39

Source: Data from e-Aushadhi portal made available by APMSIDC

Thus, during the years 2017-22, 94.18 *per cent* of essential medicines were partially supplied; 4.22 *per cent* were not supplied and only 1.60 *per cent* were totally supplied against the requirement placed by the selected PHCs. In respect of surgicals, 92.03 *per cent* were partially supplied; 7.58 *per cent* not supplied and only 0.39 *per cent* were totally supplied against the requirement.

Further, we observed in the twelve checked GGHs/AHs/CHCs that medicines and surgical items were short issued by APMSIDC as indented as detailed in **Table 4.4**.

Table 4.4: Supply of indented medicines/surgical items to CHCs/AHs/DHs/GGHs

Year	Total requisitions placed by test checked PHCs		Not at all supplied		Partially Supplied		Partially supplied (in per cent)		Totally Supplied		Totally Supplied (in per cent)	
	Medicines	Surgicals	M	S	M	S	M	S	M	S	M	S
	(M)	(S)										
2017-18	2,152	977	93	72	1,950	892	90.61	91.3	109	13	5.07	1.33
2018-19	2,383	1,280	221	65	2,157	1,206	90.52	94.22	5	9	0.21	0.70
2019-20	2,695	1,222	142	111	2,516	1,088	93.36	89.03	37	23	1.37	1.88
2020-21	2,447	1,105	93	119	2,335	978	95.42	88.51	19	8	0.78	0.72
2021-22	2,583	1,296	142	87	2,421	1,200	93.73	92.59	20	9	0.77	0.69
Total	12,260	5,880	691	454	11,379	5,364	92.81	91.23	190	62	1.55	1.05

Source: Data from e-Aushadhi portal made available by APMSIDC

Thus, during the years 2017-22, 92.81 *per cent* of essential and additional medicines were partially supplied; 5.64 *per cent* were not supplied only 1.55 *per cent* were totally supplied. Further, 91.23 *per cent* of surgical items were partially supplied, 7.72 *per cent* were not supplied and only 1.05 *per cent* were totally supplied against the requirement placed by the selected GGHs/AHs/CHCs. Nine test checked HCFs⁹⁴ were allocated funds worth ₹23.96 crore towards placing indent for medicines and surgicals in e-Aushadhi, out of which ₹18.23 crore was only utilised leaving a balance of ₹5.73 crore unutilised. HCFs attributed non-utilisation of funds to short supply and non-supply of indented drugs by CDSs.

⁹⁴ DH Atmakur, DH Hindupur, DH Tekkali, AH Kadiri, AH Kavali, AH Seethampeta, CHC Kothacheruvu, CHC Naidupeta and CHC Sompeta.

Government replied (August 2023) that a system was developed by APMSIDC to supply the shortfall of drugs and surgical items on fortnightly basis for each CDS in order to improve the supplies.

The indenting of drugs and surgical items was not made on the basis of needs and the supplies were also not made to HCFs as indented. Thus, indenting and supply were carried out on ad-hoc basis without any standardised protocol.

4.3.1.1 Availability of drugs in test checked District Hospitals

IPHS 2012 prescribed 493 types of drugs, lab reagents, consumables and disposables for delivery of minimum assured services in District Hospitals. However, IIPH Hyderabad⁹⁵ selected 151 drugs, lab reagents, consumables and disposables for test check. The category wise availability of drugs, lab reagents, consumables and disposables in three test checked DHs is detailed in **Table 4.5**.

Table 4.5: Availability of Drugs, Lab reagents, Consumables and disposables in three test checked District Hospitals of Andhra Pradesh

SL No	Categories	No. required as per IPHS 2022	No. of drugs selected for test check	DH Tekkali	DH Atmakur	DH Hindupur
1	Analgesic/ Antipyretics / Anti Inflammatory	11	5	5	5	5
2	Antibodies & Chemotherapeutics	76	20	15	13	10
3	Anti-Diarrhoeal	6	1	1	1	1
4	Dressing Material/ Antiseptic Ointment Lotion	24	10	5	6	5
5	Infusion Fluids	14	11	8	9	8
6	Eye and ENT	25	10	4	3	1
7	Anti-histamines/ Anti-Allergic	12	8	6	6	5
8	Drugs acting on Digestive System	20	6	4	5	3
9	Drugs related to Haemopoietic system	4	3	3	2	1
10	Drugs acting on Cardiac vascular system	26	19	11	15	14
11	Drugs acting on Central/ peripheral Nervous system	40	16	8	10	9
12	Drugs acting on Respiratory System	16	5	4	4	4
13	Skin Ointment/ Lotion etc	23	5	4	5	2
14	Drugs acting on Uro-Genital system	5	5	3	4	4
15	Drugs used in obstetrics and Gynaecology	35	8	6	7	6
16	Hormonal Preparation	14	5	4	4	5
17	Vitamins	24	6	5	4	4
18	Other Drugs and Material and Misc. Items	83	8	5	7	5
19	Emergency lifesaving drugs for SNCU	12	0	NA	NA	NA
20	Other Essential Medicines & Supplies for SNCU	23	0	NA	NA	NA
	Total	493	151	101	110	92

Source: Hospital records

⁹⁵ Audit engaged Indian Institute of Public Health, Hyderabad for technical support and advise

GoAP has formulated a list of 608 drugs and 372 surgical items required at Government Medical Establishments. The State norms are much higher than IPHS, 2012 norms. However, the shortages in procurement and availability were significant as above.

4.3.2 Local Purchase of Drugs and medicines

As per the Procurement Policy 2009, out of the total budget allotted, ten *per cent* of budget shall be earmarked to HCFs under the control of DH and Commissioner, APVVP and 20 *per cent* under the control of DME for meeting local emergency requirements towards purchase of medicines. We observed that ₹146.16 crore was released during the period from 2019-20 to 2021-22 to HCFs under the control of DME only. APMSIDC stated that since DH and Commissioner, APVVP did not seek earmarked funds for local purchases, they were not provided funds for the same. As a result, HCFs under the control of DH and APVVP were not given provision for purchase of emergency drugs during the period 2017-18 to 2021-22.

Non-release of funds for local purchase of Medicines to HCFs and short supply of medicines by the APMSIDC may lead to adverse events including treatment delays, clinical complications and substandard treatment.

Government replied (August 2023) that a centralised procurement policy with IT system support has been developed to enable the health institutions to raise their indents for emergency medicines and drugs.

Reply is not tenable as the purpose of decentralised procurement system is to procure lifesaving and other medicines under emergency and to overcome the supply deficiencies of essential medicines under centralised procurement. Thus, the objective of decentralisation in procurement is defeated.

4.3.3 Stock out medicines

The Procurement Policy (2009) stipulated that stock for at least three months at CDSs, two months in HCFs of Tribal Areas and one month in HCFs in rural/urban HCFs should be always maintained. Whenever the stocks go below the aforesaid levels, it is the responsibility of APMSIDC to replenish the same either by cross movement or by fresh procurement. The APMSIDC shall design and establish an appropriate system of forecasting demand for each medicine in each HCF in advance to enable timely replenishment. However, we observed in 20 test-checked HCFs that stocks as mentioned in **Table 4.6** were not replenished during the years 2017–18 to 2021-22.

Table 4.6: Stock out medicines and surgicals in test checked HCFs

Name of the hospital	No. of types medicines went out of stock					No. of types of surgicals went out of stock				
	2017-18	2018-19	2019-20	2020-21	2021-22	2017-18	2018-19	2019-20	2020-21	2021-22
Tertiary Level Hospitals										
GGH Anantapur	45	56	66	66	59	33	61	58	53	43
RIMS Srikakulam	73	82	113	96	96	60	73	72	54	56
GGH Nellore	59	60	55	41	32	2	2	2	1	2
Primary level Hospitals (PHC)										
Chennur	9	17	19	17	17	3	7	7	16	9
Inamudugu	3	4	3	4	4	4	8	17	9	9
Karjada	7	7	11	8	15	10	20	13	8	5
Kondapuram	4	4	2	7	12	9	5	4	6	4
Kudair	6	8	18	18	24	7	5	15	25	14
Narpala	5	5	6	4	7	5	5	6	8	5
Thummalapenta	0	2	2	0	0	0	0	0	0	0
Urlam	15	12	5	3	6	9	12	5	6	16
Secondary Level Hospitals										
AH Kadiri	17	34	28	26	25	5	12	16	7	7
AH Kavali	33	31	33	23	26	41	17	27	20	17
AH Seethampeta	6	14	21	30	33	32	55	56	42	16
CHC Kothacheruvu	3	2	1	2	2	8	14	4	0	12
CHC Naidupeta	47	49	66	55	62	21	51	45	29	31
CHC Sompeta	3	3	1	0	1	0	0	0	0	0
DH Atmakur	13	17	17	17	9	31	49	46	44	39
DH Hindupur	21	21	30	40	59	19	24	23	20	12
DH Tekkali	9	6	14	6	2	1	63	26	12	1

Source: Data from e-Aushadhi portal made available by APMSIDC

Thus, drugs and medicines were not made available to HCFs by CDSs as per the Procurement Policy, which impacts service delivery directly. Due to non-availability of CDS data, audit could not ascertain whether CDS maintained the stocks as required in the Policy.

Government accepted (August 2023) the audit observation and promised future compliance.

Thus, the HCFs were neither provided all the drugs and medicines nor given the provision for local purchase, which would push needy patients to purchase privately.

4.3.4 Distribution of Near-Expiry medicines to the HCFs

As per Para 12.12 of the tender documents of the APMSIDC, if the drug is not consumed prior to its expiry date *i.e.*, six months before expiry, the supplier will be notified about the drugs nearing expiry. Upon receipt of such information, the supplier should replace at his own cost, the drugs nearing expiry with fresh stock of longer shelf life, otherwise the value equal to the cost of the expired quantity will be deducted from the bills or any other amount payable to the firm.

We observed at the selected CDSs at Srikakulam, SPSR Nellore, and Anantapur districts that during the period 2017-22, drugs of value ₹2.14 crore due to expire within six months were distributed to the following selected HCFs as mentioned in **Table 4.7**.

Table 4.7: Near expiry medicines in test checked drug stores

Year	Name of the CDS	Name of the sampled hospitals	Value of the near expiry drugs (₹. in crore)
2017-22	CDS SRIKAKULAM	RIMS Srikakulam; DH Tekkali; CHC Sompeta; PHCs of Urlam, Karajada, Edupuram	1.03
2017-22	CDS NELLORE	PHCs of Inamadugu, Tummalapenta, Chennur; CHC Naidupeta; AH Kavali; DH Atmakur; GGH Nellore	0.55
2017-22	CDS ANANTAPUR	PHCs of Narpala, Kondapuram, Kudair; CHC Kothacheruvu; AH Kadiri; DH Hindupur; GGH Anantapur	0.56
Total			2.14

Source: data extracted from the documents provided by the CDS

CDSs replied that the drugs were issued to health facilities instead of sending back to the suppliers as per the orders of the APMSIDC. APMSIDC stated that the procedure adopted in e-Aushadhi portal is FIFO⁹⁶ for distribution of the products to meet the demand of HCFs and for utilisation of the same before its expiry. The reply is not tenable as there is a risk of drugs expiring at the premises of HCFs without being replaced and it is an undue favour to the supplier.

Government assured (August 2023) that strict instructions would be issued to all the CDS to send back near expiry drugs to the suppliers and the supplier also will be closely monitored to replace the near expiry drugs in all the CDS.

4.3.5 Quality Control of drugs

Quality control plays a major role in providing high quality drugs to the patients. Ensuring quality of medicines is one of the prime objectives of the procurement policy.

APMSIDC procured 34,262 batches of medicines during the period from 2017-2022 and sent samples randomly from each batch to laboratories for quality testing. Out of the above, 50 batches of medicines were declared as not of standard quality (NSQ) as detailed in **Table 4.8**:

Table 4.8: Year-wise statement showing quality testing of medicines by APMSIDC

Year	No. of batches of drugs received	No. of batches of drugs from which sample sent for quality testing	No. of batches failed in quality testing
2017-18	6,595	6,595	16
2018-19	6,886	6,886	14
2019-20	5,813	5,813	13
2020-21	8,464	8,464	4
2021-22	6,505	6,505	3
Total			50

Source: Data furnished by APMSIDC

⁹⁶ First-in- First-Out

4.3.6 Disposal of expired drugs

As per Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, expired medicines and surgical items fall into the category of hazardous waste and wastes generated in CDS establishments must be sent or sold to an authorised user or disposed off in an authorised disposal facility.

We observed that expired drugs were disposed off by burying in landfills in CDS Anantapur (April 2017 to October 2020) and CDS Srikakulam (April 2017 to January 2021).

Government replied (August 2023) that agencies were engaged to dispose the expired medicines and surgical items by following the guidelines of WHO and the process of condemnation was carried out at the premises of the identified vendor.

Reply is not acceptable as it was not supported by any evidence to substantiate the reply.

4.4 Procurement of Medical Equipment

As per the Medical Equipment Procurement Policy, 2016⁹⁷, proposals for procurement of medical equipment by any HCF must follow outlines of pre-procurement process, procurement process and post-procurement process as given in **Table 4.9**.

Table 4.9: Outlines of three Processes of Procurement Policy

Pre-Procurement	<ol style="list-style-type: none"> 1. The Primary and secondary HCFs take into account all requirements while preparing indent/requisition for required items. 2. The consolidated indents are placed before the District Equipment Management Committee (DEMC). The DEMC compiles all the indents and prioritises. 3. The requirement of the medical colleges is validated by the Medical College Equipment Committee. 4. For standardisation of the indenting process, a State Level Needs Assessment committee (SNAC) validates and approves the requirements.
Procurement	<ol style="list-style-type: none"> 1. Procurement of equipment has three distinct pathways depending upon the value of the equipment, associated human resource skills needs and complexity in installation and operations of the equipment. 2. Equipment of high investment and those requiring special skills such as Haemodialysis machine, Computed Tomography (CT), Magnetic Resonance Imaging (MRI) etc., These services are engaged through Public Private Partnership (PPP) contracts. 3. Equipment of low to moderate value: Generally all equipment routinely used in hospitals as shared resource, requiring minimal training and routine maintenance shall be procured by the APMSIDC. 4. Innovations & pilots: GoAP permits APMSIDC to procure innovative products in a limited quantity from Central Government Public Sector Units, Autonomous Institutions established by an Act of Parliament and IITs.
Post-Procurement	APMSIDC was entrusted with the responsibility of setting up and running of all kinds of modern medical equipment facilities.

Source: Medical Equipment Procurement Policy, 2016

In this connection Audit observed the following:

⁹⁷ GO Ms No.7, dt.13.01.2016.

4.4.1 Non-constitution of Needs Assessment Committee

Equipment planning is an essential component of the public health planning process. The decision to purchase medical equipment should be based on the need, usage of the existing equipment, availability of technical manpower, recurring cost to maintain the equipment, services being proposed to be provided to the patients and availability of resources.

For standardisation of the indenting process, a State-level Needs Assessment Committee (SNAC) should be constituted under the chairmanship of the Commissioner, Health, Medical & Family Welfare. SNAC should consider the requirements and finalise the indents once every six months.

APMSIDC also confirmed that no indents were received through SNAC.

Government accepted (August 2023) the audit observation and stated that CHFV would be requested to constitute SNAC to assess the requirement before sending their indents.

4.4.2 Equipment lying idle in selected DHs / AHs/CHCs

During the inspection of selected DH/AH/CHCs, it was observed that equipment worth ₹4.77 crore, as shown in **Table 4.10**, was lying idle due to non-availability of trained manpower, incomplete civil works, and non-availability of accessories:

Table 4.10: Idle equipment in the selected health facilities

(In ₹)

Name of the facility	Value of equipment				
	> 5years	<5 and >3 years	<3 and > 1 year	< 1 year	Total
District Hospitals (DHs)					
DH, Hindupur		75,88,998			75,88,998
DH, Tekkali				46,41,970	46,41,970
DH, Atmakur			1,31,72,288	1,10,880	1,32,83,168
Area Hospitals (AHs)					
AH, Seethampet		11,14,400		1,07,32,583	1,18,46,983
AH, Kavali			8,96,000	37,80,291	46,76,291
AH, Kadiri			26,25,600		26,25,600
Community Health Centres (CHCs)					
CHC, Sompeta	4,59,300			12,09,600	16,68,900
CHC, Naidupeta			1,64,125	12,09,600	13,73,725
Total	4,59,300	87,03,398	1,68,58,013	2,16,84,924	4,77,05,635

Source: Text-checked health facilities



Figure 4.1: Upper GI endoscope received in 2020 at DH, Atmakur, SPSR Nellore district kept idle due to the non-availability of a General Physician/General Medicine Doctor (July 2022)

Government accepted (August 2023) the audit observation and stated that, in respect of DH Atmakur, the General surgeon was sent for training to administer endoscopy and the reply was silent about other Health Facilities.

There is no systematic need assessment of equipment in HCFs, even though the procurement policy had laid out clear guidance. The ad-hoc procedure coupled with lack of human resources, adequate space and financial resources to operate the equipment in HCFs resulted in idling of equipment.

4.4.3 Rate contracts not concluded for routinely required equipment in hospitals.

As per the Procurement Policy 2016⁹⁸, all equipment routinely used in HCFs shall be procured by APMSIDC by undertaking rate contracts valid for a period of three years for each category of equipment. For executing the rate contracts, APMSIDC should assess the annual requirement of each category of equipment and declare this in the rate contract process to obtain best market rates by volume. After conclusion of rate contracts, APMSIDC shall only place orders to approved vendors at rates agreed under the rate contract process.

We observed that some items such as (-)80 degrees refrigerators, X-ray machines, ECG machines, bio-safety cabinets *etc.* were procured by calling tenders every time.

Government accepted (August 2023) the audit observation and stated that rate contracts were finalised for a few items only and majority of the items were procured on one-time basis based on the indents received from the requesting department. From December 2022 onwards, tenders were invited to procure all items through Rate Contracts only in respect of common items.

However, APMSIDC did not furnish any documents to support their reply.

⁹⁸ Para 2.1(ii)

4.4.4 Short levy of liquidated damages-equipment supplied during the COVID-19 period ₹0.86 crore

As per clause 23 of General conditions of the contract(GCC) of the tender documents, if the supplier fails to deliver any or all of the goods within the time period specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price as liquidated damages, a sum equivalent to 0.5 *per cent* of the delivered price of the delayed Goods or unperformed Services for each week of delay or part thereof until actual delivery or performance, up to a maximum deduction of ten *per cent* of total Contract value. Once the maximum is reached, the purchaser may consider termination of the contract. As per Clause 5 of the Invitation of Bids of the tender document, the period of delivery means delivery and installation of the equipment.

We observed from the purchase orders of the equipment placed during the period March 2020 to July 2021 that while calculating LDs, the delivery date was taken as reference instead of the date of installation.

Thus, APMSIDC imposed liquidated damages worth ₹0.55 crore only instead of ₹1.41 crore over the purchase orders of the equipment worth ₹34.49 crore as the period of delivery includes both the installation and supply. This has resulted in non-deduction of LDs worth ₹0.87 crore.

Government replied (August 2023) that during COVID pandemic, in view of urgency and as per instructions of State Level Procurement Committee (SLPC) material received was stocked in godowns at some places. Material was supplied to required hospitals as per the need directly from godowns. In view of pandemic conditions, the supply/ delivery date of material was taken for imposing liquidated damages. Further, it was stated that ratification orders would be obtained to consider the date of supply for levy of liquidity damages.

4.5 Availability of Drugs in test checked Health Care Facilities

Audit examined (June-September 2022) the availability of drugs for 10 ailments/diseases selected from the view of mandatory services to be provided in the hospitals in the nine-test checked secondary HCFs.

4.5.1 Availability in Secondary Healthcare

Speciality wise drugs selected for test check is shown in **Table 4.11** and drug wise availability in test checked secondary Healthcare facilities are given in **Appendix 4.3**.

Table 4.11: Category wise number of drugs checked for its availability in test checked Hospitals

SI No	Name of the area	No. of drugs selected for test check
1	Pregnancy and childbirth	8
2	Child health (Newborn/Infant/under five)	5
3	Diabetes	4

SI No	Name of the area	No. of drugs selected for test check
4	Hypertension	8
5	Cardiovascular diseases	10
6	Diarrhoea	3
7	Malaria	2
8	Pneumonia (Both children & adults)	10
9	Bite injuries (Snakes and dogs)	2
10	Psychiatric conditions	5

Source: IIPH, Hyderabad selected these drugs

Pregnancy and childbirth

- Tab. Nitrofurantoin, the first line antibiotic in management of urinary tract infections during pregnancy was not available in five⁹⁹ out of nine¹⁰⁰ test checked Hospitals.
- Injection Iron Dextran/Iron Sorbitol, to treat moderate anaemia especially in pregnancy was not available in DH Atmakur.

Child Health (Newborn/Infant/under five)

- Injection Isolyte-P, a primary fluid to treat childhood conditions (fluid resuscitation) was not available in DH Tekkali.
- Injection Benzyl/benzathine penicillin, a commonly used injectable antibiotic to treat the paediatric infections like pneumonia, rheumatic fever, diphtheria and syphilis, was not available in nine¹⁰¹ test checked hospitals.

Pneumonia

- **Syrup Cotrimoxazole 50ml** to treat childhood pneumonia was not available in five¹⁰² hospitals

Cardiovascular diseases

- **Injection Noradrenaline**, a life-saving drug injection essential for treatment of cardiovascular disease was not available in four¹⁰³ out of nine test checked hospitals
- **Tablet Digoxin**, used to treat Cardiac arrest and superficial bleeding was not available in CHC Kothacheruvu and DH Tekkali.
- **Tablet Clopidogrel Bisulphate I.P 75mg** used to treat serious or life-threatening problems with heart and blood vessels in patients who had stroke,

⁹⁹ DH Tekkali, DH Atmakur DH Hindupur, DH Kadiri, CHC Kothacheruvu

¹⁰⁰ CHC Sompeta, CHC Naidupeta, CHC Kothacheruvu, AH Seethampeta, AH Kavali, AH Kadiri, DH Tekkali, DH Atmakur, DH Hindupur

¹⁰¹ CHC Sompeta, CHC Naidupeta, CHC Kothacheruvu, AH Seethampeta, AH Kavali, AH Kadiri, DH Tekkali, DH Atmakur, DH Hindupur

¹⁰² DH Tekkali, CHC Sompeta, CHC Kothacheruvu, AH Kavali, AH Kadiri

¹⁰³ CHC Sompeta, CHC Kothacheruvu, CHC Naidupeta, AH Kadiri

heart attack or severe chest pain, was not available in four¹⁰⁴ out of nine hospitals.

Diabetes

- **Injection Dextrose 10 per cent 500 ml bottle**, used as a fluid replacement therapy to provide energy and to prevent fluid loss (dehydration), was available in only two¹⁰⁵ out of nine hospitals.

Hypertension

- **Tablet Atenolol and Tablet Methyldopa** were available in all the nine test checked hospitals. However, **Tablet Propranolol** was not available in two¹⁰⁶ out of nine hospitals.

Diarrhoea

- **Inj. Metronidazole 100 ml, ORS** were available in all the nine test checked hospitals

Malaria

- Tab. Chloroquine phosphate to treat malaria, was not available in four¹⁰⁷ out of nine test checked hospitals.

Bite injuries (by Snakes and dogs)

- Anti-Rabies Serum (ARS), Inj. Antirabies vaccine, Inj. Antisnake venom were available in all the nine test checked hospitals.

Government accepted (August 2023) the audit observation and stated that in Area Hospitals all the medicines were now available. As the performance of healthcare facility is directly affected by the supply of essential medicines, Government should ensure the availability of medicines in all HCFs.

4.5.2 Availability of Equipment in Non-Clinical Departments in Medical Colleges

Against the requirement as per MSRR 1999, we observed in test checked GMCs that some equipment were not available in test checked Government Medical Colleges as detailed in *Table 4.12*.

Table 4.12: Shortfall of types of equipment in Non-clinical Departments in test checked Government Medical Colleges

Sl. No.	Name of the Department	Types of equipment Required 150/200 admission	No. of types of equipment available in Government Medical Colleges			No. of types of equipment in shortfall		
			Anantapur	Srikakulam	Nellore	Anantapur	Srikakulam	Nellore
1	Anatomy	38	23	19	29	15	19	9
2	Physiology	85	38	38	34	47	47	51

¹⁰⁴ DH Tekkali, AH Kavali, CHC Kothacheruvu, CHC Naidupeta

¹⁰⁵ AH Seethampeta, DH Hindupur

¹⁰⁶ DH Tekkali and CHC Kothacheruvu

¹⁰⁷ AH Seethampeta, AH Kavali, CHC Kothacheruvu, DH Atmakur

Sl. No.	Name of the Department	Types of equipment Required 150/200 admission	No. of types of equipment available in Government Medical Colleges			No. of types of equipment in shortfall		
			Anantapur	Srikakulam	Nellore	Anantapur	Srikakulam	Nellore
3	Biochemistry	32	10	14	22	22	18	10
4	Pathology	82	26	23	28	56	59	54
5	Microbiology	52	18	18	15	34	34	37
6	Pharmacology	14	14	4	5	-	10	9
7	Forensic Medicine	91	24	33	14	67	58	77
8	Community Medicine	96	75	54	43	21	42	53

Source: Medical College records

Government accepted (August 2023) the observation and promised future compliance.

4.6 Drug Management facilities in test checked Healthcare facilities

As per IPHS, hospital building should be well maintained with no seepage, cracks in the walls, no broken windows and glass panes. There should be no growth of algae and mosses on walls *etc.* Drugs shall be stored in cupboards and protected from water seepage, moisture, dust, insect, rodents *etc.*

4.6.1 Drug management facilities

Parameters such as storing away from water and heat, storing away from walls, storing above the floor *etc.*, are desirable for storage of drugs to maintain the efficacy of the procured drugs before issue to patients. However, we observed that:

- Drugs were stored on the floor in the GGH, Srikakulam as shown in **Figure 4.2**.



Figure 4.2: Drugs kept on the floor at GGH Srikakulam (June 2022)

- Seepage on walls of Pharmacy store at AH Seethampeta is shown in **Figure 4.3**. This may cause short circuits.
- Medicines kept without stacking in CHC Kothacheruvu. This can be seen in **Figure 4.4**.



Figure 4.3:
Seepage on walls in AH, Seethampeta
(June 2022)



Figure 4.4:
Medicines without stacking in CHC
Kothachervu (August 2022)

- Further, Shelves/racks for keeping medicines/drugs were not labelled in four¹⁰⁸ HCFs.

Government in its reply (August 2023) stated that now all the drugs are labelled and kept in the racks in the above facilities. Government further stated that in AH Seethampeta, the construction work is completed in February 2023 and there is no seepage now and the walls are painted. Further Government accepted the observation and stated that in CHC Kothacheruvu, a new building was under construction.

External influences such as humidity, heat, light and cold are factors that can impair the effectiveness of medicines. Guidelines for storing of medicines may be formulated for better administration and storage of medicines in HCFs.

4.7 Recommendations

- ***Government should ensure timely supply of all indented drugs/medicines to all Health Care Facilities.***
- ***Government should ensure that rules regarding near expiry drugs like timely return to supplier for replacement of stock, are followed by all the Central Drug Stores strictly.***
- ***Government should streamline the system for need assessment of equipment to avoid wastage and idling.***
- ***Flexibility should be given to Health Care Facilities to meet emergency needs by providing local purchase budget for drugs and medicines.***

¹⁰⁸ DH Tekkali, CHC Naidupeta, CHC Kothacheruvu and AH Kadiri

Chapter V

Availability and management of health infrastructure in the State

Chapter V

Availability and management of healthcare infrastructure in the State

As per IPHS 2012, on the basis of population, shortfall of Primary Health Centres in the State is 15.47 per cent and that of Community Health centres is 57.52 per cent. Separate examination rooms for pregnant woman were not available in eight test checked SCs, two SCs did not have toilet facilities, six SCs did not have examination tables. Further, in seven out of eight test checked PHCs, separate wards for male and female patients were not available, six test checked PHCs did not have separate septic labour area out of eight test checked PHCs. Two Government Medical colleges upgraded from intake capacity 100 seats to 150 seats in the year 2019 were not provided with infrastructure required for 150 intake capacity. Upgradation of medical colleges without providing required amenities, equipment and teaching faculty may result in incompetent physicians as their training would be constrained by these deficiencies.

5.1 Introduction

Health infrastructure is an important indicator for the healthcare policy and welfare mechanism in a State. To deliver quality health services in public health facilities, adequate and properly maintained building infrastructure is of critical importance.

The National Health Policy (NHP), 2017 envisages attainment of the highest possible level of health and wellbeing for all ages through a preventive healthcare orientation in developmental policies and universal access to good quality health services, without anyone having to face financial hardship.

IPHS, 2012 specified norms to be followed in providing infrastructure at each level healthcare facilities. Government in its reply stated (August 2023) that it is upgrading all the healthcare facilities to comply with IPHS norms.

On scrutiny of the records and data, made available by the Department, Audit observed insufficiencies with regard to infrastructure and availability of health facilities, as discussed in succeeding paragraphs.

5.2 Availability of facilities in Primary healthcare

Primary healthcare is a whole-of-society approach to health and well-being centred on the needs and preferences of individuals, families and communities. It addresses the broader determinants of health and focuses on the comprehensive and interrelated aspects of physical, mental and social health and wellbeing.

It provides whole-person care for health needs throughout the lifespan, not just for a set of specific diseases. Primary health care ensures people receive comprehensive care - ranging from promotion and prevention to treatment, rehabilitation and palliative care - as close as feasible to people's everyday environment.

5.2.1 Availability of Primary Health care facilities in Rural & Tribal Areas

As per IPHS one Primary Health Centre (PHC) should cater to a population of 30,000 in plain areas and 20,000 in tribal/hilly areas and one Sub Centre (SC) to a population of 5,000 in plain areas and 3,000 in tribal/hilly areas. Requirement, availability and shortage of healthcare facilities in the primary health care facilities available in the rural and tribal areas is given in **Table 5.1**.

Table 5.1: Availability of Primary Healthcare facilities in rural areas

Estimated Population for 2021-22			Type of HCF	HCFs Required	HCFs available	Shortfall of HCFs in districts
Total population	Rural population	Tribal population				
5,30,33,000	3,91,84,532	29,21,225	PHC	1,354	1,145	209
			Sub-Centre	8,227	10,032	-

Source: Information furnished by the Director Public Health & Family Welfare

Audit observed that 1,145 PHCs were available against the required 1,345 PHCs with a shortage of 209 PHCs *i.e.* 15.4 *per cent*, in the State of Andhra Pradesh.

District-wise requirement, availability, and shortage of PHCs and SCs, in Andhra Pradesh as of October 2022 are detailed in **Appendix 5.1 and 5.2** respectively.

Government accepted (August 2023) the Audit observation and replied that 88 new PHCs were sanctioned and 63 PHCs were re-located/Co-located. Recruitment of Medical Officers for the New and re-located PHCs was completed.

Status of recruitment of staff nurses and other supporting staff was not furnished by Government in its reply. As the functionality of these new or re-located/co-located PHCs was not on record the shortage remains as 15.4 *per cent*.

5.2.2 Sub-Centres / Sub-Health Wellness Centres

In line with National Health Policy (NHP) 2017, upgradation is an initiative of transforming Sub Centres into Sub-Health and Wellness Centres. NHP defines Health and Wellness Centre as a facility which enables comprehensive primary health care service delivery, including disease prevention and health promotion.

Sub-Health Wellness Centre/Sub-Centre (SC) is the most peripheral and first health care facility of Primary Health Care system for the community. SCs are assigned tasks relating to interpersonal communication in order to bring about behavioural change and provide services in relation to maternal and child health, family welfare, nutrition, immunisation, diarrhoea control and control of communicable diseases programs. A Sub-centre that provides interface with the community at the grass-root level, providing all the primary health care services. The primary focus of SC is to provide promotive, preventive and few curative primary health care along with basic Reproductive and Child Health (RCH) services.

In accordance with GoAP's decision to regard a village/ a ward to have an SC, Government established 10,032 Sub-Centres (SCs) in the State against the requirement of 8,225 SCs as per IPHS. All these SCs are proposed to be upgraded to Ayushman Bharat - Sub-Health wellness centres (AB-SHCs) as per GoI's policy. Shortage of 33

SCs in Kurnool district against requirement (five *per cent*) based on population criteria was noticed.

Government replied (August 2023) that the rural population of Kurnool District is 16,69,926 in 2022-23 and 428 Sub centres were established in the district for an average population of 3,900.

The audit observation pertains to erstwhile Kurnool which is re-organised as districts of Kurnool and Nandyal, whereas the reply of the Government is limited to re-organised Kurnool district only. Reply relating to Nandyal district is awaited.

5.2.2.1 Physical Infrastructure & Location

As per physical infrastructure norms of IPHS, a Sub-Centre (SC) should have its own building or else, premises with adequate space should be rented in a central location with easy access to people and ensure the safety of female staff.

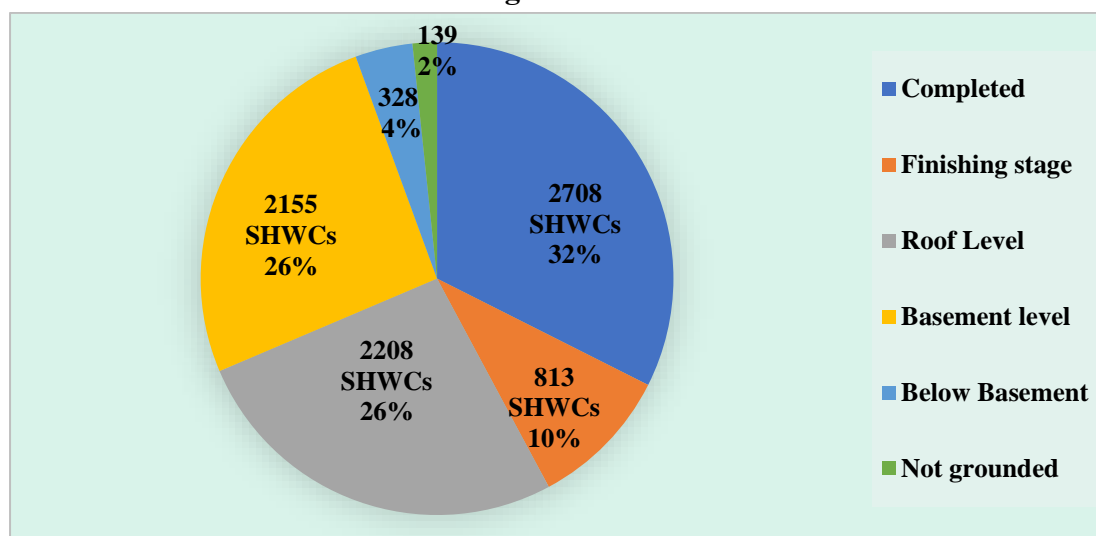
Out of 10,032 SCs functioning in Andhra Pradesh, 1,417 SCs had their own buildings, which is 14.12 *per cent* of its availability. We observed that eight out of nine test checked SCs were centrally located. Of the test checked SCs, six are functioning from village sachivalayams. Of these four were established under the YSR village clinic concept in May 2020. Thus, the SCs were not IPHS compliant, in terms of infrastructure/ facilities, as stated below, for providing quality healthcare services to the rural population.

5.2.2.2 Upgradation works of SCs to Sub-HWCs

Government of India announced (February 2018) the creation of 1,50,000 Health and Wellness Centres (HWCs) by transforming existing Sub Centres as the base pillar of Scheme of Ayushman Bharat. These centres would deliver Comprehensive Primary Health Care (CPHC) bringing healthcare closer to the homes of people covering both maternal and child health services and non-communicable diseases, including free essential drugs and diagnostic services. Government of Andhra Pradesh (GoAP) is operating SCs/Sub Health and Wellness Centres (SHWCs) under the name of YSR Health Clinics.

All the nine test checked SCs are under upgradation to SHWCs, however construction works are in different stages.

Out of 10,032 SCs, construction of new buildings was proposed for 8,615 SCs under NHM, 15th Finance Commission Grants and State funds. GoAP has taken up (February 2020) the upgradation work of 8,351 SCs as SHWCs under convergence with MGNREGS. Progress of works was being monitored by the Commissioner of Health and Family Welfare. Construction of 2,708 SC buildings were completed (October 2022) and 5,643 SC buildings were at various stages of construction as shown in the **Chart 5.1** below:

Chart 5.1: Picture showing status of construction of SHWCs

Source: Information furnished by CFW

Government accepted (August 2023) the Audit observation and promised future compliance.

As the primary focus of SCs/SHWCs is on providing Reproductive and Child Health (RCH) services, and non-availability of infrastructure would impact the service delivery.

5.2.2.3 Compliance with NHM Financial Guidelines

NHM Financial Guidelines¹⁰⁹ envisaged that third party monitoring of works and certification of their completion through reputed institutions was to be introduced to ensure quality. Since no record relating to the engagement of a third party to monitor the works during execution and their completion for quality assurance, was made available to the audit, the same could not be ascertained by audit.

Reply from the Government is awaited.

5.2.2.4 Basic Amenities at SCs

Antenatal care is the systemic supervision of women during pregnancy to monitor the progress of fetal growth and to ascertain the well-being of the mother and the foetus. Reproductive and Child Health (RCH) associated services like general examination, abdominal examination and breast examination require partition screen for providing privacy during examination for basic dignity. An examination room, examination table and toilet for sample collection are essentially required in SC as per IPHS, 2012.

We observed that out of nine¹¹⁰ test checked SCs:

- Eight SCs¹¹¹ did not have separate examination rooms,

¹⁰⁹ NHM State Program Implementation Plan for Andhra Pradesh for the Financial year communicated in NHM Record of Proceeding Andhra Pradesh (2019-20)

¹¹⁰ Yarabadu, Gokarnapuram, Kesapuram, Leguntapadu, Chenchuganipalem, Chennuru-I, Thimmapuram, Gorantla-3 and Ganganapalli

¹¹¹ Yarabadu, Gokarnapuram, Kesapuram, Chenchuganipalem, Chennuru-I, Thimmapuram, Gorantla-3 and Ganganapalli

- Two¹¹² SCs did not have toilet facility,
- Examination tables were not available in six¹¹³ SCs,
- In all test checked SCs, medicines were kept in trays instead of Medical Chests to be away from the access of general public, and
- Partition screens were not available in all test checked SCs.

Figure 5.1 below indicates the condition of one of the test checked SCs.



Figure 5.1: Sub Centre Gowravaram, SPSR Nellore district in a small-rented shed (outside and inside the SC (July 2022))

Government accepted (August 2023) the audit observation and stated that all the newly constructed buildings are being provided with these facilities. Some of the items were procured and some are indented to supply to these SHWCs.

Delay in construction of the buildings would have cascading effect on provision of these items and ultimately affects the service delivery.

5.2.2.5 Availability of Equipment and medical consumables

To deliver the desired services with quality, IPHS lays down certain required equipment, supplies, medicines for first aid and emergency care, water quality testing kits and blood smear collection slides to be available at SCs as indicated in **Table 5.2** below. Their availability in test checked SCs is also indicated in the Table.

Table 5.2: Availability of important equipment in test checked SCs

S.No	Description	Yarabadu	Gokarnapuram	Kesupuram	Leguntapadu	Chenchugani palem	Chennur Bit-1	Thimmapuram	Gorantla	Ganganapalli
1	Haemoglobinometer	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No
2	Weighing Scale Adult	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No
3	Weighing Scale, Infant (10Kg)	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
4	Weighing Scale, Hanging type	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No

¹¹² Donkuru of Srikakulam district and Leguntapadu of SPSR Nellore district

¹¹³ Yarabadu and Donkuru of Srikakulam district, Gowravaram of SPSR Nellore district and Karutlapalli, Ganganapalli and Gorantla of Anantapur district

S.No	Description	Yarabadu	Gokarnapuram	Kesupuram	Leguntapadu	Chenchugani palem	Chennur Bit-1	Thimmapuram	Gorantla	Ganganapalli
5	Clinical Thermo-meter oral & rectal	No	Yes	Yes	No	No	Yes	Yes	Yes	No
6	Stethoscope	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
7	Foetoscope	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No
8	Measuring Tape	Yes	Yes	No	No	No	Yes	No	No	No
9	Immunisation chart	No	Yes	Yes	No	No	Yes	Yes	Yes	No
10	Specimen collection Bottles	Yes	Yes	No	No	No	Yes	No	No	No
11	Water quality testing kit	No	No	No	No	No	No	No	No	No
12	Blood smear slide	No	No	No	No	No	No	No	No	No

Source: data sheets furnished by the SCs

Thus, it is observed that water quality testing kits and blood smear slides were not available in all the test checked SCs. We further observed that Chenchuganipalem SC of SPSR Nellore district and Ganganapalli SC of Anantapur district had zero out of the required important equipment. In the absence of important equipment as required above, it is clear that the services to be made available in SCs are not being delivered to the people.

Government accepted (August 2023) the Audit observation and stated that all the 67 prescribed equipment were available as of 18 July 2023.

5.2.3 Primary Health Centres

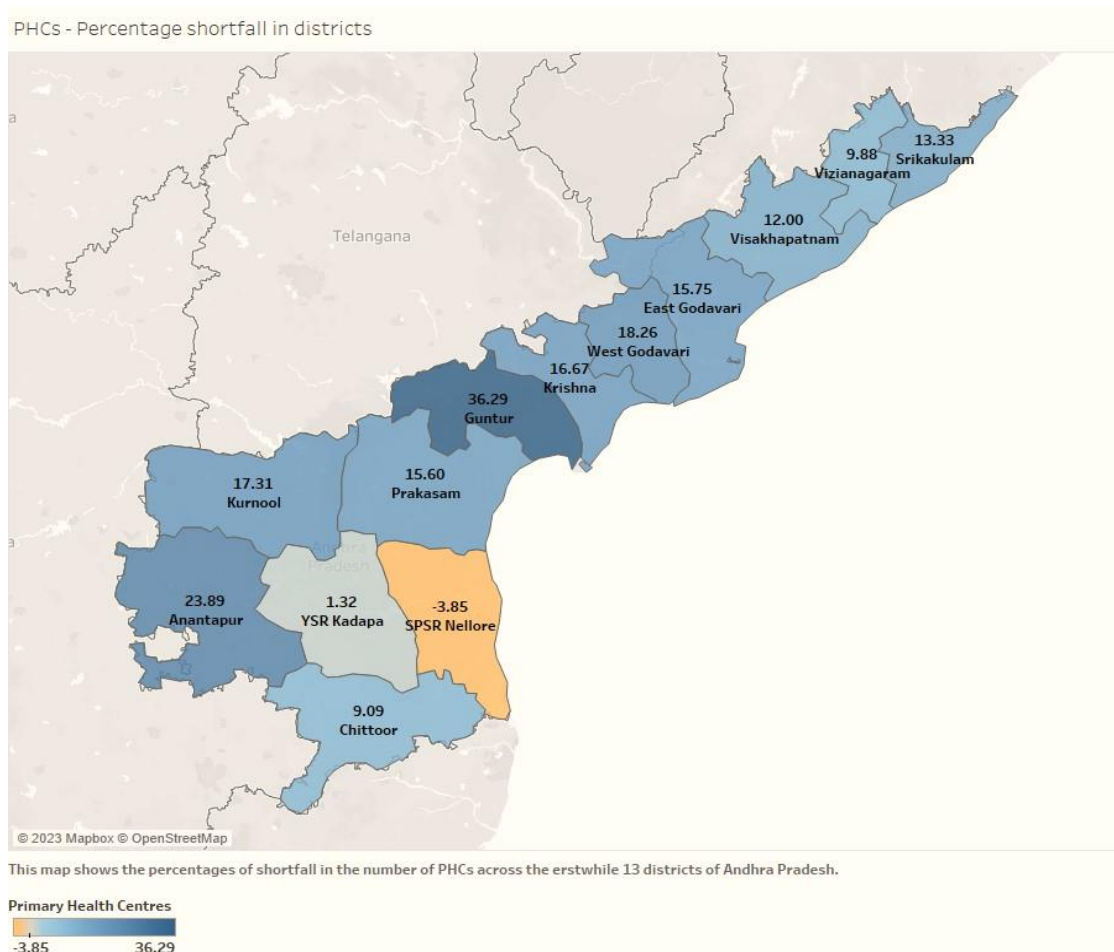
Primary Health Centre (PHC) is the first contact point between the rural community and the Medical Officer. The PHCs aimed at providing an integrated preventive and curative health care for the rural population. One PHC is mandated for 30,000 population in plain areas and one for 20,000 population in difficult/tribal and hilly areas. 'Ayushman Bharat Health Wellness Centre (AB-HWC)' norms recommended that two Medical Officers to the PHC, 14 paramedical and other staff, to act as a referral HCF for five to six SCs and to have four to six beds for in-patients.

As per GoI's policy to upgrade the existing PHCs as HWCs, all the PHCs in the State were upgraded as Health Wellness Centres. Requirement of PHCs was calculated on the basis of population criteria¹¹⁴ (as per estimated population data for 2021-22 furnished by CH&FW). Thus, a shortage of 25 tribal and 184 rural PHCs was noticed. 36 per cent shortage in required number of PHCs was noticed in Guntur district and 24

¹¹⁴ One PHC for a population of 30,000 people in the plain areas and for 20,000 people in tribal and hilly areas

per cent in Anantapur district. Requirement, availability, and shortages of PHCs District wise are given in *Map 5.1* and *Appendix 5.2*.

Map 5.1: District wise percentage shortfall of PHCs in the State



Government replied (August 2023) that 88 new PHCs were sanctioned and 63 PHCs were relocated.

Since 63 PHCs were relocated only and not new PHCs, we observed that there was a shortage of 121 PHCs in terms of population norms.

5.2.3.1 Availability of Physical Infrastructure in PHCs

- (a) PHC Ichapuram (Rural) at Eedupuram, Srikakulam was established (2018) covering some SCs of PHC Koligam. However, as the dedicated or rented building was not available, PHC Eedupuram was offering partial services from the old location of Koligam. During physical verification audit could not find out the records relating this PHC. Medical Officer of PHC, Rajupuram which is 10 kms away, was working as In-charge Medical Officer for PHC, Eedupuram.

Government sanctioned¹¹⁵ an amount of ₹1.84 crore for construction of a new PHC at Eedupuram. Foundation stone for construction was laid (July 2021), however construction did not commence as of June 2022.

Government accepted (August 2023) the Audit observation, and further stated that two regular Medical Officers were recruited in March 2023 for PHC Eedupuram.

- (b) As per IPHS norms, Separate wards/areas should be earmarked for male and female in- patients with a size 5.5 m x 3.5 m each with necessary furniture. However, we observed that seven¹¹⁶ out of eight test checked PHCs were housing both male and female wards in a single room. Kudair PHC, where the bed occupancy was more than 60 *per cent*, was housing both male and female wards in a single room with size of 6.4 m x 3.6 m, with only two beds. The Department replied that the remaining beds taken away by Government General Hospital (GGH), Anantapur during COVID for establishing Covid Care Centre, were not returned. Further, in PHC Kondapuramu, four cots out of six cots were not provided with beds/mattresses.

Government accepted (August 2023) the Audit observation and stated that the PHCs were constructed as per the pre-approved designs and Female and Male wards were partitioned by curtains. Further, the beds taken for establishing Covid Care Centre were returned to PHCs, which were running as six bedded 24X7 PHCs.

The reply that partition by curtain is not acceptable, as IPHS prescribed two separate wards for male and female patients each with a size of 5.5 mts (18 feet) and 3.5 mts (11.5 feet). Further, the privacy of the patients would be compromised if male and female patients were accommodated in single room, and ultimately affect the treatment.

- (c) Septic labour room is a place where the normal deliveries with risk of infection are performed, like cases with venereal diseases and sexually transmitted diseases.

IPHS require separate areas for septic and aseptic¹¹⁷ deliveries in the labour room. Deliveries associated with infection, abscess, infected cysts, *etc.*, are to be organised and planned in the septic labour rooms to prevent post operative

¹¹⁵ GO Rt.No.134 dated 17 Feb 2020

¹¹⁶ Urlam, Karajada, Inamadugu, Thummalapenta, Chennur, Kudair and Kondapuram

¹¹⁷ *aseptic* means free from living micro-organisms that can cause disease. *Aseptic technique* refers to the collection of practices that are designed to avoid the introduction and transfer of germs and contaminants during medical processes

infections. However, we observed that in six¹¹⁸ out of eight test checked PHCs, there was no separate areas for septic and aseptic procedures.

Reply from the Government is awaited.

- (d) National Building Code specified the fire safety requirements for Hospitals, in addition to the general requirements which are common to all buildings. None of the test checked PHCs were provided with fire alarm, smoke detector, hose reel, sprinkler system *etc.*, which are necessary items for fire safety. Sand buckets were also not available in six¹¹⁹ out of eight test checked PHCs. PHC Urlam, Srikakulam district and PHC, Inamadugu, SPSR Nellore district did not have overhead-tank for fire safety.

Government replied (August 2023) that fire extinguishers were supplied to every PHC and fire safety mock drill training was also completed for 700 PHCs. In addition to the above, all PHCs were provided with display boards and escape layouts and PHCs were instructed to maintain sufficient sand buckets to face fire.

The reply was verified (September 2023) by audit in 10¹²⁰ PHCs and observed that escape layouts were not available in six¹²¹ PHCs and sand buckets were not available in eight¹²² PHCs. This indicates that PHCs did not comply with fire safety norms.

5.2.3.2 PHC Upgradation works as Health & Wellness Centres

‘Ayushman Bharat - Health & Wellness Centres (AB-HWCs)’ programme, is a flagship programme of Government of India to move from a selective approach to health care to deliver comprehensive range of services. All the PHCs in the State are designated as AB-HWCs. An amount of ₹413.54 crore for strengthening/ upgradation of 989 PHCs in 13 Districts of the State was sanctioned (February 2020) by GoAP under Nadu Nedu programme.

As of October 2022, 823 works were completed by incurring ₹306.55 crore. Audit, however, observed that the existing PHCs, though converted to HWCs, comprehensive primary healthcare services, as envisaged under the programme, were not available, as the test checked PHCs were deficient in manpower, equipment/ instrument, physical infrastructure, *etc.* as discussed in succeeding paragraphs.

5.2.3.3 Construction of buildings of PHCs

Administrative sanction was accorded (February 2020) for construction of 149 PHCs with an amount of ₹256.99 crores under Nadu Nedu Programme in 13 Districts. The Works were executed by the Panchayath Raj Department and were being monitored by the Commissioner of Health and Family Welfare.

¹¹⁸ Inamadugu, Thummalapenta, Chennur, Kudair, Kondapuram and Narpala

¹¹⁹ Urlam, Karajada, Chennur, Kudair, Kondapuram and Narpala

¹²⁰ Durgi, Mutukuru, Dhulipudi, Emani, Munnangi, Velagaleru Agiripalli, Kondapalli, Kapileswarapuram and Srikakulam

¹²¹ Durgi, Mutukuru, Dhulipudi, Munnangi, Velagaleru and Agiripalli

¹²² Durgi, Mutukuru, Dhulipudi, Emani, Velagaleru Agiripalli, Kondapalli and Kapileswarapuram

We observed (October 2022) that Only 31 works were completed, 33 works were at finishing stage, 31 works were at roof level, 23 works were at brickwork stage, 11 works were up to basement level, ten works were at foundation stage, eight works at tender stage and two works were not taken up due to site related issues.

Government replied (August 2023) that out of 149 works, 56 works were completed, 84 works were under completion and nine works were not yet commenced. Further, two PHCs were sanctioned and they were scheduled to be completed by March 2024.

Delay in completion of construction work affects the service delivery by PHCs.

5.2.3.4 Availability of Equipment and essentialities

IPHS prescribes the minimum space required, furniture and fittings to be available in the PHCs as per need to deliver the services. We observed that five¹²³ out of eight test-checked PHCs did not have wheelchairs and stretcher-on-trolleys for patients. Further, the labour rooms were not equipped with oxygen suction machines and accessible electrical outlets for infants in addition to the facilities required for the mothers in all selected PHCs.

Government accepted (August 2023) the Audit observation and stated that labour rooms were equipped with oxygen, suction machines, and accessible electrical outlets for infants in PHCs. Audit verified (September 2023) 10 PHCs and observed that suction machines in labour rooms were not available in three¹²⁴ PHCs. Further, regarding the wheelchairs and stretcher-on-trolleys for patients, Government promised future compliance.

Availability of standard inventory as per IPHS was verified in all test checked PHCs. We observed that the test checked PHCs were functioning without one or more of the required equipment/number of items of equipment, which are listed in **Appendix 5.3** under three categories viz., Essential medical/ surgical items, requirements for fully equipped Labour room, and equipment and furniture including reagents and diagnostic kits.

Government, without reference to the above inventory, stated (August 2023) that indirect ion selective electrolyte analyser, Fatal Doppler, Westergren stand, Westergren disposable tubes, Binocular Microscope, Semi-Automatic Biochemistry Analyser, Urine analyser, Needle syringe destroyer-Electronic, Desktops, Printers, Barcode Printers and Tabs were only available. Audit verified (September 2023) 10 PHCs and observed that except Binocular Microscope and Urine analyser, all other equipment one or the other were not available in 10 PHCs.

¹²³ Urlam, Inamadugu, Thummalapenta, Chennur and Kondapuram

¹²⁴ Agiripalli, Kondapalli and Srikakulam

5.3 Availability of facilities in Secondary Healthcare

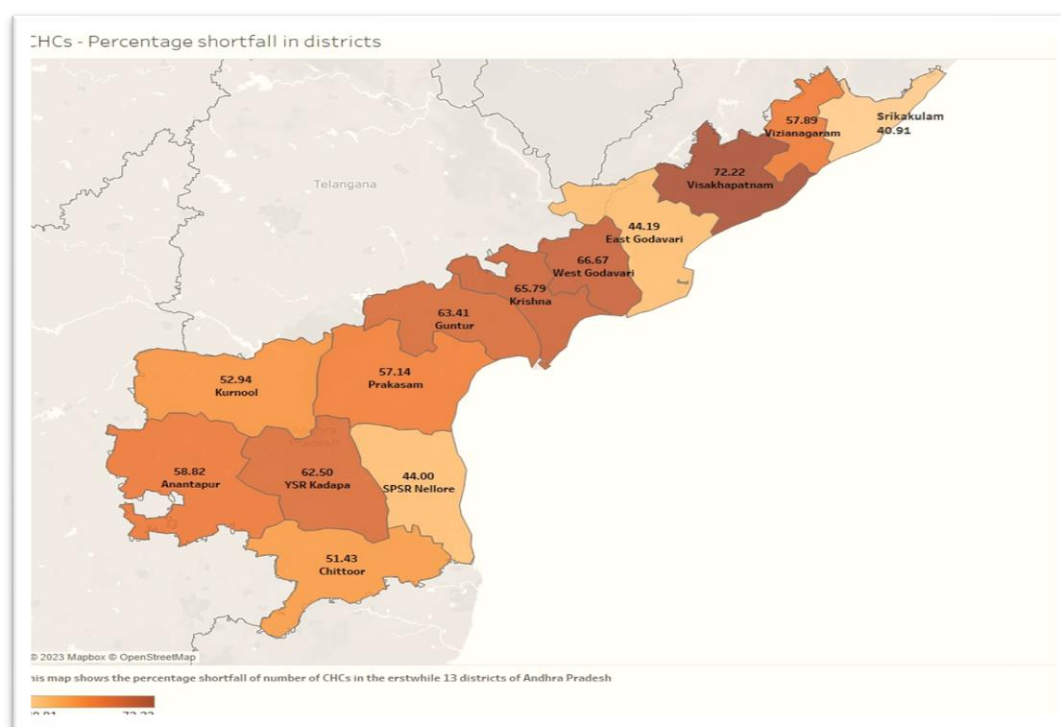
5.3.1 Community Health Centres

CHC serves as a referral centre for PHCs within the block and provides facilities for obstetric care and specialist consultations. CHC should be provided with 30 beds along with an Operation Theatre, Labour room, X-ray, ECG and Laboratory facilities.

5.3.1.1 Availability of CHCs

As per Indian Public Health Standards (IPHS) 2012, four Primary Health Centres (PHCs) are to be included under each CHC thus catering to the population of 80,000 approximately in tribal/hilly/desert areas and 1,20,000 population in plain areas. Based on the 2011 Census, the required number of CHCs is 412 for Andhra Pradesh, whereas the available CHCs were 175 and there is a shortfall of 237 (57.5 per cent) across the State (November 2022) given in *Appendix 5.4*. District wise shortfall of CHCs is detailed in *Map 5.2*.

Map 5.2: District wise percentage shortfall of CHCs in the State



Government replied (August 2023) that 176 CHCs were functioning in the State and each AH catered to the needs of public equal to three 30 bedded CHCs and each DH catered to the needs of public equal to eight to ten CHCs.

The justification provided by the Government was in contravention to the IPHS, 2012 norms *ibid*.

5.3.1.2 Upgradation of CHCs

GoAP had taken up (February 2019) the upgradation works of CHCs for strengthening and up-gradation of hospitals from NABARD funds. The Packages were grouped region-wise into three and the number of works to be taken up in the districts under each package is summarised in **Table 5.3**.

Table 5.3: Status of Strengthening and upgradation of works for CHCs.

S.No.	Package No.	Names of the Districts in the package	No. of works	Amount (₹ in Crore)
1	No.1	Srikakulam, Vizianagaram, Visakhapatnam, East Godavari and West Godavari	45	169.19
2	No.2	Krishna, Guntur, Prakasam and SPSR Nellore	35	121.87
3	No.3	Chittoor, YSR, Anantapur and Kurnool	38	142.91
Total			118	433.97

Source: Data furnished by APMSIDC

Andhra Pradesh Medical Services & Infrastructure Development Corporation (APMSIDC) concluded (October 2020) the package wise agreements with three different contractors. The works which should have been completed in January 2022 were not completed (October 2022). In terms of expenditure, only 40 *per cent* of work has been completed.

All the three-test checked CHCs¹²⁵ were functioning in Government buildings. Construction work of new buildings at CHCs Kothacheruvu, Naidupeta and a new additional block at CHC Sompeta were also in progress.

CHC, Kothacheruvu in Anantapur district

Government upgraded¹²⁶ PHC, Kothacheruvu as 30 bedded CHC, Kothacheruvu (February 2019). An agreement was entered with the contractor for construction of new CHC building for ₹335.74 lakh in October 2020 with scheduled date of completion in January 2022. Extension of time was granted by APMSIDC till December 2022 for completion of the work.

However, work done was ₹68.61 lakh (20.44 *per cent* of total work) only as of September 2022. CHC Kothacheruvu is functioning with six beds in the old PHC building without facilities like Operation Theatre, Emergency beds, Casualty ward *etc.* Due to lack of adequate seating arrangements and incomplete construction of new



Figure 5.2: OP patients waiting outside CHC, Kothacheruvu (August 2022)

¹²⁵ CHCs Kothacheruvu, Naidupeta and Sompeta

¹²⁶ GO Ms No. 36 (HM&FW) dated 15 February 2019

building, out-patients were waiting outside the proper building for getting registration and consultation with doctor in CHC Kothacheruvu. (See **Figure 5.2**)

Thus, due to delay in construction of work, the services intended to be provided by the CHC Kothacheruvu were not delivered in full, though three years had elapsed after the upgradation of CHC. Effectively, CHC, Kothacheruvu is functioning like a PHC as the number of beds, services such as OTs, emergency beds, casualty, *etc.*, were not yet provided.

Government accepted (August 2023) the Audit observation and stated that the delay in work was due to COVID-19 pandemic and assured future compliance.

CHC, Naidupeta, SPSR Nellore district

A work providing facelift to CHC Naidupeta was taken up¹²⁷ and completed¹²⁸ (June 2018) with an expenditure of ₹61.12 lakhs. Work satisfactory certificate, stating that the renovated work was done satisfactorily, and all the fixtures were in good condition, was issued (January 2019) by the Medical Officer.

Subsequently, Government accorded administrative sanction¹²⁹ (January 2020) for an amount of ₹5.13 crore for strengthening of CHC and agreement was concluded (October 2020) with a contractor¹³⁰. As per the work order, the existing floor area 7,599.32 sq.ft (706 sq.m) which was facelifted, was dismantled to carry out construction of new building for CHC, Naidupeta. Extract of the approved plan of the Strengthening work can be seen in **Figure 5.3**. However, work had progressed to only 44.97 per cent (July 2022).

Thus, the expenditure made on facelifting to the extent of dismantling became wasteful.

Government accepted (August 2023) the audit observation and stated that in order to provide additional facilities, the old building was dismantled and new CHC building was taken up as per IPHS.

AREA STATEMENT					
TOTAL SITE AREA	1.79Acre	7243.87 Sqm	25047 sq. yard	8663.59 sft	
EXISTING AREA	IN SQM	IN SFT	PROPOSED AREA	IN SQM	IN SFT
GROUND FLOOR	994.4	10703.6325	GROUND FLOOR	1225.52	13191.39
			FIRST FLOOR	796.42	8572.594
TOTAL	994.4	10703.6325		2021.94	21763.98
TOTAL (EXISTING+PROPOSED)		3016.34 Sqm	32467.613 Sft		
DISMANTLING AREA		706 Sqm	7599.3207 Sft		

KEY PLAN:
<i>Figure 5.3: Extract of the approved plan</i>

¹²⁷ Memo No. 16934/1.1/2004, dated 16.02.2017 of the Principal Secretary to Govt, HM&FW (1.1) Dept

¹²⁸ Agreement No. 40/APMSIDC/2017-18, dated 14.09.2017 of the Chief Engineer, APMSIDC, Mangalagiri

¹²⁹ G.O Rt NO. 28 of HW & FW(D1) Dept, dated 16.01.2020.

¹³⁰ M/s Megha Engineering and Infra Limited

Due to the delay in construction work, CHC Naidupeta is functioning in 288.4 sq.m (19.18 *per cent*) instead of the required area of 1,503.32 sq.m, as per IPHS for CHC. Cots for in-patients were placed in a heap in the verandah near corridor due to lack of space which can be seen in **Figure 5.4**. Four Paediatric cots which were not in use were dumped in the corridor.



Figure 5.4: Cots dumped in the corridor (July 2022)



Figure 5.5: Storeroom with drugs /medicines placed haphazardly (July 2022)

In the storeroom, drugs/medicines were kept on the floor and boxes containing drugs/medicines were scattered all over. This can be seen in **Figure 5.5**.

The CHC is functioning with very less space than it required as per IPHS 2012. In a congested hospital, privacy to the patients could not be ensured.

CHC, Sompeta, Srikakulam

Construction of 30 bedded new building (Isolation ward, NBSU, Labour Room, Maternity ward) with an estimated cost of ₹4.60 crore was planned (February 2019) with a scheduled date of completion in January 2022. However, only 12.04 *per cent* of the work was completed (June 2022).

Government attributed (August 2023) the delay to COVID and stated that two floors (Ground and first floor) of CHC Sompeta were completed except electrical and plumbing works with an expenditure of ₹2.76 crore (60 *per cent*).

The reply of the Government indicates that 40 *per cent* of work is still incomplete.

5.3.1.3 Equipment in Laboratory

IPHS 2012 prescribed ten types of Laboratory Equipment for CHCs such as Binocular Microscope with oil immersion, Lancet¹³¹, Ice Box, Stool transport carrier, Test tube rack, Tabletop centrifuge¹³², Refrigerator, Spirit Lamp, Smear transporting box and Sterile leak proof containers.

We observed in test checked CHCs that:

¹³¹ Used to obtain small blood specimens

¹³² Separate or concentrate a liquid medium density for applications including tissue culture, protein work, cell harvesting *etc.*

- Binocular Microscope with oil immersion, Test tube rack were available in CHC Sompeta.
- Binocular Microscope with oil immersion, Lancet and Test tube rack were available in CHC Naidupeta.
- Lancet and Tabletop Centrifuge were available in CHC Kothacheruvu.
- Ice Box, Stool transport carrier, Refrigerator, Spirit lamp, Smear transporting box, Sterile leak proof containers were not available in all the test checked CHCs.

Government replied (August 2023) that all CHCs except Kothacheruvu were provided with fully automatic analysers, and 55 types of tests are being conducted at CHCs as per IPHS, 2022. With regard to CHC Kothacheruvu, Government assured future compliance.

5.3.1.4 Equipment in Operation Theatre

IPHS 2012 prescribes ten essential OT equipment to be available in CHC. The availability of Equipment in Operation Theatres in test checked CHCs¹³³ is shown in **Table 5.4**.

Table 5.4: Availability of equipment for OT in test checked CHCs

Sl. No.	Name of Equipment	CHC Sompeta	CHC Naidupeta	CHC Kothacheruvu
1	Auto Clave HP	Yes	Yes	Since OT was not available, no equipment was available.
2	Operation Table Hydraulic Major	Yes		
3	Operation table Hydraulic Minor	No	Yes	
4	Shadow less lamp ceiling type major	No	No	
5	Shadow less Lamp stand model/Potable	Yes	Yes	
6	Steriliser (Medium instruments)	Yes	Yes	
7	Diathermy Machine (Electric Cautery)	No	Yes	
8	Suction Apparatus – Electrical	Yes	Yes	
9	Wheelchair	Yes	Yes	
10	Stretcher on trolley	Yes	Yes	

Source: Hospital records

Government accepted (August 2023) that no OT was available in CHC Kothacheruvu as it was still functioning in old building. Further, it was stated that after handing over of the new building OT services would be available.

No reply with regard to Operation Theatre services in Sompeta and Naidupeta was furnished by the Government.

¹³³ CHCs Sompeta, Naidupeta and Kotha Cheruvu

5.3.2 Area Hospitals

Sub-district (Sub-divisional)/Area hospitals are below the district and above the block level (CHC) hospitals and act as First Referral Units for the Tehsil/Taluk/block population in which they are geographically located. Specialist services are provided through these Subdistrict hospitals and they receive referred cases from neighbouring CHCs, PHCs and SCs (Sub-District Hospitals in Andhra Pradesh are termed as Area Hospitals).

5.3.2.1 Availability of buildings in Area Hospitals

GoAP permitted APMSIDC to take up works under region wise packages for strengthening and up-gradation¹³⁴ of Area Hospitals in the State as shown in **Table 5.5**.

Table 5.5: Package wise works sanctioned for Strengthening and Upgradation of AHs

Sl. No	Package	Names of the Districts in the package	No of works	Amount (₹ in crore)
1	No.1	Srikakulam, Vizianagaram, Visakhapatnam, East Godavari and West Godavari	18	199.04
2	No.2	Krishna, Guntur, Prakasam and SPSR Nellore	09	110.39
3	No.3	Chittoor, YSR, Anantapur and Kurnool	18	253.15
Total			45	562.58

Source: APMSIDC records

APMSIDC entered (October 2020) into the package wise agreements with three different contractors. As per the schedule, all the works were to be completed by January 2022. As of October 2022, only 33 *per cent* of work was completed.

Due to non-completion of the works, Area Hospitals were running without required infrastructure for providing all mandatory services as detailed below.

Area Hospital, Seethampeta, Srikakulam district

AH Seethampeta was upgraded from a 30 bedded CHC to 100 bedded in 2019. The hospital is being operated in a building made for a 30 bedded CHC (1640 sq.m) as of June 2022.

- The upgradation work included adding an area of 1,956 sqm to the existing 1,640 sqm and was taken up by APMSIDC in October 2020 at a cost of ₹16.54 crore under Package-I. The scheduled date of completion of work was 25 January 2022. However, as of October 2022, only 15.07 *per cent* of work was completed.

¹³⁴ vide GO Rt No.313 dated 29.06.2020 of Dept of Health, Medical and Family Welfare (D1)



**Figure 5.6: Paediatric beds placed in corridor
AH Seethampeta (June 2022)**



**Figure 5.7: Seepage in ward
at AH Seethampeta (June 2022)**

- some paediatric beds were placed in the corridor due to lack of space in wards as shown in **Figure 5.6**.

As per IPHS 2012, the minimum area required for a 100 bedded Area Hospital is 6,500 sq.m. However, AH Seethampeta is functioning in 1,640 sq.m only, which is 75 *per cent* less than the required area (6,500 sq.m – 1,640 sq.m = 4,860 sq.m).

Government attributed (August 2023) delay in construction to COVID pandemic and stated that 75 *per cent* of the work except external plastering, painting, fixing of sanitary and electrical fittings, *etc.*, was completed with an expenditure of ₹10 crore.

Area Hospital, Kavali, SPSR Nellore district

The work for strengthening of the hospital was taken up by APMSIDC¹³⁵ in October 2020 at a cost of ₹12.95 crore under Package-II. The scheduled date of completion of work was 25 January 2022. However, as of October 2022, only 32.60 *per cent* of work was completed.

Government attributed (August 2023) delay in construction to COVID pandemic and stated that about ₹Eight crore was incurred towards expenditure (62 *per cent* work was completed) against agreed work value of ₹12.95 crore.

¹³⁵ vide GO RT No 631 dated 18.11.2019

Area Hospital, Kadiri, Anantapur district

Outpatient Department building (OPD) was demolished in July 2019. The construction of new building was taken up by APMSIDC in October 2020 at a cost of ₹14.33 crore under Package-3. As per the agreement, the building was to be completed by January 2022. However, as of August 2022, the work was completed up to the pillar level *i.e.*, 13.91 per cent only.

Due to the non-completion of construction of the building, OPD was functioning in RMO residential quarters.

Three doctors were accommodated in one room, two doctors in another room and three doctors in kitchen. Pharmacy and Gynaecology OP were accommodated in the remaining rooms.

Outpatients were standing on the road for getting registration at AH Kadiri as can be seen in **Figure 5.8**.



Figure 5.8: Patients standing on road for OPD registration AH, Kadiri (August 2022)



Figure 5.9: Outpatients standing in queue for consultation with OP doctor at AH Kadiri (August 2022)

As per IPHS 2012, minimum area required for a 100 bedded Area Hospital (AH) is 6,500 sq.m. After dismantling, AH Kadiri is functioning with an existing area of 4,633 sq.m, having a shortfall of 1,867 sq.m.

Medical Superintendent replied that the buildings containing the OP block, paediatric block, drugs store and compound wall were demolished in July 2019 for the construction of the new building. The construction of the new building was not completed as of August 2022.



Figure 5.10
Out-patients standing, waiting at Injection Room at AH Kadiri (August 2022)



Figure 5.11
Patients standing in two separate queues for collecting medicines from OP medicines issue counter(left) and for consultation with OP doctor (right) at AH Kadiri (August 2022)

Government attributed (August 2023) delay in construction to COVID pandemic and stated that about ₹ one crore was incurred towards expenditure and promised future compliance.

Government accepted the Audit observation.

5.3.2.2 Laboratory Equipment in Area Hospital

IPHS 2012 prescribed 33 number of essential laboratory equipment for AHs.

Test check of three Area Hospitals revealed that the percentage shortfall in the availability of laboratory equipment was 33 *per cent* in Kavali, 45 *per cent* in Seethampeta and 52 *per cent* in Kadiri.

The availability of Laboratory equipment in the test checked Area Hospitals is shown in (*Appendix 5.5*)

- Essential laboratory equipment such as Balance (Electrical Monopan), Simple balance, Hot plates, Paediatric Glucometer/Bilirubinometer, Alarm clock and Bio-safety Cabinet (Class-I) were not available in three test checked AHs.
- In AH Kavali, due to non-availability of the required equipment, full range of investigations were not conducted.
- In AH Kadiri, due to non-availability of equipment *i.e.*, incubator and CBP rotator, all the envisaged investigations were not conducted.

Government accepted (August 2023) the audit observation and stated that equipment *viz.* fully automatic analyser, semi-automatic analyser, TSH, T3, T4 analyser, Hot air oven, incubator and Urine analyser were supplied to all the AHs as per IPHS and installation was also completed. Further, it was stated that all the tests were conducted in AHs Kadiri and Kavali except AH Seethampeta, where tests were partially conducted due to insufficient equipment and reagents.

5.3.2.3 Operation Theatre (OT)

As per IPHS 2012, every AH should have two operation theatres (OTs) (i) Elective OT-major and (ii) Emergency OT/FW OT.

Two operation theatres were available in AHs Kadiri and Kavali. In AH Seethampeta, one general operation theatre was available.

IPHS 2012 also prescribed 14 essential equipment for Operation Theatres to the AHs.

We observed shortfall in the availability of equipment in OTs in three AHs as detailed below in **Table 5.6** below.

Table 5.6: Availability of Medical Equipment in OTs of Test checked Area Hospitals

Sl. No.	Medical Equipment Name	AH Seethampeta (Yes/No)	AH Kavali (Yes/No)	AH Kadiri (Yes/No)
1	Auto Clave HP Vertical	Yes	Yes	Yes
2	Operation Table Hydraulic Major	No	Yes	Yes
3	Operation table Hydraulic Minor	No	No	Yes
4	Operating table non-hydraulic field type	Yes	Yes	No
5	Autoclave vertical single	Yes	No	No
6	Shadow less Lamp stand model	Yes	Yes	Yes
7	Focus lamp Ordinary	No	Yes	No
8	Steriliser (Big instruments)	No	Yes	Yes
9	Steriliser (Medium instruments)	No	Yes	Yes
10	Steriliser (Small instruments)	Yes	Yes	Yes
11	Diathermy Machine (Electric Cautery)	Yes (not working)	Yes	Yes
12	Suction Apparatus – Electrical	Yes	Yes	Yes
13	Suction Apparatus - Foot operated	Yes	No	No
14	Ultraviolet lamp philips model 4 feet	No	No	No
Seethampeta – Shortage percentage – $(6/14 \times 100 = 42.85\%)$				
Kavali – Shortage percentage – $(4/14 \times 100 = 28.57\%)$				
Kadiri – Shortage percentage – $(5/14 \times 100 = 35.71\%)$				

Source: Information provided by test checked AHs

- OT Table Hydraulic major and Steriliser (Big & medium instruments) were not available and Diathermy Machine (Electric Cautery) was not in working condition in AH Seethampeta.
- Operating table non-hydraulic field type was not available in AH Kadiri
- Operation table Hydraulic Minor was not available in AH Seethampeta and AH Kavali.
- Autoclave vertical single, Foot operated Suction Apparatus were not available in AH Kavali and AH Kadiri.
- Focus lamp Ordinary was not available in AH Seethampeta and AH Kadiri.

- Ultraviolet lamp (four feet) which is commonly used for disinfection, was not available in the three test checked AHs.

Government accepted (August 2023) the audit observation and stated that out of 14 equipments, five equipments¹³⁶ in AH Seethampeta, one¹³⁷ in AH Kavali and five¹³⁸ in AH Kadiri were not available as of August 2023.

Government further replied that steriliser for big instrument, and steriliser for medium instrument were not in use as disposable syringes and disposable surgical consumables were utilised and stated that ₹90 lakh were sanctioned under the NABARD for procurement of the above items for AH Kadiri.

5.3.3 District Hospitals

Every district is expected to have a district hospital. During the period under review Andhra Pradesh with 13 districts is having 12 District Hospitals. Out of 12 DHs, one DH at Chittoor is functioning under PPP mode. As per IPHS, bed strength for a DH varies from 75 to 500 beds depending on the size, terrain, and population of the district. However, in AP, bed strength in DHs varies from 150 to 400 beds.

5.3.3.1 Laboratory Equipment in District Hospital

IPHS 2012 prescribes 60 Laboratory equipment for a District Hospital(DH). Shortfall in laboratory equipment in test checked DHs was 52 *per cent* in DH Tekkali, 45 *per cent* in DH Atmakur and 42 *per cent* in DH Hindupur. Shortfall in various essential Laboratory equipment was noticed in all 12 DHs as detailed in *Appendix 5.6*.

Government replied (August 2023) that;

In DH Tekkali,

- The laboratory equipment such as Spirit lamp, Test tube holders, ESR tubes, Fine Needle Aspiration Cytology, TCDC count apparatus were not available at the time of audit were available and functional now.
- For Micro-Biology Equipment installation, laboratory needs infrastructure modifications *i.e.*, civil works which were ongoing and the micro biologist was deputed for training to RIMS Srikakulam.

In DH Hindupur,

- Thyroid T3, T4, TSH test were not available due to non-installation of equipment and
- Auto immunological and fully automate analyser worth ₹18 lakhs was not installed due to space constraints,
- Due to electrical issues, some equipment such as automated analyser and Auto immune analyser was yet to be installed.

Further, it was stated that in **DPHL, Hindupur**, Hanging drop preparation for V. Cholera test was available. Pathologist was now available for conducting Semen analysis, CSF analysis, cell count, and cytology under aspirated fluids.

¹³⁶ Operating table non- hydraulic field type, Focus lamp ordinary, Steriliser (Big instruments), Steriliser (medium instruments) and UV lamp

¹³⁷ Steriliser (small instruments)

¹³⁸ Operating table non- hydraulic field type, Steriliser (small instruments), Suction apparatus (Electrical), Suction apparatus (Foot operated) and UV Lamp

In DH Atmakur,

Fine Needle Aspiration Cytology was not done due to non-availability of Pathologist and promised future compliance regarding provision of Chemical balance, simple balance, spirit lamp, alarm clock, floatation bath, emergency drug trolley with auto cylinder, and Cytospin. It was further stated that essential laboratory equipment such as TCDC Count apparatus, ESR stand with tubes, test tube holder was available in DH, Atmakur. Glycosylated Haemoglobin test was available from April 2023.

However, supporting documents were not furnished to audit to ensure the availability of these equipment.

5.3.3.2 Operation theatre (OT)

As per IPHS 2012, DHs shall have three types of Operation Theatres viz., Elective OT-Major, Emergency OT/FW OT and Ophthalmology/ENT OT. We observed that in all twelve¹³⁹ DHs, these three types of OTs are available.

IPHS 2012 also prescribed essential equipment for OTs in DHs. A shortfall in the availability of equipment for the operating theatre was observed in three test checked DHs as shown in **Table 5.7**.

Table 5.7: Availability of Medical Equipment in OTs in test checked DHs

S. No	Equipment in OT	DH TEKKALI	DH ATMAKUR	DH HINDUPUR
1	Auto Clave HP Horizontal	Yes	No	Yes
2	Auto Clave HP Vertical	Yes	Yes	Yes
3	Operation Table Hydraulic Major	Yes	Yes	Yes
4	Operation table Hydraulic Minor	Yes	Yes	No
5	Operating table non-hydraulic field type	Yes	Yes	No
6	Autoclave vertical single	Yes	Yes	Yes
7	Shadowless Lamp stand model	Yes	Yes	Yes
8	Focus lamp Ordinary	No	Yes	Yes
9	Steriliser (Big instruments)	No	No	Yes
10	Steriliser (Medium instruments)	No	Yes	No
11	Steriliser (Small instruments)	Yes	No	No
12	Bowl Steriliser Big	No	No	No
13	Bowl Steriliser Medium	No	No	No
14	Diathermy Machine (Electric Cautery)	Yes	Yes	Yes
15	Suction Apparatus – Electrical	Yes	Yes	Yes
16	Suction Apparatus - Foot operated	No	Yes	No

¹³⁹ Paderu, Parvatipuram, Anakapalli, Tanuku, Tenali, Markapur, Madanapalle, Chittoor, Proddatur, Tekkali, Atmakur and Hindupur

S. No	Equipment in OT	DH TEKKALI	DH ATMAKUR	DH HINDUPUR
17	Ultraviolet lamp Philips model 4 feet	No	No	No
Total not available		7	6	8

Source: Hospital records

Government replied (August 2023) that due to budget constraints, Focus Lamp ordinary Steriliser (Big & Medium instruments), Bowl Steriliser (Big & Medium), Suction Apparatus-foot operated and Ultraviolet lamp (four feet) were not procured and would be procured in the current financial year for DH Tekkali.

Further, Government stated that at DH Atmakur, all the equipment was available now except Ultraviolet lamp Philips model four feet which was under procurement process.

Government further replied (August 2023) that at DH Hindupur, Operation table Hydraulic Minor, OT non-hydraulic field type, Steriliser (Medium & Small instruments), Bowl Steriliser (Big & Medium), Suction Apparatus-foot operated and Ultraviolet lamp (four feet) were available now. However, supporting documents were not furnished to audit to ensure the availability of these equipment.

5.3.3.3 Equipment for ENT services

As per IPHS (2012), ENT services should be available in the DHs. IPHS also prescribes ENT equipment for DHs. ENT specialist doctor was available in all twelve¹⁴⁰ DHs. However, ENT specialist doctor was not available in DH Atmakur up to July 2022.

The availability of eight¹⁴¹ essential equipment and instruments in all twelve DHs is detailed below;

- **Operating Microscope (ENT)** was not available in DH Parvathipuram, DH Markapur.
- **Headlight ordinary** was not available in DH Parvathipuram, DH Tenali, DH Markapur, DH Chittoor and DH Proddatur.
- **Laryngoscope fibre optic (ENT)**, an instrument used for performing tracheal intubation for patients with abnormal upper airway anatomy was not available in DH Tekkali, DH Paderu, DH Tenali, DH Markapur, DH Chittoor and DH Proddatur.
- **Laryngoscope direct** (used for visualisation of larynx) is often used during general anesthesia, surgical procedures around the larynx and resuscitation. Both these Laryngoscopes were not available in DH Tekkali, DH Parvathipuram, DH Tenali, DH Markapur and DH Proddatur.
- **Tracheostomy Set** is used for creating an opening at the front of the neck so a tube can be inserted into the windpipe (trachea) to help the patient to breathe. This

¹⁴⁰ Paderu, Parvatipuram, Anakapalli, Tanuku, Tenali, Markapur, Madanapalle, Chittoor, Proddatur, Tekkali, Atmakur, Hindupur

¹⁴¹ Audiometer, Operating Microscope, Head light (ordinary) (Boyle Davis), Laryngoscope fiberoptic (ENT), Laryngoscope direct, Otoscope, Tracheostomy Set and Tuning fork.

was not available in DH Paderu, DH Parvathipuram, DH Tenali, DH Markapur, DH Chittoor and DH Proddatur.

- **Tuning Fork** was not available in DH Paderu, DH Tenali.

Government accepted (August 2023) the Audit observation.

5.3.3.4 Imaging Equipment

X-rays are used to detect bone fractures, certain tumors and other abnormal masses, pneumonia, some types of injuries, calcifications, foreign objects *etc.*

IPHS 2012 prescribes radiology services for the DHs (X-ray, Ultrasonography and Dental X-ray, *etc.* X-ray service was available in all twelve DHs. However, dental X-ray service was not available in eight¹⁴² DHs.

Audit observed that the full range of imaging services were not available in the test checked DHs. The details of availability of imaging services are shown in **Table 5.8**.

Table 5.8: Availability of equipment for imaging services in 12 DHs

Imaging Services		Tekkali	Atmakur	Hindupur	Paderu	Parvathipuram	Anakapalli	Tanuku	Tenali	Markapur	Madanapalli	Chittoor	Proddatur
X-ray	300 mA machine	No	No	No	No	Yes	Yes	Yes	No	Yes	No	No	Yes
	100 mA machine	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	60 mA* machine	Yes	Yes	Yes	No	No	Yes	No	No	Yes	No	Yes	Yes
	Dental X-ray	No	No	Yes	No	Yes	No	No	No	Yes	No	No	Yes

Source: hospital records

*mA denotes Million Amperes per second

300 mA X-ray machines though available at six DHs (Tekkali, Atmakur, Hindupur, Paderu, Madanapalli and Chittoor) were not in working condition.

Dental X-rays are used to diagnose diseases affecting the teeth and the bones. They provide important information to plan the appropriate dental treatment. Though Dental X-ray machines were available in DHs Tekkali, Atmakur and Tanuku they were not in working condition.

Due to non-availability of Dental X-ray machines, appropriate dental treatment to the patients could not be assured.

Government accepted (August 2023) the audit observation.

5.4 Availability of facilities in Tertiary Healthcare

5.4.1 Medical colleges

For the academic year 2021-22, there are 11 Government, 17 Private & one Aided Government Medical Colleges in the State as detailed in **Table 5.9**.

¹⁴² Paderu, Anakapalli, Tanuku, Tenali, Madanapalle, Chittoor, Tekkali and Atmakur

Table 5.9 - Details of Government & Private Medical Colleges with UG seats

S. No.	Category of the Medical College	No of colleges available	No of UGs seats
1	Government	11	2,185
2	Private	17	2,650
3	SVIMS (semi govt)	01	175
Total		29	5,010

Source: furnished by Director of Medical Education

In addition to the above there are two institutes *i.e.*, All India institute of Medical sciences at Mangalagiri and Regional Ayurveda Research institute for skin disorders at Vijayawada functioning with GoI funds.

Out of 11¹⁴³ Government Medical Colleges, three Medical Colleges listed in **Table 5.10** were selected for test check /detailed scrutiny of the records for the period 2017-18 to 2021-22.

Table 5.10: Details of Test checked Medical Colleges

S.No.	Name of the Medical college	No of Seats
1	GMC, Anantapur	150
2	GMC, SPSR Nellore	175
3	GMC, Srikakulam	150

Source: furnished by Director of Medical Education

M/s Anantapur Medical College Trust, Anantapur was converted into GMC, Anantapur in the year 2000 with 100 seats intake annually & subsequently the Government had increased seats from 100 to 150 seats in the year 2019.

D.S.R Government District Hospital, Nellore was upgraded to Government General Hospital (GGH) and attached to newly established ACSR Government Medical College with 150 MBBS seats in the year 2014. Subsequently, Government had increased seats from 150 to 175 in the year 2019.

District Hospital, Srikakulam was upgraded to Government General Hospital (GGH) and attached to newly established Government Medical College (named as RIMS), Srikakulam with 100 MBBS seats. Subsequently the Government had increased seats from 100 to 150 in the year 2019.

5.4.1.1 Availability of Buildings/Infrastructure

As per clause A.1.1 of Minimum Standard Requirement Rules (MSRR)1999, for 150/200 admissions annually, the medical college shall be housed in a unitary campus of not less than **20 acres** of land. Further, minimum accommodation requirements prescribed for Medical Colleges are detailed below:

1. Administrative Block consisting of working accommodation for Principal/Dean's office, staff, College Council, Office Superintendent, records, common room for male and female with attached toilet and cafeteria.

¹⁴³ 1. Govt. Medical College, Srikakulam; 2. Andhra Medical College, Visakhapatnam; 3. Ranga Raya Medical College, Kakinada; 4. Siddhartha Medical College, Vijayawada; 5. Guntur Medical College, Guntur; 6. Govt. Medical College, Ongole; 7. Govt. Medical College, Nellore; 8. S.V. Medical College, Tirupati; 9. Govt. Medical College, Kadapa; 10. Kurnool Medical College, Kurnool; and 11. Govt. Medical College, Anantapur

2. College council, Central library, lecture theatre, examination hall, Central Photographic Section, central workshop, and animal house.

Audit observed that the extent of land with the colleges was sufficient as per the requirement in all the three GMCs.

5.4.1.2 Shortfall in accommodation in GMCs

Out of nine elements¹⁴⁴ of accommodation, shortfall in five elements was noticed in the test checked GMCs as detailed below:

- a. **Central Library:** As per Clause A.1.4 of MSRR, 1999, there shall be air-conditioned Central library of 2400 Sq.m & 3200 Sq.m with seating arrangement for at least 300 and 400 students for 150 & 200 admissions respectively.

Shortfall observed in availability of space and seating capacity in Central Library is shown in **Table 5.11**.

Table 5.11: Details of availability of space and seating capacity in Central Library of test checked GMCs

Description	Requirement as per MSRR, 1999 for 150 admissions	Anantapur (150 seats)	Srikakulam (150 seats)	Requirement as per MSRR, 1999 for 200 admissions	Nellore
Total area of Central Library (in sq.m)	2400	334.44	650	3200	2270
Total Seating capacity of Library	300	550	150	400	300

Source: Medical College records

- b. **Lecture Theatre:** As per clause A.1.5. of MSRR, 1999, for colleges with 150 admissions, there shall be four Lecture Theatres of gallery type for 180 students each and one in the hospital for 200 students. Shortfall observed is shown in **Table 5.12**.

Table 5.12: Details of shortfall in Lecture Theatre in test checked GMCs

Description	Requirement as per MSRR, 1999 for 150 admissions	Available		Requirement as per MSRR, 1999 for 200 admissions	Available
		Anantapur (150)	Srikakulam (150)		Nellore (200)
No of L.T available	5	5	4	5	4
Seating capacity of each theatre	180X4, 200X1	150X5	150X2, 100X2	240X4, 300X1	180X4

Source: Medical College records

- Shortfall in Seating capacity of lecture theatres is 170 and 420 in GMC Anantapur and GMC Srikakulam respectively.

¹⁴⁴ 1. Administrative Block, 2. College Council, 3. Central Library, 4. Lecture Theatre, 5. Examination Hall, 6. Central Photographic Section, 7. Central Workshop, 8. Animal House and 9. Central Incineration Plant

- No. of lecture theatres in GMC, Srikakulam is four against the requirement of five and hence a shortfall of one lecture theatre.
 - The number of lecture theatres in GMC, Nellore is four against the requirement of five and hence a shortfall of one lecture theatre.
 - Lecture theatre with seating capacity of 300 was not available in GMC Nellore.
- c. **Examination Halls:** As per Clause A.1.6. of MSRR, 1999, for colleges with 150 admissions, there shall be two examination halls of capacity 250 with area of 250 sq.mt each, which should be flat type and should have adequate chairs with desk/writing benches in such a manner that there would be sufficient space between two students.

The availability of examination halls, their extents and seating capacities are depicted in **Table 5.13**.

Table 5.13: Details of shortfall in Examination Halls in test checked GMCs

Description	Requirement as per MSRR, 1999 for 150 admissions	Available		Requirement as per MSRR, 1999 for 200 admissions	Available Nellore (200)
		Anantapur (150)	Srikakulam (150)		
No. of Examination Hall	2	2	2	3	1
Extent of each examination hall in sq.m	250 Sq. m each	279.63 Sq.m	125 Sq.m	250 Sq.m each	1348 Sq.m
Seating capacity of each hall	250	150	125	250	-

Source: Medical College records

- The area of examination halls in GMC, Srikakulam is half the prescribed area.
 - A shortfall in seating capacity of 100 & 125 was noticed in each examination hall of GMC, Anantapur & Srikakulam respectively.
 - In GMC, Nellore instead of three, only one examination hall was available.
 - Details of seating capacity were not furnished by GMC, Nellore.
- d. **Central Photographic Section:** As per Clause A.1.7 of MSRR, 1999, Central Photographic and audio-visual sections with accommodation for studio, dark room, enlarging and photostat work shall be made available.

We observed that Central Photographic and audio-visual sections were not available in GMCs Anantapur and Nellore.

Thus, the test-checked hospitals were not MSRR 1999 compliant, in terms of accommodations such as central library, examination hall, lecture theatre *etc.*

Government accepted (August 2023) the audit observation and promised future compliance.

5.4.1.3 Department-wise shortfall in accommodation

The MSRR,1999 prescribed minimum requirement of accommodation such as rooms for professors, Associate professors, Assistant professors, tutors, staffs, demo room, dissection hall *etc.*, for each department (teaching and technical staff) of the medical college. However, shortfall in availability of accommodation was noticed as detailed in **Table 5.14**.

Table 5.14: Details of Department wise shortfall in accommodation in test checked GMCs

Name of the Department	Name of the items	Requirement as per MSRR,1999 (150 seats)	Available	Shortfall	Shortfall Percentage
GMC, Anantapur					
Biochemistry	Tutors/Demonstration rooms	1	0	1	100
	Departmental office cum clerical room	1	0	1	100
	Working accommodation for non-teaching staff	1	0	1	100
Human Anatomy	Cold storage room in Dissection Hall	1	0	1	100
	Working accommodation for Non-teaching staff	1	0	1	100
GMC, Nellore					
Human Anatomy	Extent of demonstration room	75 Sq.m	60 Sq.m	15 Sq m	20
	Extent of Dissection Hall	400 Sq.m	325 Sq.m	75 Sq.m	18.75
	Cold storage room in Dissection Hall	1	0	1	100
	Room for Assist. professor/lecturer	4	1	3	75
	Room for Tutors/Demonstration	5	1	4	80
	Extent of histology laboratory	300 Sq.m	200 Sq.m	100 Sq. m	33.33
Forensic Medicine	Demonstration room	3	2	1	33.33
	Extent of demonstration room	75 Sq.m	25 Sq.m	50 Sq.m	66.67
	Laboratory for examination of specimens, tests and forensic histopathology, serology, anthropology and toxicology	1	0	1	100
	Associate professor room	2	1	1	50
	Room for Demonstration /tutor	4	0	4	100
Community Medicine	Demonstration room	3	2	1	33.33
	Extent of demonstration room	75 Sq.m	60 Sq.m	15 Sq.m	20
	Room for Assist. professor/lecturer	4	1	3	75
	Room for Tutors/Demonstration	5	1	4	80

Name of the Department	Name of the items	Requirement as per MSRR, 1999 (150 seats)	Available	Shortfall	Shortfall Percentage
GMC, Srikakulam					
Community Medicine	Extent of Museum	125 Sq.m	75 Sq.m	50 Sq.m	40
	Extent of research laboratory	50 Sq.m	20 Sq.m	30 Sq.m	60
Microbiology	Demonstration room	1	0	1	100
Pathology	Extent of practical laboratory for morbid anatomy and histopathology/cytopathology	200 Sq.m	130 Sq.m	70 Sq.m	35
Physiology	Extent of Amphibian laboratory	200 Sq.m	150 Sq.m	50 Sq.m	25
Human Anatomy	Extent of Dissection Hall	325 Sq.m	300 Sq.m	25 Sq.m	7.69
	Room for Assist. professor/lecturer	3	2	1	33.33

Source: Medical College records

We observed that:

➤ **GMC, Anantapur**

Two out of eight departments did not have required space such as tutors/demonstration room, clerical room, non-teaching staff room and cold storage room.

➤ **GMC, Nellore**

Three out of eight departments were functioning with less space than prescribed extents.

➤ **GMC, Srikakulam**

Five out of eight departments were functioning with less space than prescribed extents.

Shortfall in accommodation may lead to inconvenience to students as well as teaching and non-teaching staff in discharging their duties.

Government accepted (August 2023) the audit observation and promised future compliance.

5.4.1.4 Non upgradation of infrastructure to increased MBBS seats

The Government accorded administrative sanction (September 2017) for an amount of ₹60 crore each for upgradation of the Government Medical Colleges, Anantapur and Srikakulam, to increase MBBS seats from 100 to 150. The upgradation work was taken up under the centrally sponsored scheme, with 60 : 40 *per cent* sharing basis of funds.

Agreements were concluded in respect of GMC Srikakulam (February 2019) and Anantapur (December 2018). Status of these works is stated below:

➤ The following upgradation works in GMC, Srikakulam scheduled to be completed by 14 May 2022:

- (i) New block for library and lecture hall (four number)
- (ii) Vertical expansion of hospital block (4th floor)
- (iii) Vertical expansion of existing MCH block for UG & female interns.
- (iv) Vertical expansion of male interns' hostel for male residents (2nd floor)
- (v) Vertical expansion of nurses' hostel for female residence (2nd & 3rd floor).

Though the date of completion was extended up to 28 October 2022, the work was not completed. Further, payment of ₹15.80 crore was also made on 30 September 2021 to the contractor. The Chief Engineer, APMSIDC, Mangalagiri replied (September 2022) that the work was delayed due to reasons like COVID-19 pandemic, non-availability of required sand and non-payment of work bills in time.

Due to non-completion of the works the students and staff were facing inconvenience with the present accommodation.

➤ Upgradation work at GMC, Anantapur (vertical expansion at existing building and New Blocks) was approved (Agreement 20 December 2018) and scheduled to be completed by 19 March 2020. This was extended up to 26 March 2022. We observed that work up to basement level only completed at GMC, Anantapur (September 2022).



Figure 5.12: Incomplete Upgradation work at GMC, Anantapur (August 2022)

Further, payment of ₹6.21 crore was made (March 2022) to the contractor. The Executive Engineer, APMSIDC, Anantapur replied (August 2022) that action would be initiated as per the guidelines.

Government accepted (August 2023) the audit observation and assured future compliance.

Delay in completion of upgradation works for the upgraded medical colleges would impact the training of medical students and cause inconvenience to the patients.

5.4.1.5 Hostels

As per Clause A 3 of MSRR, 1999, for 150 admissions annually, college hostels should have at least provision for 75 per cent of 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 nine sq.m / student.

Every student shall undergo a period of certified study extending over four and half academic years divided into nine semesters, (*i.e.*, of six months each) from the date of commencement of study for the subjects comprising the medical curriculum to the date of completion of the examination and followed by one-year compulsory rotating internship as per¹⁴⁵ Regulations on Graduate Medical Education, 1997.

A. Shortfall in Per Capita Space

As per MSRR 1999, the required size of the Room is nine sq.m per student. Extent per student available in hostels of the test checked GMCs is given in **Table 5.15**.

Table 5.15: Details of shortfall in Per capita space in hostel in test checked GMCs

S.No.	GMC	Accommodation (No. of rooms)			Area available (sq.m)	Student capacity (No. of students)	Availability per student (Capacity/ area)
		Boys	Girls	Total			
1	2	3	4	5	6	7	8 = (6)/ (7)
1	Anantapur	112	108	220	2,640.00	532	4.96
2	Srikakulam	105	110	215	3,575.22	430	8.31
3	SPSR Nellore	140	164	304	4,689.00	568	8.25

Source: Medical College records

It can be seen from the above table that in GMC, Anantapur, per capita space was lesser. Shortfall in per capita space would result in congestion.

Government accepted (August 2023) the audit observation and promised future compliance.

B. Deficiencies/Shortages of facilities at Hostels

As per MSRR, 1999, for 150/200 admissions annually, each student shall be provided with independent and separate furniture which shall include chair, table, bed and full size cupboard. Each hostel shall have a Visitors' room and a Study room with Computer & Internet. Both these rooms should be air-conditioned. There shall be a recreational room having T.V., Music, Indoor games and mess facilities.

In three test checked GMCs, the availability of the facilities was examined and shown in **Table 5.16**.

Table 5.16: Details of deficiencies/shortages at hostels in test checked GMCs

S.No	Description	GMCs (UGs Hostels)					
		Srikakulam		Anantapur		Nellore	
1	Visiting Room	without sitting facilities	without sitting facilities	without sitting facilities	without sitting facilities	without sitting facilities	without sitting facilities
2	Study room	without Air conditioning, computer and internet	without Air conditioning, computer and internet	without Air conditioning, computer and internet	without Air conditioning, computer and internet	without Air conditioning, computer and internet	without Air conditioning, computer and internet

¹⁴⁵ point 7- training period and time distribution

S.No	Description	GMCs (UGs Hostels)					
		Srikakulam		Anantapur		Nellore	
3	Recreational Room	Not available	Not available	without TV, Music, Indoor games and mess facilities	without TV, Music, Indoor games and mess facilities	without TV, Music, Indoor games and mess facilities	without TV, Music, Indoor games and mess facilities



Figure 5.13: Overhead tank leakage in girls' hostel, GMC, Srikakulam (June 2022)

Source: Medical College records



Figure 5.14: Dysfunctional Toilet in Girls Hostel, GMC, Srikakulam (June 2022)



Figure 5.15: Four boarders staying in one room in Boys hostel, GMC, Anantapur (August 2022)

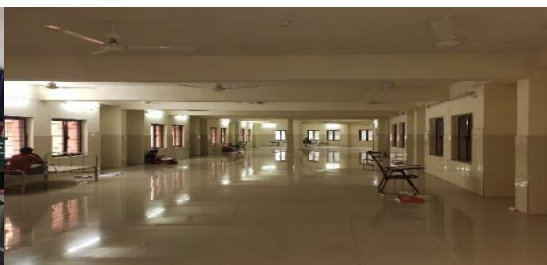


Figure 5.16: Study room without any facilities in Girls hostel, GMC, Anantapur (August 2022)



Figure 5.17: Three boarders in one room in Girls Hostel, GMC, Srikakulam (August 2022)

We observed the following shortfalls in the hostels:-

- Seating facilities were not available in visitors' rooms in Men's and Women's hostels in three test checked GMCs.
- Air-conditioning, computers and internet facilities were not available in Men's and Women's hostels in three test checked GMCs.
- Recreation room was not available in Men's and Women's hostels in GMC, Srikakulam. TVs were not available in Recreation room of other two test checked hostels.
- Floor tiles were in damaged condition in all hostels in test checked colleges.
- Power back-up facility was not provided in Men's Hostel, GMC, Anantapur and Women's Hostel, GMC, Nellore.

- vi. Overhead tank was last cleaned in 2019 in Men's Hostel, GMC, Srikakulam.
- vii. CC cameras provided were not working in Men's Hostel, GMC, Anantapur, and in both Hostels of GMC, Nellore.
- viii. Lift facility was not available at Men's and Women's Hostels having G+3 floors at GMC, Anantapur and Nellore.

Government accepted (August 2023) the audit observation and promised future compliance.

5.4.1.6 Quarters Lying Unoccupied at Government Medical Colleges

As per MSRR 1999 (B. 10.1 & 10.2), there shall be enough quarters to cover 100 *per cent* of the total Sr. Residents and Jr. Residents and at least 20 *per cent* each of Nurses, Teaching & Non- teaching staff respectively. It shall be mandatory for all Senior and Junior Residents to stay in Residents' Hostel / Quarters in the campus where the hospital is located.

We observed that the staff quarters were lying vacant in three test checked GMCs as given in **Table 5.17**.

Table 5.17: Details of unoccupied Quarters in test checked GMCs

Quarter description	Name of the GMC		
	Srikakulam	Nellore	Anantapur
No. of quarters	38	150	53
No. of quarters occupied	19	26	18
No. of quarters unoccupied	19	124	35

Source: Medical College records

Fifteen Senior Residents in GMC Anantapur were staying outside the college campus.

- Out of 18 senior residents in GMC Nellore, only three were staying in the campus. Even though sufficient number of quarters were available, the Senior residents were not staying in the hospital quarters which would affect emergency services in the hospital.

Government accepted (August 2023) the audit observation and stated that unoccupied quarters would be allotted to needy staff.

However, the availability of Senior and Junior Residents near the Hospital is mandatory to attend 24X7 emergency services.

5.4.1.7 Strengthening of existing Medical Colleges and attached institutions

With a view to strengthening of existing 11¹⁴⁶ Medical Colleges and attached institutions, the Government of AP accorded¹⁴⁷ (22 March 2021) administrative sanction to the Director of Medical Education, AP for an amount of ₹3,850 crore. Audit observed that APMSIDC did not take up any work.

Government accepted (August 2023) the audit observation and promised future compliance.

¹⁴⁶ Medical colleges are 11 only. However, Andhra Medical College Visakhapatnam was having three attached hospitals for upgradation. Hence GO was issued for 13 Medical Colleges.

¹⁴⁷ G.O.Ms.No.32, dt.22.03.2021

5.4.1.8 Establishment of New Medical Colleges

The Ministry of Health & Family Welfare administers a Centrally Sponsored Scheme (CSS) for ‘Establishment of new Medical Colleges attached with existing district/referral hospitals’ with preference to underserved areas and aspirational districts, where there is no existing Government or private medical college.

Accordingly, State Government accorded administrative sanction (12 September 2020) for establishment of three Medical Colleges at Machilipatnam, Piduguralla and Paderu¹⁴⁸ at an estimated amount of ₹550 crore, ₹500 crore and ₹500 crore respectively, under a Centrally Sponsored Scheme in the ratio of 60:40 between Centre and State as detailed in **Table 5.18**.

Table 5.18: Details of release of funds to three new Medical Colleges under CSS

(₹ in crore)

Sl. No.	Location	Share of funding			Budget		Expenditure incurred	Balance
		GoI	State	Total	Year	Amount		
1	Paderu	305	195	500	2021-22	249.99	56.04	193.95
2	Machilipatnam	355	195	550				
3	Pidiguralla	305	195	500				
Total						249.99	56.04	193.95

Source: furnished by APMSIDC

It can be observed from **Table 5.18** that against ₹249.99 crore (₹153.04 crore towards Central share and ₹96.95 crore towards State share) released, an amount of ₹56.04 crore only was spent towards establishment of New Medical Colleges at Paderu Machilipatnam and Pidiguralla. Remaining funds of ₹193.95 crore were surrendered to DME.

Administrative sanction was also given for establishment of 13 New Medical Colleges and however, GoAP accorded administrative sanction (September 2020) for setting up of Medical College at Pulivendula and instructed DME to arrange funds through Project Finance Mode through financial institutions. Department of Health, Medical and Family Welfare, GoAP accorded administrative sanction (March 2021) for an amount of ₹5,800 crore for setting up of remaining 12 New Medical Colleges under State Development Plan (SDP).

However, Agreements were concluded only for GMCs Pulivendula and Vizianagaram with ₹366.09 crore and ₹363.75 crore with scheduled date of completion by 10 December 2023 and 03 December 2023 respectively. Expenditures of ₹80.55 crore and ₹0.44 crore were incurred towards establishment of GMCs Pulivendula and Vizianagaram. However, construction of Government Medical College at Pulivendula only commenced under State Development Plan (SDP).

Government accepted (August 2023) the audit observation and promised future compliance.

¹⁴⁸ vide GO MS Nos 113,114 and 116 dated 12.09.2020.

5.4.2 Government General Hospitals (Medical College attached Hospitals)

Teaching hospital associated with Government Medical College is commonly known as Government General Hospital (GGH). Teaching hospitals shall be under the academic, administrative and disciplinary control of the Dean/Principal/Director who shall not be concurrently Head of Department but can be a teaching faculty in the respective Department.

As per Clause C of MSRR, 1999, each department shall have a Head of the Department of the rank of Professor except in the Departments of Dermatology, Venereology & Leprosy, Psychiatry & Dentistry where Associate Professor may be the Head of the Department. The Staffing pattern of the department is organised based on units. A unit is also called a ward consisting of 30 beds generally. Generally, each clinical department has one or more units.

5.4.2.1 Availability of Physical Infrastructure

As per¹⁴⁹ MSRR 1999, every medical college with 150/200 admissions annually should have 23 departments and two optional Departments in associated Teaching Hospital.

Shortfall in units in the Clinical Departments

We observed shortfall in the no. of units in GGH, Nellore as detailed below in **Table 5.19**.

Table 5.19: Details of Department wise shortfall in Units at GGH, Nellore

S.No.	Name of the Department	No. of units required as per MSRR, 1999	No of units available	Shortfall
1	Orthopedics	4	3	1
2	General Medicine	7	4	3
3	General Surgery	7	5	2
4	Ophthalmology	2	1	1

Source: Information furnished by the GGHs.

Government accepted (August 2023) the audit observation and promised future compliance.

5.4.2.2 Availability of Beds

As per MSRR,1999, stipulated the number of units required and beds per unit to be available for 150 and 200 admissions for 10 departments. Details of number of units and beds per unit required for 150 and 200 admissions in 10 departments as detailed in **Table 5.20**.

Table 5.20: Details of Requirement of Units & Beds in 10 Departments

Sl. no.	Name of the clinical department	for 150 admissions		200 admissions	
		No. of units	No. of beds	No. of units	No. of beds
1	General Medicine	5	150	7	210
2	Paediatrics	3	90	4	120
3	Psychiatry	1	15	1	15

¹⁴⁹ Point 3

Sl. no.	Name of the clinical department	for 150 admissions		200 admissions	
		No. of units	No. of beds	No. of units	No. of beds
4	Dermatology, Venereology and Leprosy	1	15	1	15
5	Tuberculosis and Respiratory Diseases	1	20	1	30
6	General Surgery	5	150	7	210
7	Orthopedic	3	90	4	120
8	Ophthalmology	1	15	2	40
9	Oto-Rhino-Laryngology	1	15	1	20
10	Obstetrics and Gynaecology	3	90	4	120
	Total	24	650	32	900

Source: Information furnished by the GGHs.

During test check of three GGHs in Anantapur, SPSR Nellore and Srikakulam, we observed shortfall in availability of beds against the regulations as detailed in **Table 5.21**.

Table 5.21: Details of Shortfall in bed availability in test checked GGHs

Name of the Hospital	Required No. of beds	Available	Name of the Department	No. of beds required	Available	Shortfall
GGH, Nellore	900	870	Obstetrics & Gynaecology	120	100	20
			Ophthalmology	40	30	10
GGH, Anantapur	650	627	Orthopedics	90	70	20
			Psychiatry	15	12	3
GGH, Srikakulam.	650	633	Orthopedics	90	75	15
			General Medicine	150	148	2

Source: Information furnished by the GGHs.

- There was a shortfall of 30 beds (Obstetrics & Gynaecology Dept.-20 and Ophthalmology Dept.-10) in GGH, Nellore.
- There was a shortfall of 23 beds (Orthopaedic Dept.-20 and Psychiatry Dept.-3) in GGH, Anantapur.
- There was a shortfall of 17 beds (Orthopaedic Dept.-15 and General Medicine Dept.-2) in GGH Srikakulam.

Government accepted (August 2023) the audit observation and stated that the bed strength was enhanced to 917 in GGH Nellore, 970 in GGH Anantapur and 750 in GGH Srikakulam.

5.4.2.3 Availability of Equipment in Clinical Departments

Against the requirement as per MSRR1999, we observed in test checked GGHs that many types of equipment were not available as detailed in **Table 5.22**.

Table 5.22: Shortfall in Equipment in the Clinical Departments of test checked GGHs

Sl. No.	Name of the Department	Types of equipment Required 150	Type of equipment not available at GGHs		Types of equipment Required for 200 beds Hospital	Type of equipment not available at GGH Nellore
			Anantapur	Srikakulam		
1	General Medicine	53	35	28	53	40
2	Paediatrics	49	17	15	49	10
3	Psychiatry	13	11	10	13	11
4	Dermatology, Venereology and Leprosy	8	8	8	8	8
5	Tuberculosis and Respiratory Diseases	13	4	5	13	3
6	General Surgery	42	16	29	42	15
7	Orthopedic	25	11	10	25	7
8	Radio Diagnosis	9	2	3	9	6
9	Oto-Rhinolaryngology	178	48	75	178	80
10	Ophthalmology	39	9	6	39	15
11	Obstetrics and Gynaecology	97	15	50	97	47
12	Anesthesiology	51	19	20	51	24

Source: Information furnished by the GMCs

Thus, with the short availability of equipment in three test checked GGHs, it is doubtful that the student would receive proper instructions and practice.

We observed that clinical Departments in the test checked GGHs had a shortfall of the following important equipment as detailed in **Table 5.23**.

Table 5.23: Details of 100 per cent Shortfall of certain equipment in test checked GGHs

Sl. No.	Name of the department	GGH Anantapur	GGH Nellore	GGH Srikakulam
1	Radio diagnosis	DR, System, multimedia projector with screen	500 MA & 800 MA x-ray, CR& DR system, CT (16 slice), multimedia projector with screen	Mammography, multimedia projector with screen
2	Anaesthesiology	OT- Fibre optic bronchoscope, PNS, ABG machine, side lab for emergency investigation, Pain clinic-Fluoroscopy machine, nerve locator, Anodyne machine, Anesthetic machine with resuscitation equipment <i>etc.</i>	OT- LMA / PLMA of all sizes, EtCO2 monitor, Fibre optic bronchoscope, PNS, ABG machine, side lab for emergency investigation, Anodyne machine, Anesthetic machine with resuscitation equipment <i>etc.</i> Transcutaneous Electric Nerve Stimulating Machine, ultrasound machine <i>etc.</i>	OT- Fibre optic bronchoscope, PNS, ABG machine, oxygen therapy unit, Radio frequency ablation machine, Fluoroscopy machine, Styleted Epidural catheter, Rac's catheters, nerve locator, Anodyne machine, Anesthetic machine with resuscitation equipment <i>etc.</i>

Sl. No.	Name of the department	GGH Anantapur	GGH Nellore	GGH Srikakulam
3	OBS & Gynae.	MR Syringes, Cryo/electro cautery apparatus, Hysterosalpingograms Cannula, PCT forceps, Ayer's spatula OT-Tuboplasty set, Laparocator for tubal ligation, Resectoscope, Hysterometer, Operative microscope, Low mid cavity forceps/Keill and forceps, Vacuum Extractor and suction machine, Infusion Pump, Laparocator for tubal ligation, microscope <i>etc.</i>	EA + ECC sets, MR syringes, Cryo/electro cautery apparatus, Simple fetal Doppler, ultrasound machine, NST machine, Hysterosalpingogram Cannula, PCT forceps, OT- Tuboplasty set, Laparocator for tubal ligation, histo mat, operative microscope, D&C set, MTP set, Cervical exploration set, Uterine packing forceps, Abdominal hysterectomy set, Diagnostic laparoscopy set, Postpartum ligation, Low mid cavity forceps/Keil and forceps, Vacuum Extractor and suction machine, Infusion Pump, EB set, Laparocator for tubal ligation, CTG machine, Ultrasound machine with Doppler/Vaginal probe/facilities for Interventional procedure, Oxytocin infusion pumps, Multichannel Monitor with ECG, BP, HR, Pulse oximeter for high risk pregnant patients (eclampsia, heart diseases <i>etc.</i>), Fetal Monitor for Antepartum Surveillance Fetal doppler, portable ultrasound	EA + ECC sets, MR syringes, Cryo /electro cautery apparatus, NST machine, Hysterosalpingogram Cannula, Digital/electronic blood pressure apparatus, colposcope, PCT forceps, Ayer's spatula OT- Tuboplasty set, Laparocator for tubal ligation, histo mat, operative microscope, Electronic Carbon dioxide insufflator/ Insufflator basic unit. Digital/ Electronic B.P. Apparatus, Portable ultrasound Oxytocin infusion pumps, Multichannel Monitor with ECG, BP, HR, Pulse oximeter for high-risk pregnant patients (eclampsia, heart diseases <i>etc.</i>) EB set, Uterine packing forceps, Postpartum ligation, Low mid cavity forceps/Keil and forceps, Infusion Pump, EB set, Laparocator for tubal ligation, Ultrasound machine with Doppler/Vaginal probe/facilities for Interventional procedure, Oxytocin infusion pumps, Multichannel Monitor with ECG, BP, HR, Pulse oximeter for high-risk pregnant patients (eclampsia, heart diseases <i>etc.</i>), Fetal Monitor for Antepartum Surveillance Fetal doppler, portable ultrasound.

Sl. No.	Name of the department	GGH Anantapur	GGH Nellore	GGH Srikakulam
4	Paediatrics	i. Resuscitation equipment- Nasal prongs, Nasal catheters ii. Drug Delivery Equipment/ Catheter/tube- Blood Transfusion Set, Umbilical vein Catheter iii. Measurement Equipment Digital Weighing machine - Shakir's tape, Measuring tape, Digital thermometer-Oral. Work Lab and Investigations- Bone marrow needle, Lumbar Puncture (L.P.) Needles, Pleural aspiration needle, Vim-Silverman liver biopsy needle, True Cut Renal biopsy needle	i. Resuscitation Nasal catheters ii. Measurement Equipment Digital Weighing machine - Shakir's tape, measuring tape, Infant meter Stadiometer, digital BP measuring Instrument with various cuff sizes Work Lab and Investigations- Lumbar Puncture (L.P.) Needles, Vim-Silverman liver biopsy needle, True Cut Renal biopsy needle	i. Resuscitation equipment- Nasal catheters ii. Drug Delivery Equipment/ Catheter/tube- Blood Transfusion Set, Umbilical vein Catheter, Intra-venous (I.V.) Cannula (Butterfly type), Three-way and four-way valve iii. Measurement Equipment Digital Weighing machine - Infant & child, Digital Thermometer-Oral, digital BP measuring Instrument with various cuff sizes. iv. Work Lab and Investigations-Pleural aspiration needle, True Cut Renal biopsy needle

Source: Information furnished by the GGHs

Due to shortage of equipment, patients had to opt for private treatment which was expressed during patient surveys as detailed in **Table 5.24**.

The abstract of inpatients surveyed in all the test checked GGHs is shown below.

Table 5.24: Abstract of Inpatients surveys in test checked GGHs and paid out of pocket

Name of the GGHs.	No of In-patients surveyed	No of patients who had to pay out of pocket for medicines/diagnostic tests/lab services etc., as per the survey
Srikakulam	23	9
Anantapur	23	8
Nellore	27	8
Total	73	25

It can be seen from **Table 5.24** that in three test-checked GGHs, 25 patients out of 73 surveyed inpatients received either medicines or diagnostic test or lab services from outside agency and paid for the medicines and services received.

Government accepted (August 2023) the audit observation and promised future compliance.

5.4.2.4 Blood Banks

As per the Drugs and Cosmetics Rules, 1945 section 122E.A(d), 'Blood Bank' means a place or organisation or unit or institution or other arrangements made by such organisation, unit or institution for carrying out all or any of the operations for

collection, apheresis¹⁵⁰, storage, processing and distribution of blood drawn from donors and/or for preparation, storage and distribution of blood components. Under section 122A, license from Drug Control Administration is required for operation of Blood Bank in the State. As per Rules 122-F of the above Act, the applicant has to apply for the grant and/or renewal of license for the operation of a Blood Bank with the Licensing Authority appointed under Part VII in Form 27- C or Form 27-E or Form 27-F, as the case may be.

We observed that the license of Blood Bank in GGH, Srikakulam had expired on 18 August 2021 and was under renewal. Licenses of Blood Bank in GGH, Anantapur and GGH, Nellore were valid up to December 2022.

Some equipment like Refrigerator Remi BR 300, Refrigerator Jewet and deep freezers were not in working condition at GGH Nellore. Two Blood Bank centrifuges and two refrigerators were not working at GGH, Anantapur.

Pictures of equipment not working



Figure 5.18: Dysfunctional centrifuges in GGH Anantapur (August 2022)



Figure 5.19: Dysfunctional refrigerator in GGH, Anantapur (August 2022)

Government accepted (August 2023) the audit observation and stated that Blood Bank licence was obtained for GGH Srikakulam, and promised future compliance regarding licenses for remaining units are under process.

5.5 COVID-19 Management

A sudden and usually unforeseen event that calls for immediate measures to mitigate impact is an Emergency. A set of written procedures that guide emergency actions, facilitate recovery efforts, and reduce the impact of an emergency event is termed as Emergency response plan. Hospitals are complex and potentially vulnerable institutions, dependent on external support and supply lines. It is a challenging effort even for a well-prepared hospital, to cope with the consequences of a disaster.

In recent times, the world faced COVID-19 pandemic which caused immense pressure on the healthcare system. To combat with the pandemic, due to changed priorities, GoI brought out an Emergency Covid Response and Health Systems Preparedness (COVID-19 ER&HSP) package with the objective to slow and limit the spread of COVID-19 as much as possible, to strengthen National and State Health Systems to support prevention and preparedness and to strengthen the surveillance activities including setting up of Laboratories and Management of COVID-19.

¹⁵⁰ A technique by which a particular substance or component is removed from the blood, the main volume being returned to the body

5.5.1 India COVID-19 Emergency Response and Health System Preparedness Package

COVID-19 ER&HSP is a GoI scheme intended to support accelerating and scaling up of the States' response to COVID-19 pandemic and serves the dual purpose of setting up the building blocks to strengthen health systems to respond to future disease outbreaks. In addition, the package is to provide resources to expand surveillance capacity, critical human resources for health, and laboratory capacity. Funds received under the scheme were managed through Emergency Covid Response Plan (ECRP) team in NHM.

5.5.1.1 Fund utilisation under COVID-19 in Andhra Pradesh

Public Health being a state subject, the primary responsibility of strengthening public healthcare system lies with the respective State Governments. However, Ministry of Health and Family Welfare (MoHFW) provided technical and financial support to the States to strengthen public healthcare system including management of COVID-19. GoI released funds under two packages, viz., Emergency Covid Response Package-I (ECRP-I) and ECRP-II. Under ECRP-I, (Phase-I) funds released during the financial year 2020-21 (January 2020 to June 2020) are 100 per cent central funding¹⁵¹ and the releases made during 2021-22, with 60 per cent Central share and 40 per cent State share.

Table 5.25: Utilisation of funds under COVID-19

		(₹ in crore)				
		2019-20	2020-21	2021-22	2022-23	Total
GoI share	Receipt	61.85*	330.36	823.95	-	1,216.16
	Exp.	61.85	428.76	484.03	-	974.64
	Balance	0.00	(98.40)	339.92	-	241.52
State share	Receipt	-	432.44	1,883.72	46.48	2,362.64
	Exp.	-	432.44	1,994.03	-	2,426.47
	Balance	-	0.00	(110.31)	46.48	(63.83)
SDRF	Receipt	160.90	534.75	660.76	-	1,356.41
	Exp.	160.90	534.75	364.81	-	1,060.46
	Balance	0.00	0.00	295.95	-	295.95
DMF	Receipt	-	18.23	7.92	-	26.15
	Exp.	-	141.43	3.00	-	144.43
	Balance	-	(123.20)	4.92	-	(118.28)
Total	Receipt	222.75	1,315.78	3,376.35	46.48	4,961.36
	Exp.	222.75	1,537.38	2,845.87	0.00	4,606.00
	Balance	0.00	(221.60)	530.48	46.48	355.36

Source: Information furnished by NHM

*Received in April 2020 (2020-21)

Note: Minus balances were due to funds were routed through NHM's bank account, the amounts were utilised without reconciliation

To mitigate the pandemic, GoAP had incurred an expenditure of ₹4,606.00 crore out of allocated amount of ₹4,961.36 crore during the years 2019-20 to 2022-23.

¹⁵¹ NHM guidance note dated 23.04.2020 (Annexure to DO Lr. No.Z.18015/10/2020-NHM-II-Part (1))

Procurements without need assessment

NHM Guidance Note on India COVID-19 Emergency Response and Health Systems Preparedness Package requires the State to follow due process and apply the relevant prevailing financial norms of the State while undertaking procurement activities.

As per Medical Equipment Procurement Policy 2016, the decision to purchase medical equipment should be based on the need, usage of the existing equipment, availability of the technical manpower, recurring cost to maintain the equipment, the services being proposed to be provided to the patients and availability of resources. APMSIDC is the nodal agency for all medical procurements in the State as per the Policy.

DMHO, Anantapur received funds (June 2020) towards COVID-19 from NHM. DMHO issued (July 2020) purchase order for procurement of ten mobile X-ray units and ECG machines worth ₹51.80 lakh. Further, APMSIDC was also not consulted before procurement of these items.

Basing on the purchase order, equipment was received by the HCF, in August 2020 and September 2020 and installation was completed by the agency (Wipro GE Healthcare) to end of November 2020. One mobile X-ray unit supplied to GGH, Anantapur, was dysfunctional since February 2022. Thus, the procurement was made without assessing the need, without consulting APMSIDC and not on emergency basis.

Reply from the Government is awaited.

5.5.1.2 Virus Research and Diagnostic Laboratories not established

Virus Research and Diagnostic Laboratories (VRDLs) is a designated laboratory under VRDL network established by Government of India¹⁵², as a part of implementation of the Scheme 'Establishment of a Network of Laboratories for Managing Epidemics and Natural Calamities' to strengthen infrastructure of viral diagnostics in India. These labs are intended to provide support in cases of viral outbreak. VRDL also provides routine diagnostic services (immunologic and/or molecular) for Dengue (including serotyping), Chikungunya, Hepatitis panel, Respiratory Panel, Japanese encephalitis Virus, Scrub Typhus and Zika virus. The utility of VRDLs extends beyond pandemic or immediate emergency circumstances.

During test check of DH Tekkali, it was noticed that the laboratory is non-functional and the equipment received (July 2021) towards the laboratory was kept idle. The Hospital replied (June 2022) that the lab is non-functional in the DH and the same was intimated to DCHS, Srikakulam. It was further stated that Government of AP had discontinued the establishment of VRDL laboratory in the premises of DH, Tekkali. However, the equipment was not allotted to any other hospital and was lying idle in DH and the laboratory was kept non-functional.

Government replied (August 2023) that VRDL was sanctioned during COVID-19 pandemic in 2021 in DH Tekkali and was extensively used during pandemic. The services of scientist and lab technicians were terminated after COVID pandemic. With

¹⁵² Department of Health Research, Ministry of Health & Family Welfare

the availability of Microbiologist at DH Tekkali, VRDL was put into use from 02 October 2022.

Further Government replied that Microbiology lab is proposed to be started so as to utilise that VRDL lab and equipment in the proposed Microbiology lab.

The reply confirms audit contention that the VRDL lab and the equipment were not put to use.

5.5.2 Availability of Ventilators and Oxygen Concentrators under COVID-19 in Health Institutions

Ventilators are of two types - Invasive and non-invasive ventilators. Invasive ventilators require well-trained medical staff to perform the intubation and to manage the pressure setting controls and alarms. Non-invasive ventilators, mainly continuous positive airway pressure (CPAP), bi-level positive airway pressure (BPAP) and high-flow oxygen systems require health workers to take infection control measures to reduce the risk of becoming infected with COVID-19 by the generation of aerosols.

5.5.2.1 Procurement and availability of Ventilators

Keeping in mind the need and with the primary objective of dealing with emergency or distress situation, such as that posed by the COVID-19 pandemic, and to provide relief to the affected, ventilators were procured by APMSIDC as detailed in **Table 5.26**.

Table 5.26: Ventilators procured by APMSIDC during COVID in Andhra Pradesh

Date	Make of Ventilator	Type of the ventilator	No. of ventilators procured	Cost of each ventilator (in ₹lakh)	No. of HCFs provided
15 March 2020	Vyaire Medical Inc.	Neo-natal paediatric	75	10.75	12
26 July 2021	Allied Medical Ltd.	-do-	150	10.21	15
26 July 2021	Vyaire Medical Inc.	-do-	150	10.21	15
26 July 2021	Allied Medical Ltd.	Neo-natal with HFNO	50	11.83	12
			425

Source: Purchase orders of APMSIDC

Besides these, some ventilators were supplied directly by MoHFW, New Delhi. However, data was not provided by the Department.

For care of neonates, equipment and surgical items capable of supporting preterm children and appropriate sized nasal interfaces and endotracheal tubes are essential in the paediatric HDU/ICUs. As respiratory illness spread due to COVID-19 pandemic, the health care system faced tough challenges for want of ventilators. To address this, ventilators were provided by GoI.

Further, we observed that AH Seethampeta, CHCs Sompeta and Naidupeta received 15 ventilators, five ventilators and five ventilators respectively in 2022, after second wave of COVID-19 to be established in paediatric ICU wards. However, the ventilators supplied to these HCFs were kept idle since January/February 2022, without establishing ICU wards due to space constraints, lack of trained technicians, etc.

Government replied (August 2023) that in respect of AH, Seethampeta, 15 ventilators were received in 2022, after second wave of COVID-19 and utilised in paediatric ICU wards.

However, Government did not furnish supporting evidence to ensure the utilisation. Reply in respect of CHCs Sompeta and Naidupeta was not furnished.

5.5.2.2 Availability of Oxygen Concentrators (OCs) under COVID-19 in Health Institutions

DCHS Nellore received 623 Oxygen concentrators (OCs) of 10 litres capacity and OCs of five litres capacity in July 2021 and August 2021. However, they were kept idle without distributing them to the HCFs.

DCHS Nellore replied (August 2022) that oxygen concentrators were received without indent and HCFs in the district were provided with sufficient stock of OCs. It was further stated that a letter would be addressed to APMSIDC (July 2022) to transfer the oxygen concentrators to needy hospitals.

However, Reply relating to current status from Government is awaited.

5.5.3 Oxygen services

Oxygen is an essential medicine used to treat patients at all levels of the healthcare system, including in surgery, trauma, heart failure, asthma, pneumonia and maternal and childcare. During COVID-19 season, Oxygen plants were established and infrastructure was created in the HCFs.

Oxygen Plants are designed and installed in HCFs in low-resource settings, and to face sudden emergency. We observed that Oxygen services were available in all 12 DHs. However, central/ piped Oxygen supply was available in 11 DHs, except DH Markapur. In DH, Tekkali, four Oxygen Plants were functional, and one was idle. Since oxygen plants were not functioning, oxygen services to the patients were being extended through portable oxygen cylinders.

Government replied (August 2023) that PSA plant at AH Kadiri was in working condition. However, record substantiating the reply is not furnished to ensure the same.

Reply in respect of the remaining five HCFs is awaited from Government.

5.5.3.1 Oxygen generator equipment kept idle in DH Tekkali

Oxygen generator plant received from Agastya – OXAIR, Australia (Manufactured in September 2021) was kept idle without installation at DH Tekkali (**Figure 5.20**). Medical Superintendent, DH Tekkali replied that the invoice for the plant equipment was not received by the Hospital, and the equipment was not installed.

Reply from the Government is awaited.



Figure 5.20 : Oxygen generator plant at AH Tekkali (June 2022)

5.6 Recommendations

- *Government should increase the number of CHCs to reduce patient load at AHs and DHs and to ensure availability of timely and affordable healthcare.*
- *Government should ensure that amenities and equipment are provided to the Health Care Facilities as per requirement to deliver quality services.*
- *Government should provide required infrastructure with utmost priority whenever the intake capacity of Medical College is increased.*
- *Government should look into the issues of delays in start and/or completion of planned infrastructural works to ensure speedy completion.*

Chapter VI

Financial Management

Chapter VI

Financial Management

Spending on the health sector vis-à-vis total State budget over the five year period was less than the targeted eight per cent of total State budget. There was a gap of more than 4.31 per cent in achievement even after completion of the targeted year of 2020. The State had not achieved the initial targeted expenditure of 1.15 per cent of GSDP on health sector during the years 2017-22. The State Government had not released the State share of ₹350.93 crore for the years 2017-22 towards various programmes under NHM. The State Government did not avail financial assistance extended by various financial institutions in full and funds received were also not fully utilised.

6.1 Introduction

National Health Policy, 2017 gives impetus to increasing Government finances for health, better utilisation of existing resources (optimum use of manpower and infrastructure) to achieve better health outcomes, improving financial protection and strategic purchasing from private sectors. The health expenditure by Government as a percentage of Gross Domestic Product is to be raised from the existing 1.15 per cent to 2.5 per cent by 2025. The State spending on health sector is to cross eight per cent of the budget by 2020.

In the State of Andhra Pradesh, the Department of Health, Medical and Family Welfare provides health care mainly through public hospitals. Curative and super speciality services are being provided through secondary and tertiary public Health Care Facilities (HCFs) along with private HCFs through ‘YSR Aarogyasri¹⁵³’ scheme.

6.2 Sources of funding

The Government of Andhra Pradesh (GoAP) predominantly finances health care through budgetary support every year. The budgetary support contains the State’s own receipts through taxes and non-taxes, miscellaneous receipts¹⁵⁴ and loans from NABARD¹⁵⁵ and International financial institutions (World Bank/ Externally Aided Project (EAP)). In addition, funds were provided by Government of India (GoI) by way of grants towards Centrally Sponsored Schemes (CSS) and Finance Commission (FC) grants. The details are given below:

¹⁵³ GoAP is implementing State sponsored Dr.YSR Aarogyasri Health Scheme towards achievement of universal health coverage for Below Poverty Line families in terms of financial protection and access to effective health care.

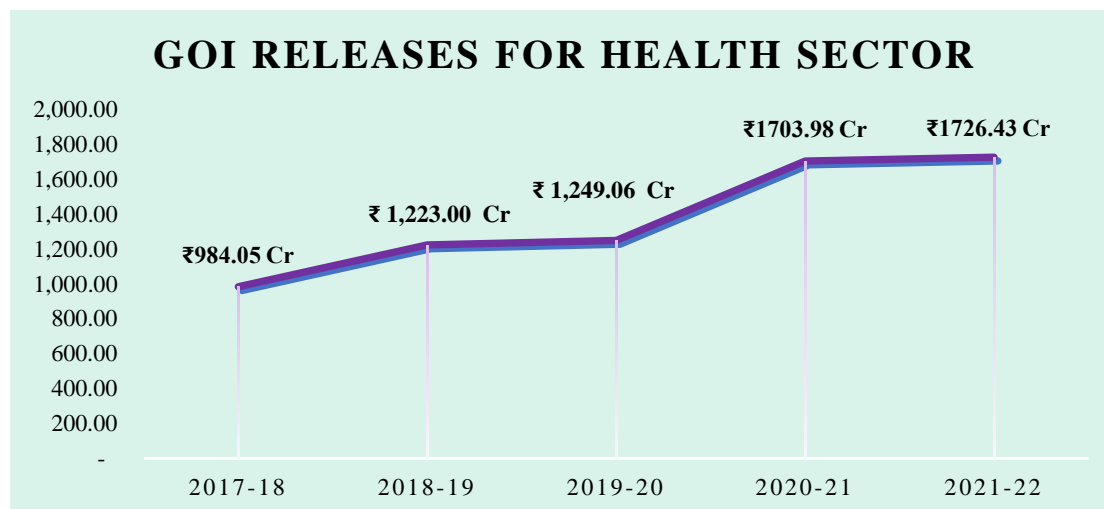
¹⁵⁴ include interest earned on program funds and refunds received from District Health Societies and Hospital Development Societies

¹⁵⁵ National Bank for Agriculture and Rural Development

6.2.1 Government of India Grants

Government of India has released an amount of ₹6,886.53 crore towards implementation of Centrally Sponsored Schemes pertaining to Health and Family Welfare. The details of year wise releases by GoI for the period 2017-18 to 2021-22 are shown in **Chart 6.1** below.

Chart 6.1: Chart showing the year wise releases made by GoI for Health Sector



From the above table, it is observed that GoI releases showed an increasing trend with an increase of 75.44 *per cent* from 2017-18 to 2021-22, with a total release of ₹6,886.52 crore during the five year period.

6.2.2 Finance Commission Grants

To strengthen and plug critical gaps in Primary Health Care level, the 15th Finance Commission recommended an amount of ₹2,601.00 crore for the award period of 2021-22 to 2025-26. As per the recommendations of State Level Committee, the National Level Committee approved ₹488.15 crore (October 2021) for seven activities¹⁵⁶ for the year 2021-22. The details of funds utilised were not available with the Department.

State Government initially transferred these grants for implementation of above activities and it was observed that subsequently the State Government withdrew the entire grant amount of ₹488.15 crore on 31 March 2022 to the Revenue Account as reduction of expenditure.

6.2.3 Loans from financial institutions

NABARD had sanctioned an amount of ₹2,484.92 crore during the period 2017-22 for health infrastructure development under RIDF¹⁵⁷. However, only an amount of ₹951.53 crore (38.29 *per cent*) was drawn by the Department towards execution of

¹⁵⁶ Construction of buildings to building less sub-centres (SCs) and PHCs, Upgradation of SCs and PHCs as Health Wellness Centres, support for diagnostic infrastructure at SCs and PHCs, to constitute Public Health Laboratory at Block public Health Unit, establishment of Urban Health Wellness centre, Support for diagnostic infrastructure for Urban PHCs, Specialist clinics in urban areas

¹⁵⁷ Rural Infrastructure Development Fund (Tranche No.s XXIII to XXVII)

186 works. Thus, GoAP had not availed the total loan facility extended by NABARD for infrastructure development.

6.2.4 Externally Aided Projects

World Bank Assistance (External Aid) was taken to strengthen the health systems and to ensure that the citizens of Andhra Pradesh have access to assured quality services without incurring any out-of-pocket expenditure¹⁵⁸ on health. The key deliverables¹⁵⁹ under the project are Infrastructure, Quality, Skill, Governance and Informatics.

The cost of the project was estimated at ₹3,127.30 crore over the project period 2019-20 to 2023-24 with corresponding State share of 30 *per cent*. As per financial activity statement provided by World Bank, an amount of ₹763.94 crore was disbursed¹⁶⁰ to the State during 2019-20 to 2021-22. However, the expenditure booked towards the activity during the said period was only ₹70.68 crore, which was 9.25 *per cent* of the amount disbursed as loan.

It is evident from above that the State Government could not avail the financial assistance extended by various financial institutions in full and funds received were also not fully utilised.

6.3 Expenditure on Health Sector

6.3.1 Expenditure on Health Sector by the State Government

NHP envisaged raising the total healthcare budget to eight *per cent* on the total State expenditure. Details of total state expenditure *vis-à-vis* the health expenditure is given in **Table 6.1**.

Table 6.1: Showing expenditure on health *vis-à-vis* State total expenditure during 2017-18 to 2021-22

(₹ in crore)					
Year	Budget for the years	Total State Expenditure*	Total State Health Expenditure	Percentage of Health Expenditure over Budget	Percentage of Health Expenditure over Total Expenditure
(1)	(2)	(3)	(4)	(5) = (4)/(2)*100	(6) = (4)/(3)*100
2017-18	1,90,705.47	1,57,617.61	6,195.09	3.25	3.93
2018-19	2,43,047.51	1,71,933.33	7,257.92	2.99	4.22
2019-20	2,48,278.85	1,87,895.24	7,429.01	2.99	3.95
2020-21	2,55,516.84	1,99,834.74	9,390.48	3.68	4.70
2021-22	3,72,445.87	2,12,126.37	11,575.04	3.11	5.46

Source: Appropriation accounts read with Grant No. XVI

*Expenditure excluding ways and means of the State

¹⁵⁸ Out-of-pocket expenditure means the money paid directly by households, at the point of receiving health care

¹⁵⁹ strengthening of primary health care system by strengthening /transforming Sub-Centres as e-Primary care posts; enhancing the quality of service and patient safety in hospital which would lead to Quality Assurance certification by GoI for DHs, AHs and CHCs and NABH accreditation for teaching hospitals, improving the skills to address the maternal and child health indicators (SNCU & NBSU based training), disaster management and disease and epidemic management systems, strengthening of 'health governance system' to address priority health issues through effective implementation of electronic health records in tertiary and secondary health care.

¹⁶⁰ disbursements represent increases in the balance outstanding due to payments made to borrowers, as well as capitalised charges (such as loan origination fees on IBRD loans)

As seen from the above, the spending on health sector vis-à-vis total State budget is much below the desired percentage of eight and ranged between 2.99 to 3.68 *per cent*. The expenditure on health sector over the five years period was nowhere near the targeted eight *per cent* as mentioned in NHP. There was a gap of more than 4.32 *per cent* in achievement of the targeted eight *per cent* even after completion of targeted year of 2020.

Further, audit compared the spending on health sector vis-à-vis total State expenditure over the years. This showed an increasing trend over the five year period and ranged between 3.93 to 5.46 *per cent*.

Policy thrust of the NHP is to ensure adequate investment in health. Without adequate financing, the NHP goal of attaining highest possible level of health and wellbeing of citizens of all ages cannot be achieved.

Reply from the Government is awaited.

6.3.2 Gross State Domestic vis-a-vis share of Government expenditure on health sector

National Health Policy, 2017 aims to increase in health expenditure by Government as a percentage of Gross State Domestic Product (GSDP) from the existing 1.15 to 2.5 *per cent* by 2025. The expenditure on health by the State Government in percentage of GSDP was as detailed in **Table 6.2** below.

Table 6.2: Percentage of expenditure on health and GSDP figures during 2017-18 to 2021-22

(₹ in crore)

Year	GSDP (Current Prices)	Expenditure by Government on health	Percentage of expenditure on health over GSDP of the State
2017-18	7,86,135.00	6,195.09	0.79
2018-19	8,73,721.00	7,257.92	0.83
2019-20	9,25,839.00	7,429.01	0.80
2020-21	9,56,788.00	9,390.48	0.98
2021-22	11,33,837.00	11,575.04	1.02

Source: Data from website of Ministry of Statistics, programme and implementation and Appropriation accounts data

It could be seen from above that though there was increase in expenditure on health as a percentage of GSDP from 0.79 (2017-18) to 1.02 (2021-22), the State had not achieved even the initial target of 1.15 *per cent*, set in 2017 during any of the years 2017-22. Thus, achievement of normative target of 2.5 *per cent* by 2025 seems remote.

Reply from the Government is awaited.

6.3.3 Budget provision and expenditure on health sector

The expenditure on health against budget provision during 2017-22 was as detailed in **Table 6.3** below.

Table 6.3: Budget provision and expenditure on health

(₹ in crore)

Year	Budget provision	Expenditure	Savings	Percentage of savings
(1)	(2)	(3)	(4)	5 = (4)/(2) X 100
2017-18	7,020.63	6,195.09	825.54	11.76
2018-19	8,463.51	7,257.92	1,205.59	14.24
2019-20	11,399.23	7,429.01	3,970.22	34.83
2020-21	11,419.48	9,390.48	2,029.00	17.77
2021-22	13,830.44	11,575.04	2,255.40	16.31

Source: Budget estimates and Finance Accounts

It could be seen from the above that budget provision was not completely utilised in any of the years. In the year 2019-20, about one third of the amount appropriated was not utilised by the State. These savings indicate that either the budgetary allocations were unrealistic or there was poor expenditure monitoring mechanism or weak scheme implementation capacities/ weak internal control which led to sub-optimal allocation among various development needs.

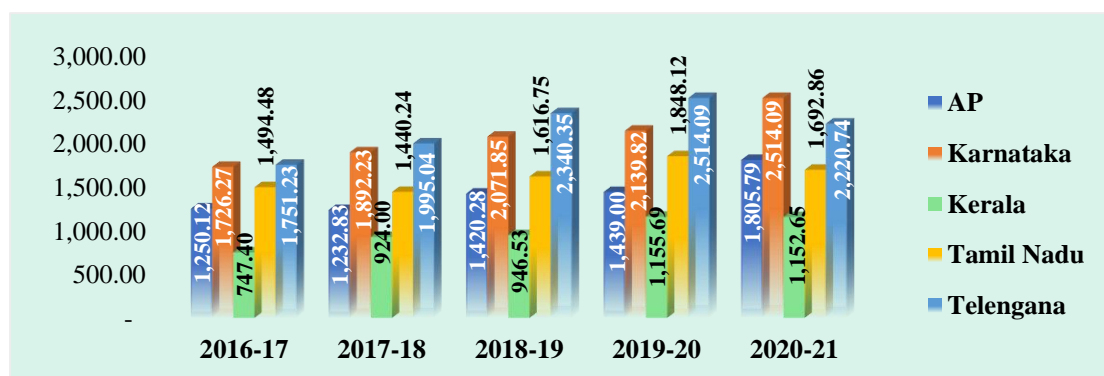
Reply from the Government is awaited.

6.3.4 Per capita health expenditure

The per capita health expenditure indicates total health expenditure per person. Government health expenditure has an important bearing on the health system, as low Government health expenditures depicts the Government's low priority over health sector.

The per capita spending by GoAP on health had increased from ₹1,250.12 in 2016-17 to ₹1,805.79 in 2020-21. However, the per capita expenditure was low when compared to three¹⁶¹ of four neighbouring states as depicted in **Chart 6.2** below.

Chart 6.2: Comparison of per capita health expenditure among southern states



Source: Key economic and fiscal indicators published by CAG of India (September 2022)

Reply from the Government is awaited.

¹⁶¹ Karnataka, Tamil Nadu and Telangana

6.4 Financial management under National Health Mission

The National Health Mission (NHM) encompasses two sub-missions, National Rural Health Mission¹⁶² (NRHM) and National Urban Health Mission¹⁶³ (NUHM). The NHM envisages the achievement of universal access to equitable, affordable & quality health care services that are accountable and responsive to people's needs.

State Health & Family Welfare Society, Andhra Pradesh is the nodal agency functioning under the administrative control of the Health Medical and Family Welfare Department, headed by the Mission Director, National Health Mission, for implementation of various health schemes in Andhra Pradesh.

6.4.1 Release of matching State share towards NHM

Under NHM, the planning and budgeting process is carried out by preparing State Project Implementation Plans (SPIPs/PIPs) which helps to identify and quantify the targets required for the programme implementation during the year. The PIPs prepared by States are sent to the National Program Coordination Committee (NPCC) under MoHFW¹⁶⁴, GoI for approval. After examination of PIPs and discussions by the NPCC with State officials, a document in the name of RoP (Record of Proceedings) is prepared. Suggestions made in NPCC meetings are recorded in the form of RoPs for budgetary approvals to support the activities proposed by the State for that financial year which serves as a reference document for programme implementation.

After approval, sanctions are issued to respective State Health Society (SHS) and funds are transferred to the State as committed in the RoP; correspondingly, the State should also deposit its 40 *per cent* share. As per NHM guidelines, upon receipt of funds from GoI, treasuries are meant to release funds to SHSs, who in turn shall release funds to the District Health Societies (DHS).

Audit observed that State Government had not released the GoI share of ₹2,128.56 crore out of total releases of ₹5,349.41 crore by GoI and ₹454.73 crore of State share for the Years 2017-22 to the implementing Units.

Government in its reply (August 2023) confirmed the GoI releases during the years 2017-18 to 2021-22 were ₹5,349.41 crore. The corresponding State share on the above amount was worked out to ₹3,566.27 crore. Further, it was stated that the short fall / gap as noticed by audit in GoI releases as ₹2,128.19 crore, is due to counting of GoI share without taking into account the Infrastructure Maintenance (IM) and Kind Grant (KG). In computing the short fall of GoI share, the actual cash grant received by SHS was only taken by audit, excluding IM and KG, which will not be credited to SHS but part of Resource Envelope. The GoI directly credits IM portion to the consolidated fund

¹⁶² The main programmatic components of the National Health Mission (NHM) include Reproductive, Maternal, Neonatal, Child and Adolescent Health (RMNCH+A), Communicable and Non-Communicable Diseases

¹⁶³ NUHM seeks to improve the health status of the urban population particularly the urban poor and other vulnerable sections by facilitating their access to quality primary health care. NUHM covers all the State capitals, district headquarters and other cities/towns with a population of 50,000 and above (as per census 2011)

¹⁶⁴ Ministry of Health & Family Welfare

of the State. Similarly, the KG amount would be received in the form of commodities and hence both of these are not reflected in SHS accounts.

Releases to SHS made by MoHFW and State Government under NHM for the period 2017-18 to 2021-22 as furnished by the Government is detailed in **Table 6.4** below:

Table 6.4: Releases by GoI and State Government

(₹ in crore)

S. No	Financial Year	GoI Releases to State	State Releases to SHS	Short fall in release of GoI Share by GoAP	GoAP Share to be released (40%)	GoAP Share released	Short fall in GoAP Share	Total Short fall
(1)	(2)	(3)	(4)	(5) = (3)-(4)	(6)	(7)	(8) = (6)-(7)	(9) = (5)+(8)
1	2017-18	762.44	575.11	187.33	484.54	282.06	202.48	389.81
2	2018-19	1,172.23	1,180.21	(-)7.98	746.09	608.31	137.78	129.80
3	2019-20	1,114.93	1,135.68	(-)20.75	743.28	916.99	(-)173.71	(-)194.46
4	2020-21	1,094.01	1,160.07	(-)66.06	729.34	842.42	(-)113.08	(-)179.14
5	2021-22	1,205.80	1,298.34	(-)92.54	803.86	506.40	297.46	204.92
	Total	5,349.41	5,349.41	0.00	3,507.11	3,156.18	350.93	350.93

Source: RoPs extracts and information furnished by SHS

Government had not provided the quantum of amounts received towards IM and KG grants in its reply. However, it is evident from the above that the State Government had not released the State share of ₹350.93 crore for the years 2017-22 to the Implementing Units. Short release of corresponding State share affected the implementation of programmes under NHM and thereby universal access to good quality healthcare services with a lower cost of healthcare delivery could not be ensured.

6.4.2 Expenditure under National Health Mission

The funds approved under RoP and expenditure during 2017-22 are shown in **Table 6.5** below.

Table 6.5: Statement showing expenditure against total approvals

(₹ in crore)

Year	Total resource envelope ¹⁶⁵	Expenditure	Closing Balance	Percentage of expenditure over resource envelope
(1)	(2)	(3)	(4) = (2)-(3)	(5)
2017-18	1,460.78	988.42	472.36	67.66
2018-19	1,548.11	1,131.38	416.73	73.08
2019-20	1,683.68	1,035.08	648.60	61.48
2020-21	1,832.72	1,586.01	246.41	86.55
2021-22	2,063.25	1,692.83	370.42	82.05
Total	8,588.54	6,433.72	2,154.52	74.91

Source: Extracts of RoPs approved by Government

Audit noticed that the funds released were not utilised to full extent during any of the years and only 75 per cent of the total resource envelope was utilised during 2017-22.

Reply from the Government is awaited.

¹⁶⁵ amount released as per ROP inclusive of previous year closing balances available with State Government

6.4.3 Pending advances and non-receipt of Utilisation Certificates

State Health Society (SHS) maintains an advance¹⁶⁶ register to monitor the settlement of advances extended to various institutions/implementing units. SHS shall watch the settlement of advances by the implementing units and obtain Utilisation Certificates for the amount utilised. However, SHS did not watch the adjustment of long pending advances.

The closing balance of institutional advances for the year 2020-21 was shown as ₹576.53 crore since 2013-14 *i.e.* from united Andhra Pradesh, where utilisation certificates for even old advances were also not obtained. Non-submission/delay in submission of UCs weakens the control on utilisation of funds and provides scope for mis-utilisation / misappropriation / diversion of funds.

Reply from the Government is awaited.

6.4.4 Untied grants to Sub Centres (SCs)

As per operational guidelines for financial management under NHM, timelines for release of funds from State Health Society (SHS) to District Health Society (DHS) should be within 15 days of receipt from GoI. However, the timelines were not followed in any of the years under review.

An amount of ₹20,000/- is to be released to the SCs functioning in government buildings. There are 10,032¹⁶⁷ SCs functioning in the State of which only 1,417 SCs have their own buildings. It was noticed from the release orders submitted by SHS/ NHM, that amounts were not released to these 1,417 SCs which functioned in government buildings during 2019-20 and 2021-22. Further, only ₹15 lakh was released during 2020-21.

An amount of ₹10,000/- is to be released to the SCs functioning in private buildings. During the year 2019-20, no fund was released to these sub centres located in rented buildings. Further, only ₹5,000 instead of ₹10,000 was released to sub centres functioning in rented buildings for the year 2020-21. The functional effectiveness of a SC in these conditions is doubtful. The physical status of Sub-centre buildings during test check is detailed in **Figures 6.1 and 6.2** below.

¹⁶⁶ advances given for POL, purchase of drugs & equipment *etc.*, to various implementing units

¹⁶⁷ As per information furnished by Department there are 10,032 SCs available as of October 2022. As per GoAP decision, every village/ward to have a Sub-Centre (SC), AP Govt. established 10,032 SCs. Prior to this there were 7,683 SCs.

Figure 6.1 and Figure 6.2



Figure 6.1: SC, Chennur Bit-1 of SPSR Nellore District functioning in rented building (July 2022)



Figure 6.2: SC Ganganapalli of Anantapur district functioning in a Village Sachivalayam (August 2022)

Government stated (August 2023) that ROP approval for the year 2021-22 was given for 6,313 SCs/ SHCs established and funds released. It was further stated that ₹20,000 was released to each of all the 10,032 SC HWCs for the financial year 2022-23. However, no specific reply relating to release of ₹5,000 to SCs functioning in rented buildings and release of untied funds for the year 2019-20 was furnished by the Government.

6.5 Recommendations

- *The State Government may enhance expenditure on healthcare services to the expected level of eight per cent of total State budget and to 2.5 per cent of GSDP in line with the Guidelines of National Health Policy 2017 to ensure that adequate and quality healthcare infrastructure and services are provided to the citizens.*
- *The State Government may ensure optimum utilisation of funds available under NHM.*

Chapter VII

Implementation of Centrally Sponsored Schemes

Chapter VII

Implementation of Centrally Sponsored Schemes

Implementation of Janani Suraksha Yojana (JSY), Pradhan Mantri Matru Vandana Yojana (PMMVY) and Birth Waiting Home (BWH) programmes were affected by inadequate and untimely release of funds by the State Government. As a result, intended benefits could not be provided to the needy in time, defeating the objectives of the programme. Though adequate funds were provided by the Government to screen tribal children for identification of Thalassemia and Sick cell anaemia, State Blood Cell failed to screen children and to provide adequate equipment and components for blood transfusion services. Shortages of manpower and low expenditure made the implementation of National Tuberculosis Elimination Programme (NTEP) deficient in the State and achievement of the NHP goal of eliminating TB by 2025 appears uncertain. Prevalence Rate of Grade 2 Disabilities (G2D) is more than two per cent against the target of one per cent. This indicates that the tracing, tracking, and reporting of the (G2D) disease in the community are not adequate. Regarding Malaria control Programme, Annual Blood Examination Rate (ABER) is not uniform in the State and is less than 10 per cent in two districts of Krishna and Chittoor. About 2201 habitations (five per cent) in the State are still in high-risk zone for Malaria parasite. Due to shortage of manpower, three departments became non-functional at newly constructed Super Speciality Hospital, Anantapur. This had a cascading effect of non-sanctioning of 16 new PG seats in GMC, Anantapur as part of Pradhan Mantri Swasthya Suraksha Yojana (PMSSY) programme.

7.1 National Health Mission

The National Health Mission (NHM) is a flagship programme of the Government of India. The programme aims in attainment of universal access to equitable, affordable, and quality healthcare services, accountable and responsive to people's needs, with effective inter-sectoral convergent action, to address the wider social determinants of health.

The key goals of NHM are enabling and achieving the stated vision, making the system responsive to the needs of citizens, building a broad-based inclusive partnership for realising national health goals, focusing on the survival and wellbeing of women and children, reducing the existing disease burden and ensuring financial protection for households.

While the healthcare infrastructure, management of health services, and Human Resource availability are discussed in the previous chapters, implementation of some programmes under NHM, were discussed in this Chapter.

7.2 Maternal and Child health

7.2.1 Reproductive and Child Health

Reproductive and Child Health (RCH) is an umbrella of programmes under National Health Mission (NHM). RCH targets reduction of maternal and infant mortality and total fertility rates. RCH programme aims to reduce social and geographical disparities in access to and utilisation of quality reproductive, maternal, newborn, child and adolescent health services. Some of the programmes under RCH are discussed below.

7.2.1.1 Janani Suraksha Yojana

Janani Suraksha Yojana (JSY) is a safe motherhood intervention programme under NRHM being implemented with the objective of reducing maternal and neo-natal mortality by promoting institutional delivery among the poor pregnant woman. Each beneficiary registered under this Yojana should have a Janani Suraksha Yojana (JSY) card along with a Mother – Child Protection MCP card. Accredited Social Health Activist (ASHA)/Anganwadi Worker (AWW)/ any other identified link worker under the overall supervision of the Auxiliary Nurse Mid-wife (ANM) and the MO, PHC should mandatorily prepare a micro-birth plan to monitor Antenatal check-up, and the post-delivery care. It is a direct cash benefit scheme¹⁶⁸ to pregnant woman at the time of delivery in Public HCFs. Numbers of institutional deliveries, non-institutional deliveries and JSY beneficiaries who received benefit are indicated in **Table 7.1**.

Table 7.1: Institutional & non-institutional Deliveries and JSY beneficiaries received payments

Year	Institutional Deliveries as per HMIS	Deliveries in Public Institutions	No. of pregnant women received JSY benefits (percentage)	No. of pregnant women who have not received JSY benefits (percentage)
2017-18	7,37,140	3,16,869	2,72,432 (85.98)	44,437 (14.02)
2018-19	7,42,638	3,22,083	2,72,912 (84.73)	49,171 (15.27)
2019-20	7,32,248	3,07,903	2,59,726 (84.35)	48,177 (15.65)
2020-21	7,09,456	2,90,078	2,82,264 (97.31)	7,814 (2.69)
2021-22	7,51,363	2,85,652	1,65,435 (57.91)	1,20,217 (42.09)
Total	36,72,845	15,22,585	12,52,769(82.28)	2,69,816 (17.72)

Source: Information furnished by CFW for the years 2017-21 and for the year 2021-22 from NHM- DBT mode

It can be seen from **Table 7.1** above that 2,69,816 pregnant women delivered in public HCFs but did not receive the benefit during 2017-18 to 2021-22. Department attributed this to issues such as to bank details uploading and non-tracing of the discharged women. Thus, it is clear that the condition, that the pregnant women should be

¹⁶⁸ For Rural woman at ₹1000/-, Urban woman at ₹600/- in Andhra Pradesh

registered and tracked during the period of pregnancy, was not adhered to in implementation of JSY.

Government replied (August 2023) that 2,69,816 Pregnant Women who were eligible under JSY were paid subsequently and none of the eligible pregnant women were denied the payment.

JSY is a direct cash benefit scheme to promote institutional delivery among the poor pregnant women. Thus, Government should provide adequate funds and timely disbursement of financial benefits to beneficiaries to increase institutional deliveries.

7.2.1.2 Birth Waiting Homes

Government of India introduced a scheme for Tribal area to construct 'Birth Waiting Homes' (BWHs) to enable women from distant and interior habitations to reach the delivery care institution at least seven days before the expected date of delivery (EDD) to prevent the complications of arrival in late labor. Giving birth at a health facility with skilled care can make the difference between life and death for both mother and child. BWHs help to ensure that both mothers and newborns receive the care they need during the first hours and days after birth.

The following were observed regarding establishment and maintenance of BWHs:

- GoI released the following funds under National Health Mission (NHM) towards maintenance of Birth Waiting Homes and provision of diet to the Pregnant Women (PW) and attendants during their stay at BWHs as indicated in **Table 7.2**.

Table 7.2: Statement of funds provided for maintenance of BWHs

(₹ in lakhs)						
Year	No. of BWHs approved in RoP	Available	RoP approvals	Funds released to ITDA	Expenditure	Per cent of utilisation
2019-20	31	30	24.80	24.50	8.88	36.24
2020-21	41	32	2,60.71	2,22.03	24.11	10.86
2021-22	41	35	2,83.88	2,19.81	29.80	13.56
Total			5,69.39	4,66.34	62.79	13.46

(Source: Information furnished by CFW)

Thus, out of ₹4.66 crore released over three years from 2019-20 to 2021-22, only an amount of ₹0.63 crore (13.46 per cent) was utilised by Integrated Tribal Development Agencies (ITDAs) towards establishment and functioning of BWHs while an amount of ₹4.03 crore was kept unspent.

- Establishment of ten new BWHs¹⁶⁹ was approved¹⁷⁰ by GoI for Andhra Pradesh. The funds were also received from GoI and the same were released to ITDAs. However, only five new BWHs were established in 2020-21 and 2021-22.

¹⁶⁹ Maredumilli, Araku, Pedabayalu, G.K.Veedhi, Gurthedu, Dumbriguda, Munchingiputtu, Bhadravari, Parvathipuram and Darakonda

¹⁷⁰ ROP 2020-22

Government replied (August 2023) that construction of nine BWHs was completed and were functional. It was further stated that BWH at PHC Darakonda, was in finishing stages and would be completed by August 2023. Efforts should be made to put them for utilisation by providing infrastructure, equipment and staff with adequate fund releases.

- In the test checked HCFs, 58.25 per cent of funds were not released by ITDAs towards Birth Waiting Homes (BWHs) during 2020-21 and 2021-22 as given in **Table 7.3**.

Table 7.3: Allocation and release of funds to the test checked hospitals towards BWHs

(₹ in lakhs)				
Name of the Hospital / location of the BWH	No. of deliveries in the previous year	Funds receivable by BWH	Funds received	Short fall
2020-21				
AH Seethampet	709	14.52	2.40	12.12
DH Parvathipuram	1440	29.47	0	29.47
DH Paderu	39	1.39	0.81	0.58
2021-22				
AH Seethampet	744	16.25	2.34	13.91
DH Parvathipuram	957	20.72	29.40	(8.68)
DH Paderu	206	4.95	1.50	3.45
Total		87.30	36.45	50.85

Source: Hospital records

No amounts were released to the three-test checked HCFs during 2017-18 to 2019-20 by the respective ITDAs.

State Project Monitoring Unit (SPMU) stated that four¹⁷¹ BWHs in Srikakulam District were not operational due to dilapidated condition of the buildings and three BWHs in Visakhapatnam District for other reasons such as proximity to Mortuary (Paderu), DH and used as Pregnant women Hostel in Araku valley AH and Chinthapalli CHC.

In AH Seethampeta, BWHs were in dilapidated condition and housed 108 ambulance call centre personnel. This was confirmed during Audit as it was one of the test-checked AHs.



Figure 7.1: BWH at Seethampeta in Dilapidated condition (June 2022)

- At AH, Seethampeta, we observed that the Hospital had received a meagre amount of ₹2.40 lakh and ₹2.34 lakh against ₹14.52 lakh and ₹16.25 lakh received by Mission Director, National Health Mission (NHM) during the years 2020-21 and 2021-22 respectively. The Medical Superintendent, Seethampeta AH replied

¹⁷¹ Pathapatnam, Kothuru CHC, Seethampet AH and Palakonda

that no amounts were received towards payment of wages to Aaya for cleaning. Further, records of BWHs were not maintained during the period from 2020-21 and 2021-22.

- BWH at DH Paderu was established in the year 2011 with four rooms. However, funds were not released to DH Paderu during 2017-18 to 2020-21 for maintenance.
- DH, Parvathipuram replied that an amount of ₹29.47 lakh was received from ITDA Parvathipuram on 10 January 2022. However, the entire amount was remitted back to ITDA on 21 April 2023 stating that free diet and medicines were being provided from JSSK funds¹⁷².

The reply was not acceptable, as the BWH programme was envisaged to provide food, milk and safe drinking water at ₹300/- per pregnant woman (PW) per day for seven days along with the patient's attendant prior to delivery. Further, an amount of ₹5,200/- per month would be paid towards maintenance of BWHs for providing Aaya, who is assisting the PW in the BWHs and for cleaning the toilets, warming of milk, purchase of brooms and detergents, *etc.* This indicates that the objectives of both the programmes BWHs and JSSK were not properly conveyed by the Department to the HCFs.

Further, Performance Reports and Functionality Reports of BWHs should be obtained by the State Nodal Agency (SNA). However, the State Nodal agency did not monitor the same. SHS did not furnish to audit, the details of Utilisation Certificates, financial reports on the diet, wage compensations paid to the Pregnant Women *etc.*

Government accepted (August 2023) the audit observation and added that they had issued instructions to all ITDAs for timely release and utilisation of funds and promised future compliance.

7.2.1.3 Pradhan Mantri Matru Vandana Yojana

Under PMMVY, a cash incentive of ₹5,000/- would be provided directly to the account of Pregnant Women and Lactating Mothers (PW&LM) for first living child of the family (FLCF) who were deprived of the benefit of wage compensation. During the years 2017-18 to 2021-22, out of 18,19,641 PW and LM (FLCF), only 8,61,382 received the full benefit.

Budget releases from GoI (60 *per cent*) and respective State share (40 *per cent*) during the years from 2017-18 to 2021-22 are given in **Table 7.4**.

¹⁷² Under, JSSK only ₹100/- would be provided for diet per day for each delivered woman, for a maximum stay of seven days in case it is a C-section delivery

Table 7.4: Year wise releases by GoI and GoAP towards PMMVY*(₹ in crore)*

Year	Total No of First Pregnant Women	GoI Share received	Release of funds GoI & GoAP								Total GoAP Share received
			1 st quarter		2 nd quarter		3 rd quarter		4 th quarter		
			GoI	GoAP	GoI	GoAP	GoI	GoAP	GoI	GoAP	
2017-18	3,19,705	65.21	43.47	28.98	21.74	14.45	-	-	-	-	43.43
2018-19	3,88,523	135.00	33.75	22.50	33.75	22.50	33.75	22.50	33.75	22.50	90.00
2019-20	3,46,932	101.25	33.75	Nil	33.75	Nil	33.75	Nil	Nil	Nil	0.00
2020-21	3,70,693	14.39	14.39	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.00
2021-22	3,93,288	14.39	14.39	Nil	Nil	Nil	Nil	Nil	Nil	70.66	70.66

* State share of 40 per cent (₹70.66 crore) was released in lumpsum belatedly in March 2022.

Source: Information furnished by the Commissioner Health and Family Welfare

As per the Rules governing the Grants-in-Aid, the matching State share must be released within 21 days from the date of release of Central share. However, State share was not released since 2019-20 to match Central share.

The Commissioner, Family Welfare accepted the delay (October 2022) and stated that there was no matching State share pending to be released against the Central share release.

In the year 2019-20, GoI released its share of ₹101.25 crore for first three quarters (at ₹33.75 crore per quarter). Since the State share was not released simultaneously the release of Central share was stopped for the fourth quarter and nominal releases were made in the subsequent two years.

The objective of the PMMVY is to give partial compensation to PW and LM who were working and had to experience a wage-loss due to the pregnancy. State had lost the opportunity to compensate the pregnant woman due to non-release of state matching share.

Low birth weight has been defined by WHO as weight at birth of less than 2.5 kgs. Low birth weight is included as a primary outcome indicator in the core set of indicators for the Global Nutrition Monitoring Framework. As per WHO, the proportion of infants with low birth weight is an indicator of a multifaceted public health problem that includes long-term maternal malnutrition, ill-health, and poor health care in pregnancy. Low birth weight is caused by intrauterine growth restriction, prematurity, or both. It is closely associated with fetal and neonatal mortality and morbidity.

Out of 36,73,012 institutional deliveries¹⁷³ recorded in the State during 2017-22, only 36,32,213 new-born babies were weighed. Among the weighed, 1,86,420 new-born babies (5.13 per cent) were born with low birth weight *i.e.*, below 2.5 kgs.

An undernourished mother almost inevitably gives birth to a low birth weight baby. To avoid poor nutrition Governments are providing support for nutritious food to the pregnant mothers through PMMVY, JSY, *etc.* However, the delivery mechanism in the State, in implementation of these schemes, was not effective.

¹⁷³ Total no. of deliveries recorded - 36,91,605

Government accepted (August 2023) the audit observation and stated that the pending State share amount of ₹70 crore was released at the end of March 2022 and all pending beneficiaries were paid.

Though payments were made, the reply is not acceptable as belated payments would have deprived the pregnant women and lactating mothers of receiving the benefit of wage compensation, when the need for rest and nutrition was most required.

7.2.2 Rashtriya Bal Swasthya Karyakram

Rashtriya Bal Swasthya Karyakram (RBSK), a GoI initiative, is a referral mechanism of government approved surveillance programme committed to improve health outcomes through early identification management of Defects at birth, Diseases in Children, Deficiency conditions and Developmental Delays including Disabilities (known as 4Ds). The programme was intended to recruit and train Mobile Health Teams (MHTs) to screen and identify children specifically suffering from the selected health conditions. Children identified with these defects are required to be referred to the District Early Intervention Centres (DEICs) for treatment.

7.2.2.1 Implementation of RBSK in the State

NHM, sanctioned an amount of ₹13.50 crore for constituting 450 mobile teams under RBSK. However, GoAP did not initiate the activities in the year of approval. Mobile Teams were constituted in June 2018 and engaged till March 2020, though agreement with the firm¹⁷⁴ was made from 07 April 2018 to 06 April 2023.

- We observed that 1.08 crore children were screened by MHTs, defects were identified among 1.49 lakh children and only 92,000 children were treated leaving 56,600 children untreated from June 2018 to October 2019.

Government accepted (August 2023) the audit observation of non-operation of MHTs and stated that at present under Family Physician Concept, the PHC Medical Officers were visiting the villages in Dial-104 vehicles and conducting screening once in 15 days in the afternoon at AWCs and Schools, and identifying sick children and referring to District Early Intervention Centre (DEIC).

- Further, we observed that data relating to child mortality or data of birth defects among neonates or children under Five years was not maintained either at State level or at district level.

Government accepted (August 2023) the audit observation and stated that at present the children were being screened for 20 birth defect conditions at all delivery points (HCFs) and referred to nearest DEIC for treatment and follow-up after entering the details in MSS (Matru Sisu Samrakhshana) Portal. However, we observed that the MSS portal had been operational since August 2023 for newborn screening only and the portal had not made provision to capture old/ follow-up cases.

¹⁷⁴ M/s Dhanush Infotech Pvt. Ltd., in consortium with Thrill Health and Wellness Pvt. Ltd.

7.2.2.2 Implementation of RBSK in test checked districts

During the year 2019-20, funds amounting to ₹20.45 lakh and ₹16.22 lakh were released to District Health Societies, Anantapur and SPSR Nellore Districts respectively towards arrangement of transportation facility to the children from their concerned PHCs to DEICs. However, we observed that the amounts were not utilised till July 2022.

- DEIC, Anantapur stated that children were not visiting the rehabilitation centres due to financial constraints or lack of motivation and some children did not turn up due to frequent sickness.

The Department attributed non-utilisation of funds to proliferation of COVID-19 pandemic.

- In DEIC, Atmakur, SPSR Nellore district, we observed that 304 children with Congenital deafness were identified, and 55 children required Cochlear implant surgery during the years 2017-22. However, only 12 children were provided with Cochlear implant and 43 children were waiting for treatment.

Government accepted (August 2023) the audit observation and stated that 36 children were provided with Cochlear implants and promised future compliance.

7.2.3 Haemoglobinopathy

Haemoglobinopathy is a group of inherited disorders involving abnormal production or structure of the haemoglobin molecule which include haemoglobin C disease, haemoglobin S-C disease, Sickle Cell anaemia, and Thalassemia.

To improve the prognosis for patients affected with such disorders, and to reduce the number of children affected with Thalassemia Major and Sickle Cell disease, State Blood Cell (SBC) was established (March 2016) in Andhra Pradesh under the administrative control of Commissioner of Health and Family Welfare.

7.2.3.1 Haemoglobinopathy screening

Haemoglobinopathy screening is based on estimation of Haemoglobin (Hb) by digital Haemoglobinometer and NESTROFT¹⁷⁵ as the primary screening test, followed by CBC¹⁷⁶ and HPLC¹⁷⁷ tests for the screen positive cases. GoI envisaged to screen about two lakh Tribal children for identification of blood diseases viz. Thalassemia, Sickle cell and other 12 mutations to reduce infant mortality rate and released funds amounting to ₹6.25 crore during 2018-19. However, screenings were not undertaken for the review period.

State Blood Cell, in their reply (January 2023) stated that budget was released in 2018-19 and 2019-20 for screening of tribal children and procurement of drugs for blood disorders which was not utilised at that time. The unspent budget was released for the procurement of Blood Storage Unit (BSU) equipment, establishment of day care

¹⁷⁵ NESTROFT test is Naked Eye Single Tube Red Cell Osmotic Fragility test

¹⁷⁶ Complete Blood Count

¹⁷⁷ High-performance liquid chromatography

centres in four ITDAs and maintenance of ten District Early Intervention Centres (DEICs) in the State. It was further stated that 2,036 children were screened between June 2022 and November 2022 in Tribal areas by the Tribal Welfare Department. Thus, despite release of ₹6.25 crore by GoI, and after a lapse of three years, only one *per cent* of tribal children targeted were screened.

Thus, even though funds were provided, State Blood Cell screened only one *per cent* of the targeted tribal families and children. This may increase the risk of disorders such as haemoglobin C disease, haemoglobin S-C disease, Sickle Cell anaemia, Thalassemia and other mutations.

7.2.3.2 Non collection of epidemiological data

Family and population screening is a holistic and cost-effective approach to have a registry for epidemiological data. High-quality epidemiological data is required for high-quality public health planning and policy making to provide life-long treatment to people with Thalassemia, Sickle Cell Anaemia and Haemophilia to prevent serious complications and premature deaths. SBC provided the following data relating to disease surveillance¹⁷⁸ collected from district units as given in **Table 7.5**.

Table 7.5: No. of patients identified with Thalassemia, Sickle Cell Anaemia and Haemophilia during the years 2020-23

S. No.	District	2020-21			2021-22			2022-23		
		No. of Thalassemia patients	No. of Sickle Cell Anaemia patient	No. of Haemophilic patients	No. of Thalassemia patients	No. of Sickle Cell Anaemia patients	No. of Haemophilic patients	No. of Thalassemia patients	No. of Sickle Cell Anaemia patients	No. of Haemophilic patients
1	Srikakulam	119	265	46	119	265	48	153	Data not available	47
2	Vizianagaram	32	182	24	Data not available			56		49
3	Visakhapatnam	260	283	0	292	465	206	295		160
4	East Godavari	236	53	117	468	124	422	252		217
5	West Godavari	224	54	213	Data not available			208		233
6	Krishna	106	0	0	106	0	185	99		185
7	Guntur	148	1	0	165	1	236	256		246
8	Prakasam	39	0	0	39	0	115	64		110
9	SPSR Nellore	49	0	8	51	0	36	78		46
10	YSR	89	0	143	74	0	147	115		150
11	Anantapur	147	9	0	147	9	98	191		100
12	Chittoor	52	0	2	52	0	38	66		46
13	Kurnool	200	0	1	207	0	91	296		100
Total		1,701	847	554	1,720	864	1,622	2,129	NA	1,689

(Source: Information furnished by the department)

As noticed from the above, the number of cases increased year after year. Srikakulam, Vizianagaram, Visakhapatnam, East Godavari, West Godavari, Anantapur and Kurnool had high rate of Thalassemia incidence in Andhra Pradesh. The Department did not provide the data on Sickle Cell Anaemia for the year 2022-23. Further, data relating to

¹⁷⁸ Surveillance is an ongoing and systematic collection, analysis, interpretation, and dissemination of data about cases of a disease and is used as a basis for planning, implementing, and evaluating disease prevention and control activities.

Vizianagaram and West Godavari districts for the year 2021-22 was also not available indicating that epidemiological data collection was improper.

7.2.3.3 Absence of standard operating procedures in blood transfusion services

As anaemia is the predominant symptom in Thalassemia, the major treatment consists of regular transfusions of RBCs throughout life ranging from transfusions every two to four weeks to once every two to three months depending upon the severity of the disease. Blood transfusion corrects anaemia and promotes normal growth. To ensure safety and quality of blood components, leuko-depleted filters are used to prevent alloimmunisation¹⁷⁹. Thus, each thalassemia patient requires a minimum of four to 24 leuko-depletion filters in a year.

As per thalassemia patient load of 1,720 for the year 2021-22, as part of preparedness activity, SBC should have procured about 41,280 leuko-depletion filters during 2022-23. However, only 5,000 filters were supplied (June 2022) by APMSIDC against an indent of 31,008. SBC accepted (January 2023) that only one transfusion per month per patient was calculated for 2,584 patients while indenting. Further, it was also stated that ‘there was no negligence to the effected patients’, and the remaining units were finalised for procurement in the Bid finalisation committee.

The reply is not tenable since Leuko-filters for Thalassemia patients were required at two transfusions every month for twelve months for each patient and accordingly they should have been indented and procured for the safety of the patients.

During test check of District Hospital, Hindupur, we observed that blood component separation facility was not available with the Blood Bank and leuko-filters were not used in transfusion. Department replied that indent was placed with DCHS, Anantapur for supply of equipment and leuko-filters were not used in the blood bank due to non-availability.

Thus, SBC failed to screen the tribal families and children in particular as envisaged, even if funds are provided. SBC did not formulate SOP for safe transfusion services and provide required equipment such as Leuko-filters and component separation machine to check and control blood disorder diseases.

Reply from the Government is awaited.

7.3 National Tuberculosis Elimination Programme (NTEP)

India has the highest estimated burden of Tuberculosis Infection (TBI) globally, with nearly 35-40 crores of Indian population having TBI, of which 26 lakhs people (18-36 lakh)¹⁸⁰ were estimated to develop tuberculosis (TB) disease annually. Although early diagnosis and treatment of active TB remains a top priority in India, preventing TB by finding and treating TBI and active case finding (ACF) amongst high-risk groups (HRGs) are extremely important steps towards ending TB.

¹⁷⁹ development of alloantibody against the foreign red blood cell

¹⁸⁰ Sourced from Guidelines for Programmatic Management of TB preventive treatment in India by MoHFW

1. Releases would be made by the State Project Monitoring Unit at NHM to the implementing units and the implementing units should furnish the UCs for the amount utilised. Allocation of funds by NHM and expenditure made as per Financial Management Report (FMR) are shown in **Table 7.6**.

Table 7.6: Funds allocation and expenditure on NTEP during 2012-22

(₹ in crore)

Year	Opening balance	Allocation as per RoP #	Total Expenditure as per FMRs	Closing Balance
2017-18	6.68	45.64	26.44	25.87
2018-19	25.87	85.94	53.53	58.28
2019-20	58.28	67.55	71.75	54.07
2020-21	54.07	67.90	61.44	60.52
2021-22	60.52	89.37	75.64	74.25

RoP – Record of Proceedings

Source: Financial Management Report (FMR), Opening Balance furnished by the DPHFW

It can be observed from the above that available resources were not fully utilised in any year. DPHFW replied (December 2022) that released resources were efficiently utilised. Since the details of funds released by State Project Monitoring Unit (SPMU) were not furnished, Audit could not ascertain the efficient utilisation thereto.

Reply from the Government is awaited.

2. On scrutiny of records (October 2022), Audit noticed shortage in the availability of human resources for implementation of the programme in the State. The post of lab technician (LT) is crucial in examination of sputum and confirmation of the case. The State Program Officer (TB) confirmed that 43 posts (18.07 *per cent*) in the State were vacant. Vacancies in the cadres of Senior Treatment Supervisor (STS) and Senior TB Laboratory Supervisor (STLS) were 7.95 and 14.39 *per cent* respectively. Overall, 107 posts out of 884 sanctioned (12.10 *per cent*) posts were vacant in all the 13 cadres. Vacancy in crucial posts hampers effective implementation of the programme.

Government accepted (August 2023) the audit observation and stated that, out of 884 sanctioned posts, 86 posts (10 *per cent*) were now vacant and the recruitment was a continuous process.

3. **Case notifications:** According to the United Nations SDG 3.3, all nations have set the goal of eradicating TB by the year 2030. Government of India has set the target of eradicating TB by the year 2025 by launching Jan Andolan, a people's movement. The number of TB cases (new and relapse) notified to the health authorities during a specified period of time per 1,00,000 population is the case notification rate. Number of patients notified along with type of notification and case notification rate for the four year period is indicated in **Table 7.7**.

Table 7.7: Statement showing TB case notifications and type during the years

Year	Patients notified			Type of cases			Case notification rate		
	Public	Private	Total	New	Previously tested	PMDT [#]	Public	Private	Total
2019	76,486	22,383	98,869	85,006	10,519	3,344	149.0	2.0	151.0
2020	46,901	17,164	64,065	54,646	7,497	1,922	89.0	33.0	122.0
2021	62,100	24,732	86,832	74,857	9,403	2,572	117.0	47.0	164.0
2022	62,075	30,112	92,187	81,132	8,769	2,286	117.4	56.9	174.3

programmatic management of drug-resistant TB

Source: India TB report for the years

Thus, case notification rate increased from 151 in 2019 to 174 by October 2022.

Government replied (August 2023) that the strategy adopted was to detect more number of cases in the initial years and treat all the cases successfully so that the transmission can be curtailed and new TB cases would be reduced over a period of time.

4. **Patients with co-infections:** People living with HIV are prone to tuberculosis (TB). This is because of weak immune system, which makes it harder for the body to fight with TB germs. Cotrimoxazole Preventive Therapy (CPT) and Anti-Retroviral Treatment (ART) are known to reduce mortality in HIV-positive TB patients. WHO's 2012 update strongly recommended 100 *per cent* uptake of CPT and ART in HIV-infected TB patients, both to be started as soon as possible after the initiation of anti-tuberculosis treatment. Patients with both the infections are detailed in **Table 7.8**.

Table 7.8: Details of Patients with TB & HIV infections

Year	TB patients with known HIV status		TB & HIV co-infected patients			Paediatric TB patients		
	Public	Private	Diagnosed	Put on ART	Put on CPT	Notified	With known HIV status	HIV positive among tested
2017-18	57,872	1,440	2,632	686	664	909	829	32
2018-19	61,679	14,708	4,430	2,152	1,609	2,016	1,788	35
2019-20	73,644	21,967	6,734	6,109	5,831	2,227	2,091	28
2020-21	46,497	17,052	3,488	3,180	3,146	2,227	1,277	9
2021-22	61,981	24,204	4,870	4,772	4,723	1,141	1,126	17
Total	3,01,673	79,371	22,154	16,899	15,973	8,520	7,111	121

Source: Information furnished by DPHW

Thus, it was clear that all the HIV-infected TB patients were not put on CPT and ART together. Department replied (December 2022) that Andhra Pradesh had achieved 98 to 99 *per cent* CPT and ART during 2019-22.

Government stated (August 2023) that the success rate for TB-HIV was 95.6 *per cent* as per India TB report 2023.

The reply is not acceptable as death rate for TB-HIV co-infected cases in 2021 is 1.4 *per cent* (23 co-infected patients' death was reported as per TB report 2023 for the year 2021). Mortality can be minimised if all the TB-HIV co-infected patients were put on CPT and ART.

5. TB is a disease which can be overcome completely only when communities are mobilised and supported in a holistic manner. Complete surveillance is an important

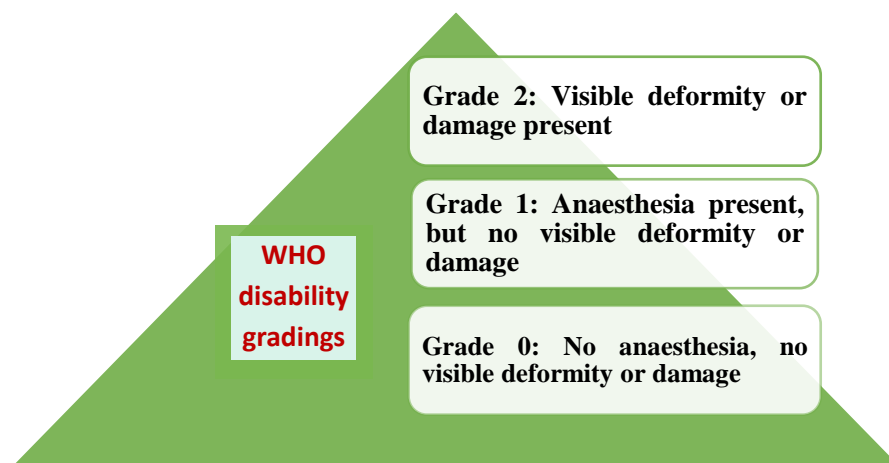
public health function in prevention and control of disease. Though there was a decline in number of TB detections from 2019-20 (175 per lakh population) to 2020-21 (121 per lakh population), the year 2021-22 marked a rise in rate *i.e.*, 164 cases per lakh population. This is an alarming sign in the State as the SDG 3.3 goal for 2030 is to record zero notification of TB cases per one lakh population in a year.

Government replied (August 2023) that to eliminate TB, the strategy was to detect more number of cases in the initial years and treat all the cases successfully, so that the transmission can be curtailed, and new TB cases will be reduced over a period of time. In the year 2021, the TB notification rate was 164 per lakh population and in the year 2022, it was 174 per lakh population which was higher than India's average by doing higher number of TB testing compared with earlier years, 1,419 per lakh population in the year 2021 and 1,524 per lakh population in the year 2022, which was more than India's average of 1,281 per lakh population.

NTEP programme implementation in the State was hampered due to shortage of manpower, non-utilisation of funds and high case notification, which is an alarming sign as the SDG 3.3 goal for 2030 is to record zero notification of TB cases per one lakh population in a year.

7.4 National Leprosy Eradication Programme

Leprosy is curable and treatment in the early stages can prevent disability. National Leprosy Eradication Programme (NLEP) is a Centrally Sponsored Scheme under the umbrella of National Health Mission (NHM). The primary goal of the Programme is to detect cases of leprosy at an early stage and provide complete, free of cost treatment to prevent occurrence of disabilities in affected persons and to stop the transmission to community level. This programme also aims to spread awareness about the disease and reduce stigma attached with the disease.



Leprosy is curable with a combination of drugs known as Multi Drug Therapy (MDT). Based on skin lesions or nerve involvement, cases are classified into

two types for treatment purposes, viz., Paucibacillary¹⁸¹ (PB) and Multibacillary¹⁸² (MB) case. Year wise details of new cases detected, Annual New Case Detection Rate (ANCDR), Prevalence Rate (PR) and proportion of Multibacillary (MB) cases among new cases during 2017-18 to 2021-22 are detailed in **Table 7.9**.

Table 7.9: Details of New Leprosy Cases

Year	No. of New Cases identified	No. of New Cases under MDT	ANCDR per 1,00,000 population	Prevalence Rate per 10,000 population	Proportion of child cases among new cases	Proportion of MB cases among new cases	Proportion of female cases among new cases	Gr-2 disability among new cases in per cent	Gr-1 disability among new cases in per cent
2017-18	4,695	3,561	8.98	0.62	9.88	47.45	40.81	228/4.9*	135/2.9
2018-19	5,294	3,590	10.12	0.73	8.10	48.24	45.13	195/3.6	115/2.1
2019-20	4,685	3,082	8.81	0.64	7.51	48.50	43.56	131/2.8	76/1.6
2020-21	1,811	1,417	3.31	0.35	7.79	52.35	40.42	48/2.7	76/4.2
2021-22	1,888	1,589	3.44	0.36	5.46	62.66	42.06	35/1.9	96/5.1

Source: furnished by DPHW

*among 228 new cases 4.9 per cent (11 cases) are suffering with Grade 2 disability

We observed that;

1. 4,323 new cases¹⁸³ were detected in the year 2013-14 with Annual New Case Detection Rate (ANCDR) of 8.13¹⁸⁴. Six years later in 2019-20¹⁸⁵, new cases reported were 4,685 with ANCDR of 8.81. Thus, there was an increase in number of new cases and ANCDR which is a warning sign.

Government replied (August 2023) that Leprosy Case Detection Campaign (LCDC) was conducted in 10 Districts in 2019-20, and therefore active case detection increased. Further it was stated that during 2020-22 case detection campaigns were not conducted due to COVID and in 2022-23 ANCDR was raised due to new case detection campaign.

Increase in new cases due to increase in LCDC is a sign of increase in disease surveillance. However, increase in detection of new cases is not a desirable trend.

2. Proportion of Multibacillary (MB) cases among new cases increased from 47.45 per cent in 2017-18 to 62.66 per cent in 2021-22. This indicates increased intensity of Leprosy in Andhra Pradesh.

Department replied (July 2023) that due to the COVID Pandemic active case detection rate was decreased, so that the MB cases were increased. But in 2022-23 the MB case rate is 58.25 and PB case rate is 42.75. This shows a decreasing trend of MB cases which indicates early detection of leprosy.

3. Case prevalence rate less than one per 10,000 population is the target for elimination of Leprosy as a public health problem. However, the case prevalence rate in Srikakulam (2017-18 and 2018-19) and Vizianagaram (2017-18 and 2019-20) was

¹⁸¹ with one to five skin lesions without demonstrated presence of bacilli in a skin smear

¹⁸² with more than five skin lesions; or with nerve involvement

¹⁸³ Calculated at ANCDR of 8.13 on census data of AP. 7,108 new cases with ANCDR of 8.13 in united AP

¹⁸⁴ NHM Annual Report 2014-15 (page 120)

¹⁸⁵ 2020-22 figures are not considered as screenings were not done due to COVID pandemic

greater than one. Thus, the goals set for elimination of Leprosy were not achieved in these districts.

Government accepted (August 2023) the audit observation and stated that for early case detection special programmes like Sparsh awareness programme and detection of cases in Hard-to-reach areas, ASHA based surveillance for leprosy suspects (ABSULS) were taken up in AP. The NGOs in Chillakalapalli, Pogiri and Saluru were actively involved.

4. Grade of disability is a key epidemiological and operational indicator, where Grade-II Disability (G2D) is considered as an indicator for delayed diagnosis and a hidden endemic. Early diagnosis and prompt treatment reduce the prevalence of the disease, prevent disabilities, help reduce transmission and help monitor the spread and burden of disease. Active follow-up after treatment completion is also desirable. The objective of NLEP programme is to reduce G2D percentage to less than one among new cases at National level. **Table 7.10** gives the district wise disability percentages to indicate G2D status:

Table 7.10: Statement showing district wise disability percentages to indicate G2D status

S.No.	Name of the District	2017-18	2018-19	2019-20	2020-21	2021-22
1	Srikakulam	5.6	4.8	3.3	3.6	NA
2	Visakhapatnam	3.2	3.7	NA	NA	NA
3	West Godavari	2.8	NA	NA	NA	NA
4	Krishna	10.2	NA	2.2	3.1	4.3
5	Guntur	2.1	4.3	5.1	4.9	3.9
6	Prakasam	10.6	5.8	3.2	NA	NA
2	SPSR Nellore	4.0	3.6	NA	NA	2.0
8	Chittoor	5.3	4.3	3.7	4.6	5.8
9	YSR	7.3	4.5	5.7	2.2	2.2
10	Anantapur	7.5	3.9	NA	NA	NA
11	Kurnool	5.4	5.5	5.2	8.1	2.1

Source: Information furnished by DPHFW

Government replied (August 2023) that Grade 2 deformity was in decreasing trend since 2019-20 and early detection of cases would decrease G2D deformity and promised compliance.

Since the target is to reduce G2D percentage to less than one, more than two *per cent* of G2D Prevalence Rate indicates that the tracing, tracking, and reporting of the disease in the community is not adequate.

5. Relapse is occurrence of new signs and symptoms of the disease during the period of surveillance or thereafter in a patient who successfully completes an adequate course of MDT. As per the NLEP monthly reports, suspected relapse cases and confirmed cases by DHs were detailed in **Table 7.11**.

Table 7.11: Statement of suspected relapse and confirmed cases

Year	No. of relapse cases suspected by PHC	No. of relapse cases confirmed at DH	Percentage of confirmation cases	No. of cases developed with new disability after MDT
2017-18	40 (39) *	37 (36)	92.5	6 (6)

Year	No. of relapse cases suspected by PHC	No. of relapse cases confirmed at DH	Percentage of confirmation cases	No. of cases developed with new disability after MDT
2018-19	12 (12)	14 (14)	116.7	0 (0)
2019-20	18 (18)	20 (20)	111.1	1 (1)
2020-21	9 (9)	8 (7)	88.9	4 (4)
2021-22	12 (12)	6 (6)	50.0	1 (1)
Total	91 (90)	85 (83)	93.4	12 (12)

Source: Information furnished by the department

**Figures in brackets indicate MB cases among cases identified*

From the above table it can be understood that proportion of relapse cases are more among Multibacillary (MB) cases. MB cases in the community were in increasing trend. Department should expand active case detection in targeted population to detect the severity of the spread.

Government replied (August 2023) that relapse cases depend on the immunity of the effected person. Due to COVID the detection was low and hence MB cases increased accordingly and relapse cases also increased. However, at present the MB cases have decreased, and relapse cases also decreased.

WHO estimated risk of relapse after nine years of stopping MDT is 0.77 *per cent* for MB and 1.07 *per cent* for PB patients. Hence, increase in detection of MB/ PB/ relapse cases is a matter of concern.

Early detection of relapsed cases and subjecting them to medical treatment would prevent community transmission of leprosy bacilli.

Sanctioned posts and Persons in Position in 13 districts of AP of the Leprosy Wing of the Health Department is shown in **Table 7.12**.

Table 7.12: Post wise Human Resource position

S.No.	Name of the Post	Sanctioned posts	Men-in-Position	Vacancy	Vacancy Percentage
1	Addl. Dist. Medl & Health	13	11	2	15.38
2	Health Education Office/	28	11	17	60.71
3	Para Medical Officer	13	8	5	38.46
4	Dy. Para Medical	366	192	174	47.54
5	Statistical Officer/Dy.S.O.	13	8	5	38.46
6	Dist. Nucleus Medl.	13	10	3	23.08
7	Lab-Technician	13	9	4	30.77
8	Pharmacist	1	0	1	100.00
9	Physiotherapist	13	7	6	46.15
10	Office Superintendent	5	4	1	20.00
11	Accountant/Sr.Asst/Jr.Asst.	30	26	4	13.33
12	Typist	12	6	6	50.00
13	Office Subordinates	26	16	10	38.46
14	Driver	26	11	15	57.69
15	Sweeper/Night Watchman	26	15	11	42.31
16	Nursing Orderly Male	2	1	1	50.00
Total		600	335	265	44.17

Source: Information furnished by the Department

As observed from the above table, 44.17 *per cent* of posts were vacant in the Leprosy wing. Posts dealing with Health Education, Paramedical, Statistical and Physiotherapy

services which are essential for dealing with disease prevalence, accountability, treatment and in promoting behavioural changes in the community, were vacant. Thus, detection, surveillance and health education activities were partial in the State.

Government replied (August 2023) that NLEP program was converted to horizontal programme¹⁸⁶ and DPMO/ APMO posts were not filled after their retirement. To fill the gap and to work for leprosy, a nodal person was nominated from paramedical staff in every PHC. It was further replied that passive case detection was strengthened by involving Dermatologists of Government and Private hospitals and Post exposure prophylaxis SDR¹⁸⁷ was administered to contacts of new cases to reduce the transmission.

Increase in new cases and increase in MB cases, prevalence of G2D rate more than two, occurrence of relapse cases and deficient human resources would make Leprosy a public health concern.

Prevalence Rate of G2D is more than two *per cent* against the target of one *per cent*. This indicates that the tracing, tracking, and reporting of the disease in the community are not adequate as per targets of NLEP. Continuous incidence of leprosy among children is a matter of concern.

7.5 National Vector Borne Disease control programme (NVBDCP)

NVBDCP is an umbrella programme for prevention and control of vector borne diseases like Malaria, Dengue, Chikungunya and other fever related diseases.

Results of disease surveillance in Andhra Pradesh are indicated in **Table 7.13**.

Table 7.13: Statement showing year wise fever disease surveillance

Disease	2017	2018	2019	2020	2021	2022 (Up to October)
Malaria	1,03,953	1,462	84,230	28,688	62,685	1,50,376
Enteric Fever	1,08,448	1,367	85,272	33,020	31,285	5,27,714
Fever with unknown origin	10,61,905	18,227	7,87,389	4,60,937	2,40,599	
Influenza like illness	19,72,758	39,693	16,13,548	8,16,515	5,51,517	46,563
Dengue	6,391	121	11,603	3,974	1,306	0
Chikungunya	1,206	25	1,125	356	18	0
Total fever associated diseases *	32,56,678	62,913	25,85,186	13,45,510	8,89,431	7,24,653

Source: Director of Public Health and Family Welfare

** total includes other fever associated diseases also*

7.5.1 Implementation of Malaria control Programme

According to WHO's latest estimates, India accounted for 79 *per cent* of malaria cases in the WHO's South-East Asian region and about 83 *per cent* of malaria deaths in the Region. Malaria cases should be reduced year by year. However, the rate of reduction was decreased between 2019 and 2020, when compared with previous years in India.

¹⁸⁶ GO MS 20 issued in the year 2005

¹⁸⁷ Single dose Rifampicin

Annual Blood Examination Rate (ABER) is the percentage of persons screened annually for malaria. ABER is an index of operational efficacy of the NVBDCP. The Annual Parasite Index¹⁸⁸ (API) depends upon the ABER. Annual Parasite Index (API) refers to high and moderate malaria transmission risk areas. Areas with API more than two *per cent* are classified as high-risk areas. As per National Framework for Malaria Elimination in India 2016-30, milestone set for all the States and their respective districts is to reduce API to less than one case per 1,000 population at risk and sustain zero deaths due to malaria by 2024. Sufficient blood slides should be systematically obtained and examined for malaria parasite to work out accurate API.

As per the Malaria Operational Manual, ABER should be more than ten *per cent* of the population, which is considered adequate to reflect a true picture of incidence of Malaria. We observed that in the following districts for the years 2017-2021, ABER was less than 10 *per cent* as shown in **Table 7.14**, which indicated that the true picture was not reflected.

Table 7.14: Statement showing district wise Annual Blood Examination Rate

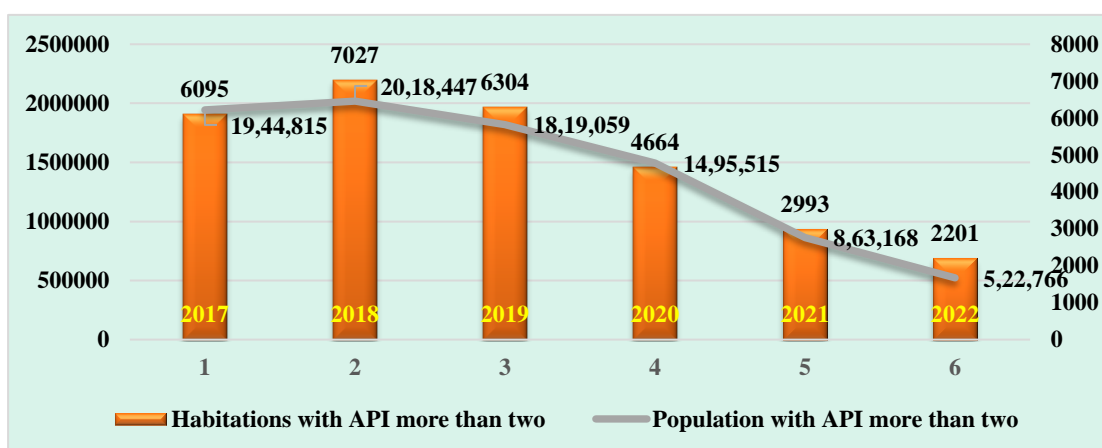
Sl. No	District	2017	2018	2019	2020	2021
1	Srikakulam	14.60	17.00	17.70	8.30	13.50
2	Vizianagaram	17.00	17.30	17.50	11.50	16.50
3	Visakhapatnam	16.60	17.60	18.60	14.30	16.60
4	East Godavari	15.60	14.70	15.70	11.70	13.80
5	West Godavari	15.30	13.90	13.20	8.00	8.80
6	Krishna	8.30	8.40	8.20	5.90	9.70
7	Guntur	13.40	13.20	13.50	7.70	12.70
8	Prakasam	13.50	13.90	10.50	7.30	10.30
9	SPSR Nellore	6.00	5.30	6.10	10.10	10.80
10	Chittoor	12.40	11.70	10.40	4.60	7.30
11	YSR	18.00	18.60	14.40	6.80	13.50
12	Anantapur	10.70	10.40	11.40	6.00	9.80
13	Kurnool	11.10	11.10	11.90	10.00	12.30
Total		13.10	13.00	12.90	8.50	11.80

(Red colour indicates the ABER below 10 and green colour indicates ABER above 10)

Source: Information furnished by the Director of Public Health and Family Welfare

Krishna district reported ABER below 10 in all the years under review. Department furnished API for the years 2017 to 2022 as given in **Chart 7.1**.

¹⁸⁸ A calculation of the total number of positive slides for a parasite in a year multiplied by 1,000 for the total population annually.

Chart 7.1: Population and Habitations with API more than two

Source: Information furnished by the Department

The population having API more than two had shown a decreasing trend, however, 2,993 habitations (7.51 *per cent*) out of 39,867 habitations to the end of December 2021¹⁸⁹ still had API above two, indicating that these habitations were in risk zone. However, the national average API for the year 2021 was 0.12 only.

Government accepted (August 2023) that ABER was reported less than 10 in eight districts during 2020 and in four districts during 2021 due to COVID. State ABER was 11.80 and 14.14 in 2021 and 2022 respectively. All districts reported ABER above 10 except two districts (Krishna 9.06 and Chittoor 9.96) in 2022. Further, it was stated that due to strengthening of surveillance activities, high risk habitations were reduced to 2,201 habitations (4.93 *per cent*) and the State Annual Parasite Index (API) was 0.04.

Thus, the incidence of malaria is still high in two districts.

Regarding Malaria control Programme, Annual Blood Examination Rate (ABER) is not uniform in the State and is less than 10 *per cent* in two districts of Krishna and Chittoor. About 2201 habitations (five *per cent*) in the State are still in high risk zone for Malaria parasite.

7.6 National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke

Under National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS), Non-Communicable Disease (NCD) Clinics were set up at District and CHC levels to provide services for early diagnosis, treatment, and follow-up for common NCDs. Provision has been made under the programme to provide free diagnostic facilities and drugs for patients attending the NCD clinics. Cardiac Care Units (CCU) were set up in identified districts for providing facilities for emergency Cardiac Care. Day Care Centres in the identified districts are setup to provide facilities for Cancer care.

¹⁸⁹ Data for the year 2022 is for 10 months only (up to 13 November 2022)

During the period from 2017-18 to 2021-22, out of ₹125.15 crore budget released, an amount of ₹78.50 crore only was incurred towards implementation of the NPCDCS program.

Government accepted (August 2023) the audit observation pertaining to the financial years 2019-20 and 2020-21 and attributed short utilisation to COVID-19 pandemic. Government further stated that in the year 2021-22, they had utilised the budget effectively and appropriately to meet the objectives and optimise resource allocation.

However, it is observed from the statement of budget and expenditure given in the reply that only 92.21 *per cent* of funds were utilised in 2021-22. Further, record relating to the year 2021-22 was not provided to substantiate effective utilisation of budget.

7.6.1 Patient referral cards at PHCs

Primary Health Care goes beyond first contact care and is expected to mediate a two-way referral support to higher-level facilities (from first level care provider through specialist care and back) and ensures follow up support for individual and population health interventions. For opportunistic screening of Diabetes and to record the follow up, patient referral card should be provided to PHCs as part of NPCDCS programme.

While verifying the budget allotment and expenditure with regard to issue of referral cards to patients at PHCs, for the years 2017-18, 2019-20 and 2020-21, a total of ₹1.03 crore was allocated in ROPs. However, State did not spend the funds towards the same. Further, non-issue of referral cards was confirmed to audit by the sampled HCFs.

One of the programme objectives is to support the development of database of NCDs through Surveillance System and to monitor NCD morbidity and mortality and risk factors. As patient referral cards are essential to record the screening data and to advise the referral centres, their absence hindered the creation of database.

Government accepted (August 2023) the audit observation and promised future compliance by providing ABHA IDs in the AarogyaSri card. As patient referral cards are essential to record the screening data and to advise the referral centres, absence of screening history would hinder the creation of database.

7.6.2 Patient referral cards at Sub Centres

As part of NPCDCS programme, patient referral Card in duplicate¹⁹⁰ should be provided to all sub-centres in the State. Under this component, budgetary allocation was made by the NHM in the years 2017-18, 2019-20 and 2020-21 while approving RoPs for the years.

An amount of ₹5.87 crore was allocated during the years; however, ₹0.60 crore expenditure was incurred by the State towards the patient referral cards, which is about 10 *per cent* of the budget allotted. Further, during physical verification of sub-centres, we observed that no referral cards were issued to the patients at SCs.

¹⁹⁰ one to be given to the patient (the suspected case >140 dl. During health camps or on a designated day ANM and (or) Male Health Worker will /mg) and other to be retained at the subcentre for future reference and follow up

The common infrastructure/manpower envisaged can be utilised for early detection of cases, diagnosis, treatment, training and monitoring of different programs such as National Program for Prevention Control of Cancer, Diabetes, CVDs and Stroke (NPCDCS), National Program for Health Care of Elderly (NPHCE), National Tobacco Control Program (NTCP), National Mental Health Program (NMHP) *etc.*

Government replied (August 2023) that ₹59.97 lakh expenditure was made for printing Community Based Assessment Checklist (CBAC) forms and were supplied to all Sub Centres. Further, it was stated that it was in the process of issuing printed ABHA IDs in the Aarogyasri card.

Thus, the envisaged objective in providing screening cards *i.e.*, to record history of persons of the age of 30 plus years to verify alcohol and tobacco intake, physical activity, blood sugar and blood pressure was not achieved by the State.

7.6.3 Human Resources

Operational guidelines for NPCDCS envisaged the following human resources to manage NCD clinic/Cardiac Care Unit (CCU) and to provide emergency and OPD services, counselling, rehabilitation services, *etc.* The availability of human resources in test checked DHs is detailed in **Table 7.15**.

Table 7.15: Statement showing the availability of Human Resource at District Hospitals

S.No.	Name of the Post	Requirement	DH, Atmakur	DH, Hindupur	DH, Tekkali
1	General Physician	One	One	Not available	Not available
2	General Nursing & Midwifery (GNM)	Two	Two	Two	Two
3	Technician	One	Not available	Not available	Not available
4	Physiotherapist	One	One	Not available	One
5	Counsellor	One	Not available	Not available	Not available
6	Data Entry Operator	One	Not available	Not available	Not available

Source: Hospital records

Due to non-availability of dedicated Physicians in DH Hindupur and DH Tekkali and technicians in three DHs, existing staff were burdened with additional work and the services to the patients were not available to the envisaged degree.

In CHC Sompeta, one Staff Nurse was appointed in November 2021 and one Medical Officer was appointed in March 2022. However, the Medical Officer was on leave since April 2022.

The programme provides financial support for essential contractual staff such as doctors and nurses at the units. The contractual manpower at district level can be utilised for NCD Clinic and CCU as well as for day care Chemotherapy unit and at CHC level to run the NCD Clinic. However, the provision was not utilised to engage Human resources on contract basis.

Government replied (August 2023) that NCD Clinics were established in 26 Districts (DHs/AHs) and these clinics were conducted by Physician and staff nurse.

However, audit could not confirm whether the staff provided in these clinics were dedicated or deputed/ diverted from other sources. The record relating to deployment of human resource in the Non-Communicable Diseases Clinics (NCDCs) was not provided to audit. As NCDCs require dedicated staff, and without dedicated human resources, the envisaged objectives of programme would not be achieved.

7.6.4 Equipment worth ₹84.34 lakh kept idle

In order to provide Cardiac Care and Cancer Care at district level, the districts not having Medical College hospitals and not covered under Scheme for Upgradation of District Hospitals to Medical College hospitals, were provided financial assistance for establishing at least four bedded cardiac care unit (CCU).

We observed that equipment worth ₹84.34 lakh supplied under NPCDCS was kept idle in DH, Hindupur due to non-availability of General Physician and Cardiologist.

Government replied (August 2023) that the Physician available at DH, Hindupur was providing the services in NCDC and Cardiac care unit. Further, it furnished the list of equipment available and put to use at DH.

However, record supporting utilisation of services by patients and number of patients who utilised CCU were not provided in support of the reply.

7.7 Pradhan Mantri National Dialysis Programme

The Pradhan Mantri National Dialysis Programme (PMNDP) was rolled out in April 2016, as part of the National Health Mission (NHM) for the provision of free dialysis services to the poor. Based on consultation with experts and discussion with some of the States, GoI is implementing PMNDP in the PPP mode from 2016-17. Accordingly, GoAP invited tenders for establishing 13 Haemo-Dialysis (HD) Centres with 10 beds each in District Hospitals of Andhra Pradesh. Initially one service provider was selected for the years 2016-18. Due to increased demand another service provider was also selected for establishing dialysis centres in Area Hospitals and CHCs also.

Kt/V is another way of measuring dialysis adequacy. If the average Kt/V value¹⁹¹ for three measurements is consistently below 1.2, the patient and the nephrologist need to discuss ways to improve it. Patient must know his Kt/V values, we examined the implementation of PMNDP in selected HCFs and observed that:

1. As per operational guidelines, all the dialysis services through the established centres should be provided only to BPL families. However, nothing was on record to confirm whether the services were provided only to BPL families. Department stated that the service provider is following Aadhar card-based registration system, and all referrals are from Government Hospitals. The reply is not acceptable as Aadhar is not a base to determine eligibility under BPL category.

¹⁹¹ The Kidney Disease Outcome Quality Initiative (KDOQI) group has adopted the Kt/V of 1.2 as the standard for dialysis adequacy. K stands for the dialyser clearance, the rate at which blood passes through the dialyser, expressed in milliliters per minute (mL/min), t stands for time and V stands for volume of water a patient's body contains.

2. Copies of no-fee receipt provided to the patients should be the basis for making payment to the service provider. However, payments were made without any such receipts. 'No fee receipts' were not provided to the patients in AH, Kadiri, CHC Sompeta and DHs Atmakur, Hindupur and Tekkali. This was confirmed by the concerned Hospital Superintendents. Department stated (December 2022) that service providers would be instructed to implement no-fee receipt concept. 'No-fee receipts' should also be subjected to a third-party annual audit. Since no-fee receipts were not provided to patients, third party audit could not be conducted.

Government accepted (August 2023) the audit observation and promised future compliance.

3. Kt/V value is the measurement of the efficacy of a haemodialysis session. The service provider should submit a half yearly report of clinical audit done by the third party to provide the Kt/V and standardised Kt/V report of each patient to the committee. However, clinical audit reports by the third party were not available in the records.

The department stated that the service provider was conducting in-house audit and Kt/V reports were submitted to the Nephrologists concerned. However, we observed that in cases where the average Kt/V value for three measurements was consistently below 1.2, the patient and the nephrologist were required to discuss about Kt/V values and ways to improve it which was not adhered to.

Government accepted (August 2023) the audit observation and promised future compliance.

7.8 Pradhan Mantri Swasthya Suraksha Yojana (PMSSY)

Super speciality hospitals form a part of Tertiary Health Care Services and provide specialised services in a particular field. Pradhan Mantri Swasthya Suraksha Yojana (PMSSY) announced in 2003 envisaged creation of tertiary healthcare capacity in medical education, research, and clinical care across the country.

PMSSY has two components:

- A. Setting up of new AIIMS Institutions in underserved regions of the country, and
- B. Up-gradation of existing Government Medical Colleges (GMCs) which broadly envisages improving health infrastructure through establishment of Super Specialty Blocks/Trauma Care Centres.

Each up-gradation project would be adding the following to the existing GMCs.

- (i) 8-10 Super Specialty Departments.
- (ii) Around 15 new PG seats to each Teaching Hospital.
- (iii) 150-250 beds

AIIMS Mangalagiri is one of the AIIMS healthcare institutes being established by the Ministry of Health & Family Welfare, Government of India under the Pradhan Mantri Swasthya Suraksha Yojna (PMSSY) started functioning from the year 2018.

Up-gradation of the Government Medical College, Anantapur was included in the scheme in the third phase of PMSSY (November 2013) at an approved cost of ₹150 crore (i.e., ₹120 crore & ₹30 crore being Central and State share respectively) for establishment of eight Departments in Super Specialty Hospital (SSH) viz. Gastroenterology, Surgical Gastroenterology, Neurology, Neurosurgery, Cardiology, Endocrinology, Nephrology and Urology with new infrastructure and additional PG seats. The details of proposed infrastructure and PG seats are given in **Table 7.16**.

Table 7.16: Details of proposed infrastructure for SSH

Name of the Government Medical College	No. of beds	No. of ICU beds	Total beds	No. of OTs	No. of proposed PG seats
Government Medical College, Anantapur	168	40	208	6	16

Source: Hospital records

We observed that:

The Super Speciality Hospital, Anantapur which was constructed under PMSSY-III had been made functional from August 2020. As per approved guidelines, 16 new PG seats were to be allotted to the proposed SSH subject to functioning of the hospital in full shape.

As three out of eight departments were non-functional, the proposed PG seats to GGH, Anantapur were not sanctioned. Required sanctioned strength of medical and paramedical staff were not provided by the Government. This was confirmed by the Assistant Director (Admin) of the GGH, Anantapur.

As per the Scheme Guidelines the State Government shall release ₹30 crore as its matching share in the establishment of SSH, Anantapur. The MOHFW, GoI allotted the work of upgradation of GMC (Super Speciality Hospital) Anantapur under PMSSY Phase-III to M/s Haigreeva Infra Tech Project Ltd (M/s HITES¹⁹²). However, the State Government released only ₹15 crores out of ₹30 crores. Due to non-release of the State share, IT networking & WI-FI infrastructure worth ₹2.12 crore was not procured and installed by the agency.

Assistant Director (Admin) (FAC) replied that the letter would be issued to the higher authorities for release of balance ₹15 crore.

Reply from the Government is awaited.

7.8.1 Non-functioning of the Departments

Super Speciality Hospital (SSH), Anantapur was constructed under PMSSY III. As per the Detailed Project Report, the contractor completed the construction of SSH with

¹⁹² M/s Haigreeva Infra Tech Project Ltd., by M/s HLL Infra Tech Services Ltd., (HITES), a Government of India Enterprise

eight departments namely i. Gastroenterology, ii. Surgical Gastroenterology, iii. Neurology, iv. Neurosurgery, v. cardiology, vi, Endocrinology, vii. Nephrology and viii. Urology. The Hospital along with the equipment was handed over (August 2020) to the Superintendent GGH Anantapur. Audit noticed that only five out of eight departments were functioning. Three departments¹⁹³ were non-functional due to non-availability of manpower.

As the SSH was sanctioned to provide affordable/ reliable tertiary healthcare services and non-availability of Gastroenterology, Surgical Gastroenterology and Urology departments, defeated the purpose for which it was established.

Reply from the Government is awaited.

7.8.2 Non installation of equipment

Out of ₹41.57 crore allotted, equipment worth ₹39.91 crore was procured¹⁹⁴ (2018); however, equipment worth ₹22.51 crore only was installed while the remaining equipment worth ₹17.4 crore was lying idle in the storeroom for the last four years. The remaining equipment worth ₹1.66 crore was not received from the supplier. Assistant Director (Admin)(FAC) replied that the same would be installed and intimated to audit.

Due to non-installation of equipment for four years the performance of the equipment in accordance with manufacturer specifications and guarantees to patients' safety could not be ensured.

The infrastructure created through the upgradation scheme remained unutilised after two years. Government was yet to provide its share of financial resources to make the SSH complete in full shape.

Government had not furnished specific reply with respect to implementation of PMSSY.

In Anantapuramu medical college, three out of eight super speciality departments were non-functional due to lack of teaching staff. This resulted in foregoing 16 Post Graduate seats in the College and deprived the State of super speciality services as well as admission to eligible students.

7.9 YSR Aarogyasri Scheme

Towards achievement of universal health coverage for BPL families whether defined in terms of financial protection or access to and effective use of health care, GoAP is implementing state sponsored Dr. YSR Aarogyasri Health Insurance Scheme. The scheme provides end-to-end cashless services for identified diseases under secondary and tertiary care through a network of service providers from Government and private sector.

Government of India (GoI) had initiated a new scheme called the Pradhan Mantri Jan Aarogya Yojana (PMJAY) from January 2019. This scheme is implemented by the

¹⁹³ Gastroenterology, Surgical Gastroenterology and Urology

¹⁹⁴ HLL Infratech services Limited (HITES)

National Health Authority (NHA). PMJAY is being implemented as part of the Aarogyasri scheme, as per the guidelines of the PMJAY scheme.

7.9.1 Institutional arrangement

The government of Andhra Pradesh set up the Dr.YSR Aarogyasri Health Care Trust (AHCT), which is an independent body. Hospitals having a minimum of 50 hospital beds with requisite infrastructure and expertise within the States of Andhra Pradesh and Telangana are eligible to be empanelled under the scheme for providing services. In respect of single specialty hospitals like ENT, Ophthalmology *etc.* 20 bedded hospitals are eligible.

With the stated objective to bring quality and transparency into the system of empanelment, online empanelment procedure was adopted. Hospitals while applying must upload entire details of the hospital such as infrastructure, availability of specialists, equipment, lab facilities with documentary and photographic evidence. Once the online application is registered, these hospitals are inspected by a team of doctors from the Empanelment and Disciplinary Committee (EDC) and based on the report and evidence, the EDC will accept/reject the empanelment application. The hospitals whose applications are accepted are thereafter inducted into the scheme after a workshop and signing of MoU.

An empanelled health care provider shall be referred to as a Network Hospital (NWH). The EDC shall initiate disciplinary proceedings against erring NWHs for infrastructure deficiencies, equipment deficiencies, manpower deficiencies, service deficiencies, violation of service contract agreement, *etc.*

7.9.2 Salient features of Aarogyasri

- The scheme provides coverage of ₹5.00 lakh per family per year for secondary and tertiary care hospitalisation in public and private Network Hospitals (NWHs) in AP and cities of Hyderabad (Telangana), Bengaluru (Karnataka) and Chennai (Tamil Nadu).
- As of May 2023, 2,475 hospitals were empanelled to provide health care facilities covering 3,708 packages/ procedures.
- Four crore individuals (81 *per cent* of the population of the State) from 1.44 crore households, are registered under the scheme.

7.9.3 Financial outlay

The State has been implementing Aarogyasri Scheme since April 2007, and Central Government sponsored Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) scheme is also being implemented in consonance with existing State scheme with effect from January 2019. The Budget allocation from 2018-19 to 2021-22 is detailed in **Table 7.17**.

Table 7.17: Budget allocation from 2018-19 to 2021-22

(₹ in crore)

Year	Budget allocation by GoAP	NHA releases	Total Releases	Expenditure	Remarks
2017-18	1,000.00	NA*	1,000.00	1,000.00	*PMJAY implemented from Jan 2019
2018-19	1,300.00	182.84	1,482.84	1,299.01	
2019-20	1,305.00	374.06	1,679.06	1,502.00	
2020-21	1,700.00 [#]	261.23	1,961.23	1,676.96	[#] Release was ₹1024.69 crore only
2021-22	1,758.93	223.94	1,982.87	1,920.18	
Total	7,063.93	1,042.07	8,106.00	7,398.15	

Source: Information furnished by AHCT. The expenditure shown here only indicates budgetary support to AHCT and not the claims paid by AHCT

7.9.4 Service provided by public and private care providers

Curative and super speciality services are provided by the Government by outsourcing these services to the private sector. All the public health facilities from PHCs to Teaching Hospitals are also empanelled as network hospitals in the scheme. The expenditure made by AHCT on claims under YSR Aarogyasri programme is detailed in **Table 7.18** below.

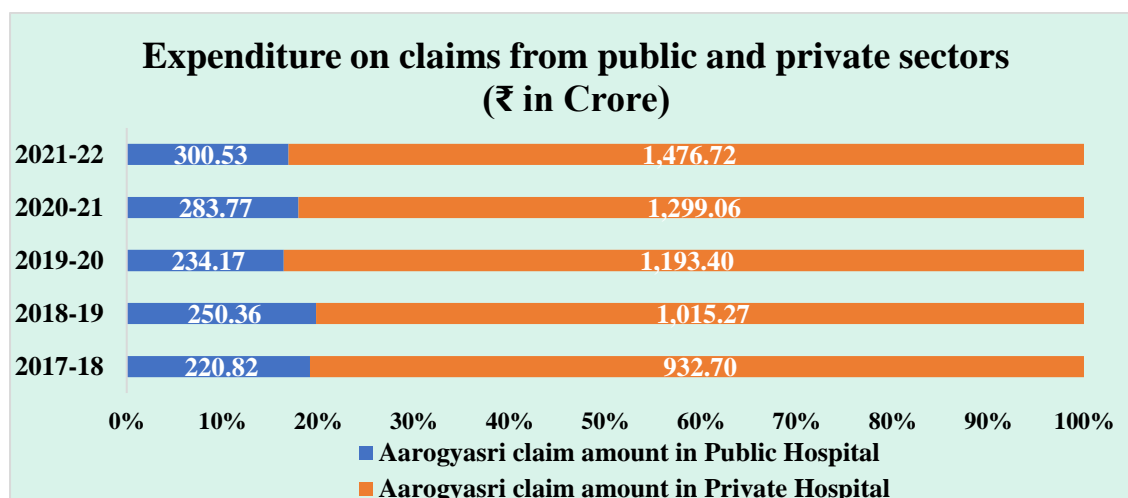
Table 7.18: Expenditure particulars of Aarogyasri on public and private hospitals

(₹ in crore)

Year	Total Aarogyasri claim amount paid	Aarogyasri claim amount in Public Hospitals	% of aarogyasri claim amount in Public Hospitals	Aarogyasri claim amount in Private Hospitals	% of aarogyasri claim amount in Private Hospitals
2017-18	11,53.52	2,20.82	19.14	9,32.70	80.86
2018-19	12,65.63	2,50.36	19.78	10,15.27	80.22
2019-20	14,27.57	2,34.17	16.40	11,93.40	83.60
2020-21	15,82.84	2,83.77	17.93	12,99.06	82.07
2021-22	17,77.25	3,00.53	16.91	14,76.72	83.09
Total	72,06.81	12,89.65	17.89	59,17.15	82.11

Source: Information furnished by AHCT

Spending related to aarogyasri on private health care providers ranged between 80.22 per cent to 83.60 per cent during the years 2017-22.

Chart 7.2 : Chart showing Aarogyasri claims towards public and private HCUs

NHP, 2017 envisaged free primary care provision by the public sector, supplemented by strategic purchase¹⁹⁵ of secondary care hospitalisation and tertiary care services from both public and from non-government sector to fill critical gaps. The order of preference for strategic purchase would be public sector hospitals followed by not-for profit private sector and then commercial private sector in underserved areas, based on availability of services of acceptable and defined quality criteria.

Audit noticed that Aarogyasri claim amounts for both public and private Health Care Units (HCUs) are increasing. There was an increase of 36.10 *per cent* with respect to public HCUs and 33 *per cent* with respect to private HCUs when compared to the base year 2017-18. **Chart 7.2** also indicates that the proportion of the expenditure on claims in public sector is decreasing. This could be due to preference for private facilities and also suggests insufficient push for public to avail benefit of Aarogyasri through public hospitals.

Government replied (August 2023) that number of patients provided with health services by Government Hospitals was increased from 1,14,550 cases in 2017-18 to 3,69,007 in 2022-23, and the performance of Government Hospitals increased to 25 *per cent* in 2022-23 from 23.20 *per cent* in 2017-18 and assured to improve the performance of the Government Hospitals in future.

However, reply of the Government is not acceptable, as the number of cases of Government Hospitals increased from 1,14,550 (23.20 *per cent*) in 2017-18 to 3,69,007 (24.45 *per cent*) in 2022-23, whereas the number of cases of Private Hospitals increased from 3,79,100 (76.80 *per cent*) in 2017-18 to 11,40,308 (75.55 *per cent*) in 2022-23, thus increase in number of cases of Private Hospitals is 7,61,208 against 2,54,457 in Government Hospitals during the same period.

¹⁹⁵ The policy envisages strategic purchase of secondary and tertiary care services as a short term measure. Strategic purchasing refers to the Government acting as a single payer.

7.9.4.1 Private hospitals performed procedures reserved for Public Hospitals

The AHCT reserved¹⁹⁶ 133 procedures exclusively for public hospitals. Of these, 123 procedures were permitted to Private Teaching Hospitals up to 40 pre-authorisations per month for practical exposure to students and the remaining ten procedures reserved for public hospitals (*Appendix 7.1*). However, 25 private teaching colleges did not observe these instructions in 281 cases by performing ten procedures reserved exclusively for Public Hospitals.

Since these procedures were to be performed exclusively by Public Hospitals, the cost of ₹86.51 lakh incurred towards these procedures was not admissible. Further, Private hospitals cannot raise pre-authorisations for 133 reserved procedures from December 2020¹⁹⁷ onwards. However, in 177 cases, 81 private hospitals involving an amount of ₹50.20 lakh were found allowed to perform these procedures.

Thus, in the above 458 cases, an amount of ₹1.37 crore was paid to private /private teaching hospitals in violation of AHCT orders.

Government accepted (August 2023) the audit observation and stated that AHCT(Trust) disallowed 133 procedures to all Private Network Hospitals in December 2020. Further Government stated that the IT team had not implemented the changes in the Trust portal and Private Network Hospitals performed the above procedures.

7.9.4.2 No claim/ minimal participation of Network Hospitals

We observed that out of 1,421 Network Hospitals (NWHs) empanelled by AHCT, 525 NWHs (both public and private) had not made a single claim during the period January 2019 to March 2021. Out of 718 public NWHs in the State, 64.09 *per cent*, i.e., 460¹⁹⁸ NWHs had not made a single claim during this period. Similarly, out of four NWHs located outside the State and having facility to avail the benefits of the scheme, two NWHs had not made a single claim. Further, we observed that 81 NWHs had made one to five claims during the period January 2019 to March 2021. Out of 81 NWHs, 44 NWHs were public.

Thus, the benefits of the Scheme had not been utilised by 460 NWHs as no claims were made and 44 NWHs had utilised the scheme minimally.

Government replied (August 2023) that due to lack of technical facilities, manpower and upgradation works PHCs and AHs did not perform well during the review period. Further, Government stated that steps were taken to improve performance of all the public hospitals.

7.9.4.3 Delay in claim settlement

As per Scheme Guidelines para 13.8, the claim settlement shall be made within 60 days. NWHs raised 17,16,377 claims amounting to ₹3,730.58 crore for settlement for the period from January 2019 to March 2021. However, 14,91,779 claims only amounting to

¹⁹⁶ Dr NTRVST/P&C/2093 Dated 06.06.2018

¹⁹⁷ AHCT Circular No. Dr YSR AHCT/Operations/20/30/005/2020, dt 09.12.2020

¹⁹⁸ These included seven Area Hospitals and 57 CHCs

₹3,283.17 crore were settled. We observed that out of the claims allowed, 9,24,578 cases amounting to ₹2,062.87 crore were settled with delay as detailed in **Table 7.19 below**:

Table 7.19: Delay in settlement of payment towards claims

(₹ in crore)

No. of days taken for claim settlement	No. of cases	Amount
61-100 days	4,48,361	920.29
101-200 days	3,88,593	929.71
201-300 days	77,180	185.53
301-400 days	10,444	27.34
Total	9,24,578	2,062.87

Source: Information furnished by AHCT

Government replied (August 2023) that delay in approval of claims resulted in delay of payments. Also, some of the bills were paid in the subsequent years due to year end activity in the budget process. These delays, however, would affect the readiness of NWHs to give treatment to prospective patients.

7.9.5 Utilisation of Public Hospital claim funds

GoAP has been regulating the utilisation of claim funds earned by public hospitals through the Health, Medical & Family Welfare department (HM&FW). The HM&FW issued guidelines¹⁹⁹ on utilisation of claim funds for the following purposes:

- 20 per cent of the claim is retained by the AHCT as revolving fund for strengthening the infrastructure in Government Hospitals.
- 45 per cent of the claim is for patient care facility management²⁰⁰, which are not available in the hospital and salaries of Data Entry Operators (DEOs). The balance amount would be utilised for development of hospital infrastructure.
- 35 per cent of the claim is for payment of incentive to the doctors and staff.

We noticed that the claim funds received in public hospitals were either used for purposes other than specified or kept idle without any utilisation as detailed below.

For example, we observed that the Area Hospitals, Sattenapalli and Tadipatri received claim amount of ₹43.19 lakh²⁰¹ for the period from May 2019 to October 2021 and kept the fund idle in the bank Account of the hospitals without spending either towards patient care or towards incentive to staff. The Superintendent, Area Hospital, Sattenapalli replied that due to frequent transfer of Superintendents and non-availability of Data Entry Operators, the amount was not utilised and promised that steps would be taken to utilise for intended purposes.

Government accepted (August 2023) the audit observation and stated that corrective action was taken, and a new system has been developed to credit the incentives directly to the treating doctors and the support staff from August 2023 and this would put an

¹⁹⁹ GO Rt.No.123 (Health, Medical & Family welfare Dept) dated 04.04.2018 and GO Rt. No. 134 dated 01.02.2010

²⁰⁰ hiring the services of aaya, barber, stretcher boy and electrician, purchase of computer peripherals, diagnostics, drugs

²⁰¹ Sattenapalle ₹41,85,087 and Tadipatri ₹1,34,400

end to inordinate delays in disbursement of incentives.

7.9.6 Ex-Gratia towards COVID – undisbursed

The Government released (May 2020 & July 2020) ₹12.41 crore to the District Collectors/District Coordinators for payment of ex-gratia at ₹2,000 to patients for post COVID facilitation after discharge from quarantine. From the records it was seen that the districts furnished UCs for ₹5.28 crore and the unspent balance of ₹7.12 crore was not remitted back to the AHCT and UCs also were not furnished. On this being pointed out the AHCT replied that the transfer of unutilised amount to the AHCT is under process (*Appendix 7.2*).

Government accepted (August 2023) the audit observation and stated that the District Collectors/ Coordinators were addressed to return the unspent balances of COVID-19 ex-gratia amount based on the U.Cs. Further, it was stated that follow-up action would also be taken thoroughly.

7.9.7 Medical and other Audits

As per clause 9 of Aarogyasri Manual, there shall be a Medical Audit of the services provided by the empanelled hospital. Further, as per Service Contract Agreement, AHCT shall empanel clinical audit agencies and it would be mandatory for hospitals to undergo third party clinical audit from any of the empanelled agencies for appropriateness and adequacy of care. Non-compliance to audit shall attract a penalty of two *per cent*. The clinical audit sample size and periodicity shall be notified by AHCT. However, during the visit of 48 selected hospitals, it was noticed that no clinical, medical and death audits were conducted for the audit period covered.

Government replied (August 2023) that the Trust constituted a team with members of Joint Executive Officer (JEO), Deputy Executive Officer (DyEO) (Technical) and other members to conduct the clinical, medical and death audits. Further, it was stated that MoU with J-PAL organisation was concluded to study the incidence of fraud and out of pocket expenditure in Hospitals to ascertain the cashless treatment in Network Hospitals.

7.10 Recommendations

- *State Blood Cell may increase screening of tribal families and children to check and control blood disorder diseases such as haemoglobin C disease, haemoglobin S-C disease, Sickle Cell anaemia, Thalassemia and other mutations.*
- *Government may take appropriate action to address the shortfall in manpower, spend the allocated funds optimally, improve monitoring and surveillance to make the State TB free and Leprosy free as per SDG 3.*
- *Government may review data collection mechanism to ensure reliable and updated data for effective planning.*
- *Government should establish a mechanism to conduct third party clinical audits and to act upon as per the scheme guidelines, and to maintain a database of such audit reports along with Action Taken Reports.*

Chapter VIII

Adequacy and Effectiveness of the Regulatory Mechanisms

Chapter VIII

Adequacy And Effectiveness Of The Regulatory Mechanisms

The Drug Regulatory mechanism was not efficient considering the shortfall in manpower to monitor the functioning of drug manufacturers and sales units. Autonomy was not given to Drug Control Administration, though recommended by the Dr. R.A. Mashelkar Committee. Though funds were provided by GoI for strengthening of Drug Regulatory System, GoAP did not release to Drug Control Administration in full. The State Level Authority constituted under Pre-Conception and Pre-Natal Diagnostic Techniques Act had inspected only two per cent of the registered centres during the five year period. Effluent Treatment Plants were not installed in the test checked HCFs. The Sewage Treatment Plants installed at Government General Hospitals, Srikakulam and Nellore were non-functional. Sewage Treatment Plants were not installed in any of the test-checked DHs and AHs. Bar coding system that tracks Biomedical waste was implemented partially.

8.1 Introduction

The role of regulatory bodies is to protect healthcare consumers from health risks, provide a safe working environment for healthcare professionals and ensure that public health and welfare are served by health programs. Regulations are necessary to standardise and supervise healthcare, ensuring that healthcare facilities extended comply with public health policies.

The purpose of regulation is to ensure access to health services, maintain quality standards, protect the rights of patients from opportunistic behaviour and ensure accountability of service providers. The most used instruments for regulations are Acts, laws, schedules, rules and regulations, *etc.*

Statutory Regulatory Bodies for Health care facilities include external agencies like Drug Control Administration (DCA) and Andhra Pradesh Pollution Control Board. Internal regulatory mechanism includes implementation of Andhra Pradesh Allopathic Private Medical Care Establishments (APAPMCE) Act and Pre-Conception and Pre-Natal Diagnostic Techniques (PCPNDT) Act, 1994. The implementation of these regulatory activities is discussed in the following paragraphs:

8.2 Drug Control Administration

The Drug Control Administration (DCA) regulates the manufacture, sale and distribution of drugs in the State by implementing the relevant legal provisions *viz.* Drugs and Cosmetics Act, 1940 and Rules 1945, Drugs and Magic Remedies (Objectionable Advertisement) Act, 1954 & Rules, 1955, Drugs (Price Control) Order,

1995 & Essential Commodities Act, 1955 and AP Narcotic Drugs and Psychotropic Substances Rules, 1986 (for limited purpose).

The Government of India constituted an Expert Committee²⁰² to examine all aspects of regulatory infrastructure including the extent and problem of spurious/substandard drugs in the country. The Committee recommended (November 2003) that there should be one Inspector for 50 manufacturing units and one for 200 sales units. Further, a Committee constituted (2019) by GoAP on Health Reforms recommended strengthening the DCA with 150 Drug Inspectors.

8.2.1 Shortfall in inspections

As per the provisions of the Drugs and Cosmetics Act, 1940, Drug Inspectors (DIs) are required to inspect the manufacturing and sales units of drugs and cosmetics once in a year, to ensure compliance of conditions of license, *etc.*, and also to draw drug samples for quality test.

Scrutiny of records revealed that out of the total 275 sanctioned posts of various cadres, 128 posts were vacant since May 2021. More importantly, 11 posts of Drug Inspectors (DIs) were lying vacant out of the sanctioned strength of 59. There are 42,283 sales and 384 manufacturing units, in the State. According to GoI's Expert Committee recommendations, there must be 211 DIs to cover all the sales units in a year. Thus, there was shortfall of 163 DIs (211 minus 48) in the State.

Further, Government had not taken steps to enhance even the strength to 150 as recommended by Health Reforms Committee appointed by GoAP (2019). Though, the Department submitted (May 2021) proposals to the Government, the Government did not take steps to increase the manpower.

Audit noticed that due to non-availability of required number of DIs, there was shortfall in number of inspections conducted ranging between 19.78 and 45.84 *per cent*. The shortfall in inspections was on increasing trend over the five year period, as there was no corresponding increase in manpower to match increase in number of sales units as shown in **Table 8.1**.

Table 8.1: Number of inspections conducted during 2017-22

Year	Number of licensed units		Number of inspections		Shortfall in inspections (percentage)
	Manufacturing	Sale	to be conducted	Conducted	
(1)	(2)	(3)	(4) = (2) + (3)	(5)	(6) = (4)-(5)/ (4)X100
2017-18	237	34,070	34,307	27,522	19.78
2018-19	246	35,620	35,866	26,296	26.68
2019-20	286	35,555	35,841	25,174	29.76
2020-21	314	38,991	39,305	26,821	31.76
2021-22	384	42,283	42,667	23,110	45.84

Source: Information furnished by the Department

²⁰² A Comprehensive examination of Drug Regulatory issues including the problem of spurious drug under the chairmanship of Dr. R.A. Mashelkar was constituted by GoI

Shortfall in the number of inspections would result in inadequate checks on the manufacturing and sale units.

Government accepted (August 2023) the audit observation .

The Drug Regulatory mechanism was not efficient considering the shortfall in manpower to conduct inspections on the functioning of drug manufacturers and sales units.

8.2.2 Autonomous status of the Drug Control Administration

The Committee appointed by GoAP recommended that the Drug Controller Administration must be an autonomous body like Food and Drug Administration on the lines of Maharashtra and Karnataka.

Audit noticed that the recommendation of the Committee was not implemented and DCA continued to be under the Department of Health Medical and Family Welfare.

Reply from the Government is awaited.

8.2.3 Strengthening of State Drug Regulatory System

To upgrade and strengthen the Regulatory system, a Central Assistance to State Plan (CASP) was introduced by GoI (2015). Under the scheme, three projects viz. Strengthening²⁰³ of Drug Testing Laboratory including the Head Office at Old Government General Hospital, Hanumanpet, Vijayawada, Strengthening of two Regional Laboratories at Vishakhapatnam & Kurnool and Strengthening of 27 office buildings for Enforcement Officers in Districts were taken up.

In this regard, an amount of ₹53.02 crore (Centrally Sponsored Scheme (CSS) share: ₹31.93 crore and Matching State share (MSS): ₹21.09 crore) was released²⁰⁴ to DCA in three instalments as detailed in *Appendix 8.1*.

Audit noticed that out of ₹53.02 crore, an amount of ₹9.91 crore was spent towards construction of drug testing lab, purchase of machinery, equipment, consumables *etc.* and balance of ₹43.11 crore was lapsed (March 2022). Subsequently, DCA requested Government to release the balance lapsed amount. Though Budget Release Orders (BRO) were issued (September 2022) for ₹17 crore by Government, no amount was transferred to Single Nodal Agency (November 2022). The BRO for balance amount ₹26.10 crore (₹43.11 crore - ₹17.01 crore) was not issued as of November 2022.

Thus, the objective of strengthening of Drug Regulatory System could not be fully achieved due to non-release of funds by GoAP.

Department stated (July 2023) that proposal for release of balance amount of ₹26.10 crore was pending with Government.

Reply from the Government is awaited.

²⁰³ Strengthening includes construction, equipment and consumables.

²⁰⁴ Central Sponsored Scheme released on 20.02.2017, 27.07.2018 and 13.03.2020; Matching State Share released on:11.07.2017, 24.07.2019,16.10.2020

Inspite of provision of funds by GoI for strengthening of Drug Regulatory System, the funds were not released in full by GoAP and thereby prevented the Drug Control Administration from delivering functions effectively. The recommendation on the autonomy by Dr. R.A. Mashelkar Committee was not extended to DCA.

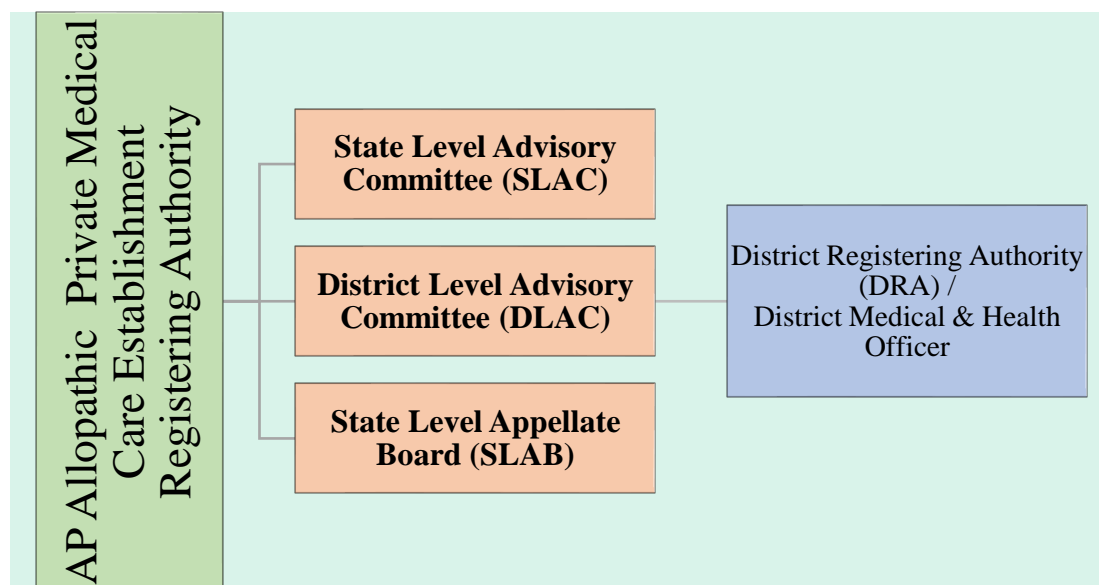
8.3 Implementation of Andhra Pradesh Allopathic Private Medical Care Establishments Act

The Allopathic Private Medical Care Establishments (Registration and Regulation) Rules 2007 (APMCE) framed under Andhra Pradesh Allopathic Private Medical Care Establishments (Registration and Regulation) Act, 2002, prescribes minimum standards for different types of Private Medical Care Establishments (PMCE) in Andhra Pradesh.

The minimum standards comprise of general and specific requirements including physical standards of space requirements and hygiene, equipment requirements for delivering specific services and manpower requirements and their qualifications. The standards also specify the minimum list of services for which the medical care establishments need to display the charges levied for the benefit of the patient information.

To oversee the implementation of APMCE Act, there must be Regulatory Authorities at different levels to watch compliance. The regulatory mechanism/authorities at different levels are shown in **Chart 8.1**.

Chart 8.1: Different levels of regulatory authorities



Source: Information furnished by Department

8.3.1 Constitution of Advisory Committees

8.3.1.1 Constitution of State Level Advisory Committee

A State Level Advisory Committee (SLAC) shall be constituted²⁰⁵ with Special Chief Secretary/Principal Secretary/Secretary to Government, dealing with the subject in Health, Medical & Family Welfare Department as Ex-officio Chairman.

The SLAC shall review the progress made in registration process and give timely advice to the various authorities constituted for the purpose to oversee the proper and effective implementation of the Act, order random inspections of the Private Medical Care Establishments without prior notice, monitor District Level Advisory Committees and review the functioning of the Clinical establishments. SLAC has to meet twice in a year and gap between two meetings should not exceed six months.

Regarding constitution of SLAC, the Department stated that no meetings were conducted during 2017-18 to 2021-22.

8.3.1.2 Constitution of District Level Advisory Committee

A District Level Advisory Committee (DLAC) shall be constituted²⁰⁶ with the District Collector as Ex-officio Chairman. DLAC shall review the progress of registration process and monitor implementation of the Act at district level. DLAC shall nominate persons for inspection teams and review the contents of the inspection reports as required. DLAC should meet at least twice²⁰⁷ in a year and gap between two meetings should not exceed six months.

Audit noticed the following in the three test-checked districts:

- In Anantapur district, DLAC was constituted, and meeting was held only once in 2018-19 during the period 2017-18 to 2021-22. In the meeting, DLAC resolved to issue circular to all Private Medical Care Establishments (PMCE) to provide free of cost service to five *per cent* of poor and needy and to submit regular report of births and deaths. However, compliance to the resolution passed by DLAC was not on record. Thus, there is no monitoring mechanism to see that resolutions passed by DLAC.
- The details of constitution of DLAC at District Medical & Health Officer (DMHO) Nellore were not on record.
- In Srikakulam district, the DLAC was constituted and meetings were conducted during the period 2017-22. However, copies of the minutes of the meetings were not furnished to audit.

8.3.2 Renewal of registrations

Every establishment shall apply for renewal of its registration along with payment of prescribed fees, three months before expiry of the registration period. Based on

²⁰⁵ Section 5A APAMCE (Registration and Regulation) Act, 2002

²⁰⁶ As per section 5A of The APAMCE (Registration and Regulation) Act, 2002

²⁰⁷ As per Rule 3(2) of the APMCE Rules

inspection reports, the Registering Authority shall grant the renewal certificate which is valid for five years.

Audit noticed (June 2012) that ten PMCEs had not applied for renewal of registration within the prescribed period in the test-checked districts. Applications for renewal were received with delays ranging between 103 and 640 days (as detailed in **Appendix 8.2**). Renewal of permissions was processed without any action by the DRAs for unauthorised functioning to these PMCEs. There was no data available about the dates of inspections and action taken on delayed applications. This indicated ineffective monitoring by the concerned DRAs.

8.3.3 Action on suspended establishments

The Registering Authority is empowered to suspend PMCE (Rule 7 of APAPMCE rules) on receipt of reliable information that the PMCE has been convicted or has been censured by any judicial or competent authority in relation to their professional conduct. The PMCE can also be suspended if found guilty on a written complaint of violation of any terms and conditions of the registration or contravention of any of the provisions of the Act.

The Registration Authority, after making enquiries thereto and after written explanation from the Establishment on the allegations levelled may order suspension of the certificate of registration for such period as it may think fit. As per the records furnished by the Department, 99 PMCEs were suspended during 2017-22 in the State, The Department attributed suspensions to lack of mandatory facilities/manpower *viz.* non-provision of waiting area, non-availability of sufficient space for laboratory, non-display of rates and non-availability of health staff, *etc.*

The action was taken based on complaints and not based on regular inspections. Thus, it shows that proper inspections are not being carried out as per the provisions of the Act. Further, it was noticed that records relating to suspended or cancelled registrations of PMCEs for the period 2017-22 were not maintained in any of the test checked DRA offices. Reasons for not maintaining these records were not furnished to audit.

Suspension/cancellation of registrations of PMCEs was based only on complaints received. Thus, regular inspections would have brought more such cases and lead to effective monitoring by the concerned DRAs.

8.4 Implementation of Pre-Conception and Pre-Natal Diagnostic Techniques Act

Pre Conception- and Pre Natal-Diagnostic Techniques (PC-PNDT) Act, 1994, prohibits prenatal diagnostic techniques for determination of sex of the foetus leading to female foeticide. It regulates the use of pre-natal diagnostic techniques only to detect genetic abnormalities, metabolic disorders, chromosomal abnormalities, certain congenital malformations, haemoglobinopathies and sex-linked disorders. The Act mandates compulsory registration of all diagnostic laboratories, all genetic counselling centres, genetic laboratories, genetic clinics and ultrasound clinics.

8.4.1 Inspections by State Level Authority

As per Standard Operating Guidelines, all the appropriate authorities including State, District and Sub-district notified under the Act *inter-alia*, shall conduct regular inspection of all the registered facilities once in every ninety days and shall preserve inspection report as documentary evidence.

In the State there were 3,047 (as of March 2022) hospitals/diagnostic centres/laboratories registered under PC-PNDT Act. During 2017-22, the State Level Authority²⁰⁸ (SLA) had conducted inspection of only 74 registered centres as detailed in **Table 8.2** below.

Table 8.2: Showing the number of inspections conducted by Monitoring Committee

Year	Number of Inspections conducted	Month in which conducted	Districts Inspected	Major deficiencies noticed
2017-18	11	June 2017	Guntur, Krishna, West Godavari	Form-F ²⁰⁹ for maintenance of record in case of prenatal diagnostic test, and display boards. Connected records and Form-F were not maintained.
2018-19	3	April 2018	Krishna and Chittoor	Two cases filed for revealing the sex and institutes were seized.
2019-20	11	April 2019	Krishna, Guntur, Prakasam, West Godavari	Connected records and Form-F were not maintained.
2020-21	14	January 2021	Guntur, Chittoor	Records not maintained and Display boards not exhibited
2021-22	35	April 2021 (5) August 2021(11) October 2021(6) November 2021(5) March 2022(8)	Vizianagaram, Kurnool, Prakasam, YSR, West Godavari, Guntur	Connected records and Form-F were not maintained.

Source: Information furnished by the Commissioner of Health and Family Welfare

Thus, the SLA covered only two *per cent* of the registered hospitals/diagnostic centres/labs during 2017-22.

Further, Inspections were conducted in a particular month in one go during the period 2017-22 (except 2021-22). Records relating to Inspection Reports were not produced to audit. No inspections were conducted in the test checked districts of Anantapur, SPSR Nellore and Srikakulam in any of the years during 2017-22 by District and State Level Authority.

²⁰⁸ Minister for Health as the Chairperson, Secretary in-charge of the Health department as Vice-chairperson, Secretaries or Commissioners in-charge of the Department of Women and Child Development, Social Welfare, Law and Indian System of Medicines and Homoeopathy, Director of Public Health as members along with other members nominated by Government, from various social organisations and an officer not below the rank of Joint Director, in-charge of Health & Family welfare would be the Member Secretary

²⁰⁹ form for maintenance of records in case of prenatal diagnostic test/ procedure by genetic clinic/ ultrasound clinic/ imaging centre

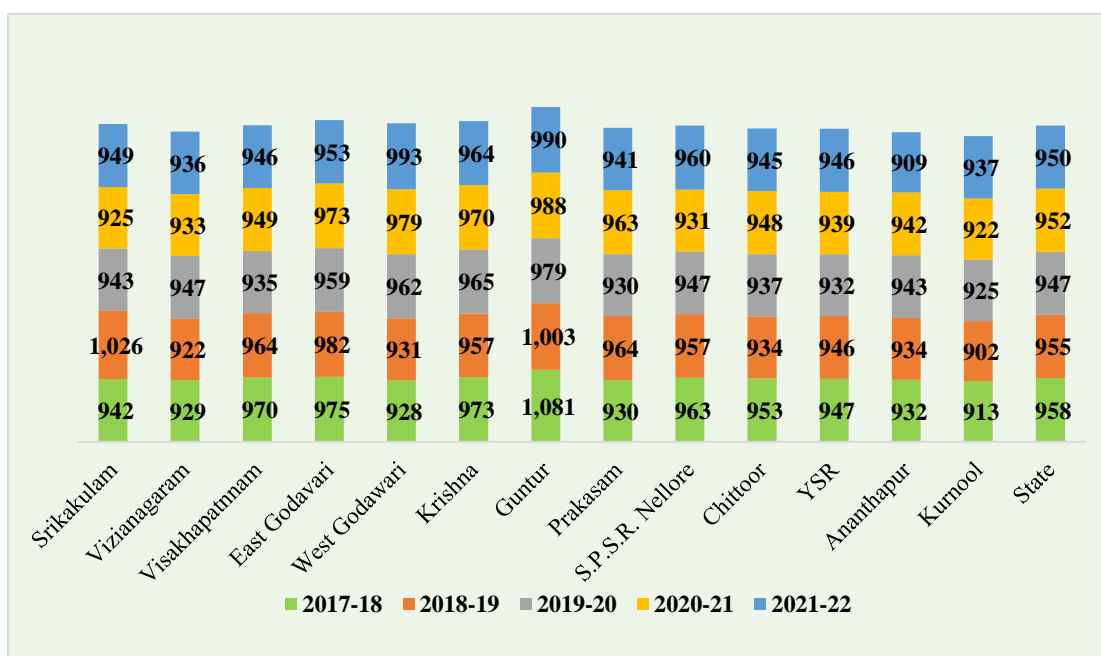
The Commissioner, Family Welfare replied (January 2023) that the Department was planning to increase the inspections by the State Level Committee in all districts.

Regarding non maintenance of records, display boards and Form F, CFW further replied that the district level field inspection reports were uploaded in the web portal. However, Audit could not find any such report in the web portal.

8.4.1.1 Gender ratio at birth

Analysis of population composition from gender perspective is very central in understanding nitty- gritty of social structure of a society and also very crucial for framing policy intervention. Due to this fact, statistics on population characteristics from the gender perspective is considered. Gender or sex ratio at birth is defined as number of female live births per every 1,000 male live births. The district wise proportion of gender ratios during the period 2017-22 is given in **Chart 8.2**.

Chart 8.2: District wise gender ratio at birth



As seen from the above the gender ratio at birth is neither steady nor increased during the review period. Except Srikakulam, Vizianagaram, West Godavari, Prakasam and Kurnool all the remaining eight districts recorded decrease in female live births per every 1,000 male live births. All these are inherent markers for the department to bring on track the effective vigilance and monitoring mechanism.

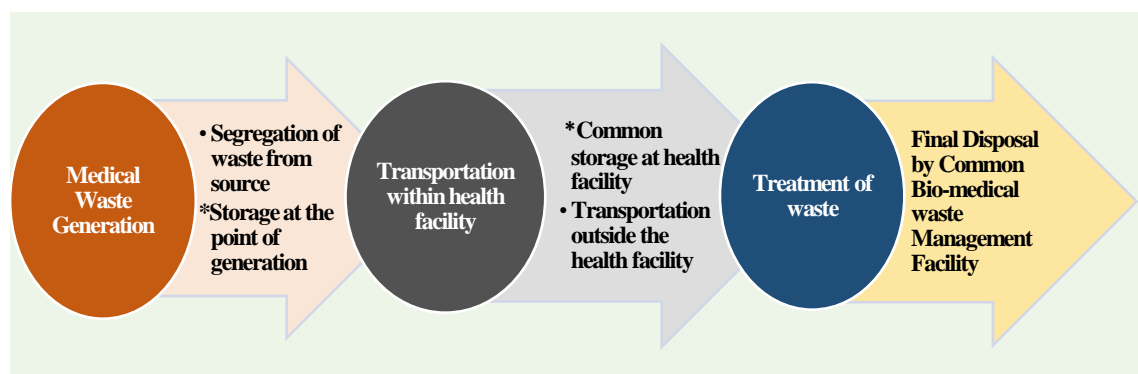
8.5 Bio-Medical waste management

Bio-medical²¹⁰ waste shall be segregated into containers/bags at the points of generation prior to its storage, transportation, treatment, and disposal. It shall be the duty of every occupier of an institution generating biomedical waste to take all steps to ensure that

²¹⁰ waste means any waste, generated during the diagnosis, treatment, or immunisation of human beings

such waste is handled without any adverse effect to human health and the environment. Steps involved in waste management in Health facilities is depicted **Chart 8.3** below:

Chart 8.3: Steps involved in waste management in Health facilities



8.5.1 Bio-Medical Waste management in Primary Health Centres

Every occupier of an institution generating or handling Biomedical Waste (BMW) shall apply (in Form 1) for authorisation to the Andhra Pradesh Pollution Control Board (APPCB). The applicant shall make an application for renewal of authorisation at least 60 days before the date of expiry with the prescribed fee. Grant of authorisation for generating BMW in any form is issued by APPCB.

Scrutiny of records of three-test checked District Medical & Health Offices revealed that all the eight Primary Health Centres (PHCs) in these test-checked districts have obtained authorisation from APPCB for generation, segregation, and safe disposal of BMW. However, the authorisation lapsed on 31 March 2022 in respect of seven test checked PHCs (except Chennur). None of the PHCs had applied for renewal of authorisation prior to expiry and were running without authorisation as of August 2022.

The Medical Officers replied that steps would be initiated to get fresh authorisation from the APPCB.

8.5.1.1 Segregation of Biomedical waste

The health care facilities, while generating the waste are responsible for segregation, collection, in-house transportation, pre-treatment of waste and storage of waste before such waste is collected by Common Bio-medical Waste Treatment Facility (CBWTF) Operator. Further, every occupier, should keep a record of BMW generated, handed over to the treatment facility.

The waste generated by PHCs is being lifted by an agency at regular intervals. However, records relating to quantity of waste generated for each category of waste were not maintained properly²¹¹ indicating lack of mechanism at PHCs for quantifying the waste at the source.

²¹¹ Chennur, Kondapuramu and Kudair

PHC Chennur stated that proper monitoring controls would be inculcated in future and PHC Kondapuramu stated that staff are not aware of the BMW weighment measures. The remaining six PHCs did not respond.

Further, Audit noticed that segregation of BMW at source is being done in all the test checked PHCs. However, in three²¹² out of eight PHCs, twin bucket facility for waste disposal was not available.



(b) Disposal of Biomedical waste

As per Bio-Medical Waste Management Rules 2016, Bio-medical waste shall be treated and disposed of (in accordance with Schedule I), and in compliance with the standards prescribed (in Schedule II). Every occupier, where required, shall set up requisite BMW treatment facilities like incinerator, autoclave, microwave system for treatment of waste, or ensure requisite treatment of waste at a common waste treatment facility or any other waste treatment facility.

Audit noticed that:

- Hypochlorite solution was not available in three²¹³ test checked PHCs for decontamination of blood spills and medical waste for reduction of microorganisms.

Government in its reply (August 2023) stated that Hypochlorite solution is not in the list provided by the Government to the PHCs. Hence, no PHC in the State is having Hypochlorite solution.

However, audit observed that IPHS, 2012 and 2022 recommended to use 0.5 per cent Hypochlorite solution for treatment of infective spills like blood.

- For collection, treatment, and disposal of BMW from the PHCs, APPCB identified 11 Common Bio-Medical Waste Treatment Facilities (CBMWTF) to operate in Andhra Pradesh. As per BMW Rules²¹⁴, no untreated BMW shall be stored beyond a period of 48 hours from generation. However, BMW was not

²¹² Chennur, Kudair and Thummalapenta

²¹³ Chennur, Kudair and Thummalapenta

²¹⁴ 2.1 (2) of Guidelines for Management of Healthcare Waste as per BMW Rules, 2016

lifted within 48 hours in three²¹⁵ of the eight-test checked PHCs. Further, BMW was lifted at an interval of 15 days during 2021-22 in PHC Kondarapuram.

BMW from healthcare activities poses a higher hazard of infection and damage, than other types of waste, if not handled properly.

8.5.2 Biomedical waste Management in secondary and tertiary health care facilities

As per Biomedical Waste Management Rules 2016, all health care facilities shall obtain authorisation to generate biomedical waste from Pollution Control Board (PCB). PCB shall select a treatment facility for collecting biomedical waste from the health facility for treatment. The treatment facility shall collect the BMW on daily basis so as not to keep the BMW untreated beyond the period of 48 hours.

We observed that, all the nine-test²¹⁶ checked secondary health care facilities under the control of Andhra Pradesh Vaidya Vidhan Parishad had obtained authorisation for generating BMW and liquid waste from APPCB. However, authorisation had expired in March 2023. Out of three test checked GGHs authorisation was expired on June 2021 (GGH Nellore) and January 2023 (GGH Anathapuramu) and had not been renewed.

All the nine-test checked secondary health care facilities were segregating BMW at source. Segregated waste was being handed over to the respective Common biomedical treatment facilities. However, the biomedical waste generated was not being lifted on daily basis (except at DH Atmakur). In all other secondary health care facilities, the lifting of BMW ranged between once a week²¹⁷ to alternate days.

BMW Rules 2016 stipulate that the health facilities shall furnish annual report regarding generation of BMW to APPCB. However, none of the test checked HCFs furnished such reports.

Government replied (August 2023) that the biomedical waste was being lifted from the six HCFs²¹⁸ on daily basis.

8.5.3 Management of liquid biomedical waste

8.5.3.1 Effluent Treatment Plant in Secondary care hospitals

BMWM Rules 2016 (Schedule I (f)) stipulate that, Chemical Liquid Waste²¹⁹ shall be pretreated before mixing with wastewater. The health care facilities were required to discharge the lab washing and canteen and domestic wastewater after disinfection for treatment in the Effluent Treatment Plants (ETP). The treated wastewater shall be utilised for utilities, flushing of toilets, on land for gardening within the premises to the

²¹⁵ Kondapuram, Kudair and Narpala

²¹⁶ DH Tekkali, DH Atmakur, DH Hindupur, AH Seethampeta, AH Kavali, AH Kadiri, CHC Sompeta, CHC Naidupeta, CHC Kothacheruvu

²¹⁷ CHC Kothacheruvu

²¹⁸ DH Tekkali, DH Hindupur, DH Atmakur, AH Seethampet, AH Kavali and CHC Sompeta

²¹⁹ liquid waste generated due to use of chemicals in production of biological and used or discarded disinfectants, Silver X-ray film developing liquid, discarded Formalin, infected secretions, aspirated body fluids, liquid from laboratories and floor washings, cleaning, house-keeping and disinfecting activities etc.

maximum extent possible and the balance may be discharged into sewer, after meeting the standards stipulated.

APPCB, while issuing authorisation to HCFs, stipulated the permissible limit for effluent discharged by each health care facility per day after disinfection and treatment in the ETP. As per Schedule B of BMW authorisation issued by APPCB, HCF shall construct and operate the ETP continuously to treat the wastewater generated to meet the Board standards within three months from the date of authorisation. Audit noticed that ETPs were not established in any of the test checked health care facilities.

Hospital effluent may contain a large variety of potential, hazardous microbiological pathogens, radioactive isotopes, at high concentrations. If the effluent from hospitals is not properly treated, then the environment and human health can be negatively impacted.

8.5.3.2 Installation of Sewage Treatment Plants

As per the instructions issued²²⁰ (October 2012) by APPCB, all health care establishments with 100 and above beds which are not connected to the terminal treatment plant through public sewer should construct and commission Sewage Treatment Plant (STP) duly following the discharge standards prescribed under the Environmental Protection Act 1986.

Audit noticed (April 2023) that:

- In Government General Hospital (GGH) Srikakulam, the installed STP was not functioning for more than two years, and the wastewater was directly discharged into Nagavali river. Even after the issue of Court Notice, no action was initiated to make STP functional.

The Superintendent GGH, Srikakulam replied that the District Collector was requested to convene a meeting with APMSIDC to make the STP functional.

- At GGH Nellore²²¹ the STP was not functional. Environmental Engineer, APPCB Nellore had issued notices (July, August, October of 2021) to GGH and ACSR Medical College, Nellore for renewal of authorisation. Despite show cause notice issued (October 2022/January 2023) by the Environmental Engineer/APPCB there was no response from the hospital authorities.

The Medical Superintendent, GGH Nellore replied that the matter would be brought to be notice of the APMSIDC, Nellore for identification and issue of work order for the functioning of STP.

- At GGH, Anantapur, STP was installed only in November 2022 and is under operation.

²²⁰ Memo No. B-7/APPCB/BMW/Gen/2007 dated 08.10.2012

²²¹ Sri A.C Subba Reddy Medical college and GGH

- STPs were not available in all the three test checked District hospitals²²² and three Area Hospitals²²³.

Reply from the Government is awaited.

Thus, the Sewage Treatment Plants installed at Srikakulam and Nellore were non-functional. Further, STPs were not installed in any of the test-checked District and Area hospitals. There was delay in disposal of waste by some of the test checked HCFs. Bar coding system that tracks biomedical waste, was implemented partially.

8.5.4 Availability of Common Bio-Medical Waste Treatment Facility

There are 11 Common Bio-Medical Waste Treatment (CBMWTF) facilities (as detailed in *Appendix 8.3*) in operation in Andhra Pradesh for collection, treatment and disposal of bio-medical waste.

Figure 8.4: CBMWTF at Athivaram village in SPSR Nellore district (erstwhile) (April 2023)



CBMWTF at Athivaram village SPSR Nellore district (erstwhile)



Incinerator in CBMWTF at Athivaram village



Shredder for shredding Plastic Waste at Athivaram village



Autoclave at Athivaram village

Audit noticed that:

- CBMWTF (authorisation valid till April 2024) located at Anantapur was non-functional since November 2021 due to complaints received from local villagers. Waste collected (from 1040 Health Care Facilities) was segregated at the treatment facility in Anantapur, however, the waste was transported to the treatment facility at Ongole which is about 300 kms from Anantapur. As per guidelines for management of healthcare waste, generated waste must be

²²² DH Tekkali-200 beds, DH Atmakur-150 beds and DH Hindupur-200 beds

²²³ AH Seethampeta, AH Kavali and AH Kadiri, all are 100 bedded hospitals

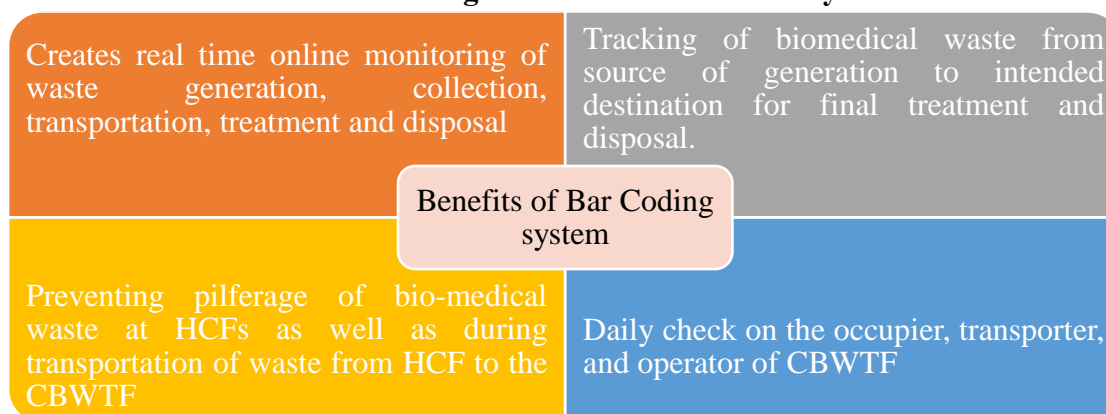
segregated at the point of generation²²⁴ of source and not in later stages. However, during physical verification of treatment facilities, it was noticed that the collected BMW is being segregated at the CBMWTF in both the districts Anantapur and SPSR Nellore instead of segregating at source of generation.

The APPCB replied that some of the HCFs are handing over the waste without segregation.

- Bio-Medical Waste Management Rules, 2016 stipulate that it is the duty of every HCF to establish a bar code system by March 2019 for bags or containers containing BMW to be sent out of the premises or place for any purpose. Further, Rule 5 of the BMW Rules, 2016 stipulates that it is the duty of every operator of CBMWTF to establish Bar Code system for handling of bio-medical waste.

As per guidelines for Bar Code system issued (2018) by Central Pollution Control Board (CPCB), the Bar Code system shall be implemented for proper accounting of the quantity of BMW collected, treated and disposed off. The advantages of Bar Code System are shown in **Chart 8.4**.

Chart 8.4: Showing the merits of Bar Code System



It was noticed that the implementation of Bar Code System is partial in Anantapur and SPSR Nellore Districts out of three test checked districts. Environmental Engineer, APPCB, SPSR Nellore replied that the HCFs have implemented Bar Code System in some hospitals. Due to COVID pandemic, the implementation of Bar Code system was partial. Now, APPCB has taken the implementation of Bar Coding for handling of BMW and given directions to the operators of CBMWTF to complete the same by May 2023.

The Executive Engineer, APPCB, Anantapur replied that Bar Code System is being implemented for Hospitals with 50 beds and above.

²²⁴ 'Point of Generation' means the location where wastes initially generate, accumulate and is under the control of doctor / nursing staff *etc.* who is providing treatment to the patient and in the process generating bio-medical waste

8.6 Quality certification from National Quality Assurance Standards

8.6.1 Public health facilities with accreditation certificates

The objective of HCF is to ensure safe, people centred, efficient, and effective delivery of healthcare services and promote health & wellness among communities by active engagement and capacity building of community level platforms and individuals.

Accreditation is one form of external evaluation of Health Care Facilities (HCFs) to determine whether benchmark standards were achieved in line with predefined requirements or standards, to produce an assessment stating whether the facility or organisation has achieved those levels.

In India, the National Quality Assurance standards, measure standards under each level of healthcare institution (DH/CHC/PHC) under eight broad themes²²⁵.

The details of HCFs in the State having accreditation certificates under National Quality Assurance Standards are detailed in **Table 8.3** below.

Table 8.3: Showing the Health Care facilities having accreditation

Description	PHCs	CHCs	District Hospitals/Area Hospitals
Total number of Health care Facilities (HCF)	1,145	175	65
Number of HCF accredited	320	12	24
Percentage of HCFs accredited	27.95	6.86	36.92

Source: Information furnished by CFW & DPHFW

As seen from the above table, percentage of accredited HCFs in the State is poor. Accreditation should be viewed as an intervention to support the continuous process required to improve the quality of care and processes in the target facility.

Government is investing considerable amounts in health system hence it is important to know the impact of its investments and outcomes for further planning and to review the areas of concern. Poor percentages in accreditations could not give assurance to the Government as well as public for quality of health services.

8.6.1.1 Internal Monitoring for Sub Centres

IPHS envisaged two levels of monitoring for a Sub-Centre *viz.* internal, and external monitoring.

- Internal monitoring involves supportive supervision and record checking at periodic intervals by the Male and Female Health Assistants (MFHA) from PHC once in a week and Medical Officer visiting an SC once in a month to check the work of the staff and to provide curative services. Nine test checked SCs stated the Medical Officers were visiting the SCs, however no record, evidencing their visits was furnished to audit. Hence, audit could not ensure that internal monitoring was in place in all test checked SCs.

²²⁵ Area of Concerns *viz.*, Service Provision, Patient Rights, Inputs, Support Services, Clinical Services, Infection Control, Quality Management and Outcome in the system

- External monitoring should be done by Village Health Sanitation and Nutrition Committee and evaluation by an independent external agency. However, only three²²⁶ out of nine test checked SCs stated that monitoring by VHSNC was done and no independent evaluation was done in all the test checked SCs.

Government stated (August 2023) that third party inspections were conducted at regular intervals and action was taken on the feedback and ATR was reviewed by the higher authorities regularly. It was further stated that social audit by public representatives was initiated.

8.6.1.2 Internal Monitoring for PHCs

Internal Monitoring mechanism to assess the functioning of PHC involves record maintenance, checking and supervision, medical audits, death audits, patient satisfaction surveys and evaluation of complaints and suggestions. External monitoring framework involves monitoring through PRI / VHSNC / Hospital Development Society, etc.

- Out-patient Record was not maintained at Registration Counter. MOs were found maintaining their own registers in the test checked PHCs.
- Hospital Development Society (HDS) is to be constituted to monitor the activities for improvement of the management and service provision of the PHC. We observed one²²⁷ PHC did not constitute HDS committee.

Patient Satisfaction Survey was conducted only in Kondapuramu PHC. Sound monitoring mechanism provide an assurance of service delivery to the beneficiaries. Five²²⁸ of eight PHCs stated that the monitoring mechanism was not available.

8.6.2 Accreditation by National Accreditation Board for Hospitals (NABH) and Healthcare providers

The hospital accreditation program is the flagship program of NABH and was started in the year 2005. This program intends to improve healthcare quality and patient safety at public and private hospitals. The accreditation standards for hospitals focus on patient safety and quality of delivery of services by the hospitals in a changing healthcare environment. Implementation of accreditation standards ensures patient safety and commitment towards quality care resulting in good clinical outcomes and further improves patient satisfaction and increases community confidence over the HCFs.

All the three-test checked GGHs had applied for accreditation however, accreditation was not awarded to any of them as detailed below;

- GGH Anantapur: after elapse of more than three years and making payment of ₹27.38 lakhs during from June 2017 to October 2021, final assessment was not conducted and accreditation was not received.

²²⁶ Goppili, Leguntapadu and Karutlapally

²²⁷ Urlam of Srikakulam district

²²⁸ Karajada, Kondapuramu, Kudair, Narpala and Urlam

- GGH Nellore: an amount of ₹15.40 lakh was paid during May 2019 to November 2021 for accreditation. The final assessment for NABH accreditation was not made.
- GGH Srikakulam: an amount of ₹17.45 lakh was paid during February 2019 to October 2021 for accreditation. However, accreditation was not received.

In all the above cases, the GGHs did not pursue with NABH for final assessment after they rectified all the discrepancies made during the pre-assessment.

Government stated (August 2023) that pre-assessment in respect of GGHs Anantapur and Nellore were completed. Non-conformances (NCs) communicated by NABH Board were complied with and further reports from NABH Board were waited. It was further stated that final assessment in respect of GGH Srikakulam was completed.

8.7 Recommendations

- *The Department may strengthen the enforcement of Andhra Pradesh Allopathic Private Medical Care Establishments Act and ensure regular inspections, so that all the Private Medical Care Establishments function with valid registration certificates.*
- *Government needs to strengthen the Regulatory mechanism of Drug Control Administration by deploying more manpower for inspection of manufacturing/sale units of drugs.*
- *Government may ensure installation of Effluent Treatment Plants in all eligible hospitals. Government may make Sewage Treatment Plants functional for safe handling of liquid biomedical waste, where they were dysfunctional and ensure establishment in 100 and above bedded Government hospitals.*
- *Government may instruct all the HCFs to maintain minimum quality standards to give an assurance of quality health care to the intended population.*
- *Government should ensure that various regulatory bodies may adopt an adequate and effective monitoring mechanism to guarantee conformity with the necessary minimum standards.*

Chapter IX

SDG 3 - State of Good Health and Wellbeing

Chapter IX

SDG 3 - State of Good Health and Wellbeing

Target for Maternal Mortality Rate 2030 is set for 70 for every one lakh live births, whereas Andhra Pradesh achieved only 83 in 2022. Target set for suicide rate is 3.5 per one lakh population, the State was at 12.4 per lakh population. Death Rate due to road accidents per one lakh population in the year 2022 was 15.26 against the target of 5.81 by 2030. Target set for Monthly Per Capita Out of Pocket Expenditure (MPCOOPE) on Health as a share of monthly per capita consumption expenditure is 7.83 per cent, whereas in Andhra Pradesh MPCOOPE is 13.50 per cent. Performance of the State is behind the National average in respect of indicators like 'total case notification rate of Tuberculosis', 'death rate due to road traffic accidents', 'Suicide rate' and 'monthly per capita out-of-pocket expenditure (MPCOOPE)'.

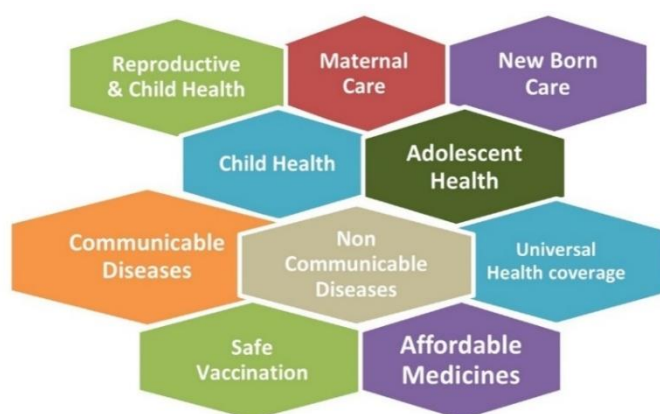
9.1 Introduction

United Nations General Assembly adopted (September 2015) '**Agenda for Sustainable Development**' which comprises a set of 17 Goals and 169 Targets to be achieved before the end of the year 2030. **SDG 3, "Good Health and Well-Being,"** calls on countries to ensure healthy lives and promote well-being for all at all ages. SDGs are a comprehensive set of interconnected goals and targets, which are required to be monitored during 2016 to 2030.

The State Government has taken number of measures such as Preparation of State Indicator Framework, Mapping of the Departments and schemes, SDG-aligned outcome budget and monitoring platform *etc.*, for strengthening the delivery of healthcare services, in line with the SDGs. The State Government has identified 169 targets and 478 related indicators (2021-22) for the 17 SDGs.

SDG 3 aims to ensure healthy lives and promote well-being for all, at all ages. Health and well-being are important at every stage of one's life, starting from birth. This goal addresses major health priorities as depicted below in **Chart 9.1**.

Chart 9.1: Chart showing Health Priorities



NITI Aayog had mapped schemes or programmes related to the SDGs and their targets. National Health Mission (NHM) is the flagship scheme of GoI to improve the overall health status of the country by providing universal access to equitable, affordable, and quality healthcare services that are accountable and responsive to people's needs. This scheme covers all programmes related to the Health Sector. Universal health coverage includes financial risk protection, access to quality essential healthcare services and access to safe, effective, quality, and affordable medicines. The Global Targets and the indicator selected for 2030 are outlined as indicated below in **Table 9.1**.

Table 9.1: Global Targets and SDGs in India

SDG No.	Global Target	Indicator selected for SDG in India	Programmes linked with these goals	Target value for 2030
3.1	Reduce the global maternal mortality ratio to less than 20 per 1,00,000 live births	Maternal Mortality Ratio (MMR)	1 Programmes under Reproductive and Child Health (RCH)	70
3.2	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 live births	Under five mortality rate per 1000 live births	2 Pradhan Mantri Maatru Vandana Yojana (PMMVY)	11
		Percentage of children aged 12 to 23 months fully immunised (BCG, Measles and three doses of pentavalent vaccine)		100
3.3	End the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water borne disease and other communicable diseases	Annual notification of Tuberculosis cases per one lakh population	1 NHM - Flexible Pool for Communicable Diseases 2 National Vector Borne Disease Control Programme (NVBDCP) 3 Integrated Disease Surveillance Project (IDSP) 4 National Leprosy Eradication Programme (NLEP) 5 National AIDS Control Programme	0

SDG No.	Global Target	Indicator selected for SDG in India	Programmes linked with these goals	Target value for 2030
3.8	Achieve, universal health coverage, including financial risk protection, access to quality essential-health care services and access to safe, effective quality and affordable essential medicines and vaccines for all	Number of governmental physicians, nurses and midwives per 10,000 population	1 NHM - Human Resources for Health & Medical Education 2 Human Resource & Capacity Development	550

Source: SDG India Index Report 2018

Implementation of Centrally Sponsored Schemes /programmes such as RCH, PMMVY, NTEP, NVBDCP, NLEP, NPCDCS, NTEP, PMNDP *etc.* to realise SDG Goals is discussed in **Chapter 7**.

9.1.1 Comparison of indicators with neighbouring states

Audit noticed that the performance of the State is below the National average and also lagged behind the southern states of India in respect of indicators like, 'Under five mortality rate', 'percentage of children in the age group 9 to 11 months fully immunised', 'total case notification rate of Tuberculosis', 'death rate due to road traffic accidents'. The status of health indicators of Andhra Pradesh, as compared to the National average and southern states of India is given in **Table 9.2**.

Table 9.2: Status of health indicators of Andhra Pradesh, as compared to the National average and southern states of India

SDG	Indicator		Target by 2030	India	Andhra Pradesh	Telangana	Tamil Nadu	Karnataka	Kerala
3.1	Maternal Mortality Ratio (per 1,00,000 live births)	MMR	70	113	65	63	60	92	43
3.2	Under 5 mortality rate (per 1,000 live births)	U5MR	25	36	33	30	17	28	10
3.2	Percentage of children in the age group 9-11 months fully immunised	Immunisation	100	91	87	98	84	94	92
3.3	Total case notification rate of Tuberculosis (per 1,00,000 population)	TB Notification	242	177	189	192	138	135	75
3.3	HIV incidence (per 1,000 uninfected population)	HIV Incidence	0	0.05	0.05	0.08	0.04	0.02	0.02
3.4	Suicide rate	Suicidal rate	3.5	10.4	12.4	20.6	17.8	17.1	24.3

SDG	Indicator		Target by 2030	India	Andhra Pradesh	Telangana	Tamil Nadu	Karnataka	Kerala
	(per 1,00,000 population)								
3.6	Death rate due to road traffic accidents (per 1,00,000 population)	Road accidents-deaths	5.81	11.56	15.26	18.68	13.88	16.60	12.42
3.7	Percentage of institutional deliveries out of the total deliveries reported	Institutional deliveries	100	94.40	99.6	99.9	99.9	99.9	99.9
3.8	Monthly per capita out-of-pocket expenditure on health as a share of Monthly per capita Consumption Expenditure (MPCE)	MPCE	7.83	13.00	13.50	14.40	9.10	9.80	17.00
3.c	Total physicians, nurses and midwives per 10,000 population	HR	45	37	95	10	65	70	115
SDG 3 Index Score			100	74	77	67	81	78	72

Green- Satisfactory Performance; Yellow - Moderate Performance & Red- Poor Performance

Source: SDG India index and dashboard 2021 by NITI Aayog

Status of various SDG 3 Indicators in Andhra Pradesh as of March 2021 is explained hereunder:

9.1.1.1 SDG 3.1 - Maternal Mortality Ratio

Global target is to reduce Maternal Mortality Ratio²²⁹ to 70 per 1,00,000 live births by 2030. As per NITI Aayog Global report 2022, Andhra Pradesh stood with the rate of 65 per 1,00,000 live births. However, we observed from the data collected from all districts that MMR of the State ranged from 52 to 87 per 1,00,000 live births over the years 2017-18 to 2021-22. The MMR was also not consistent in all districts in the year 2021-22, the MMR was 151 in Visakhapatnam district, 143 in Krishna district, 142 in East Godavari, 124 in West Godavari while it was 28 in SPSR Nellore district. This shows that the MMR across the districts was not consistent over the years as given in **Table 9.3**.

Table 9.3: Year wise MMR in Andhra Pradesh

MMR	2017-18	2018-19	2019-20	2020-21	2021-22
	87	62	52	67	83

Source: Year wise MMR data furnished by CFW

Government accepted (August 2023) the Audit observation and promised compliance.

²²⁹ No. of maternal deaths per 1,00,000 live births

9.1.1.2 SDG 3.2 – Under five Mortality Rate (U5MR)

According to Sample Registration System (SRS) Bulletin 2016-18, 36 children died before completing five years of age for every thousand live births in India. Target is set to bring U5MR down to 25 per 1,000 live births by 2030. However, as per NITI Aayog report for SDG India index and Dashboard 2020-21, Andhra Pradesh recorded a mortality rate of 33 per 1,000 live births.

Government accepted (August 2023) the audit observation and stated that, as per latest SRS Bulletin 2020, the U5MR of Andhra Pradesh was 27 per 1,000 live Births and the target 25 deaths per 1,000 live births would be achieved by 2030.

9.1.1.3 SDG 3.2 - Immunisation in children

The national target set for routine immunisation of children in the age group of 9 to 11 months is 100 *per cent*. Andhra Pradesh achieved only 87 *per cent* by the end of March 2021, as per NITI Aayog report for SDG India index & Dashboard 2020-21.

Government stated (August 2023) that Andhra Pradesh has achieved 97.80 *per cent* in FY 2020-21 towards full immunization of children in the age group 9-11 months and 102.52 *per cent* in 2021-22.

9.1.1.4 SDG 3.3-TB case notification

Target is set at 242 cases per 1,00,000 population for TB case notification rate in India. In Andhra Pradesh 189 cases were notified by the end of March 2021. Though this appears to be better than the envisaged levels, AP stood below the national average of 177 for the same period.

Government accepted (August 2023) the audit observation and stated that various awareness activities were taken up under Jan Andolan initiative.

9.1.1.5 SDG 3.3-HIV incidence

HIV cases should be brought down to zero by the year 2030. The State however, reported five HIV cases per every 1,00,000 uninfected population to the end of March 2021.

Reply from Government is awaited.

9.1.1.6 SDG 3.4 Suicide rate

As per the Report of National Crime Records Bureau, suicide rate in India per 1,00,000 population for the year 2021 was 10.4. However, in AP, the rate is 12.4 which is above the national average.

Number of deaths due to suicides in Andhra Pradesh and India during the years 2017 to 2021 is indicated in **Table 9.4**.

Table 9.4: No. of deaths due to suicides in Andhra Pradesh and India during the years 2017 to 2021

Year	Deaths due to suicides in India	Percentage of increase over previous year	Estimated population of AP	Deaths due to suicides in Andhra Pradesh ²³⁰	Percentage of increase over previous year
(1)	(2)	(3)	(4)	(5)	(6)
2017	1,29,887	-	5,23,42,459	5,354	-
2018	1,34,516	3.56	5,28,10,016	5,319	(0.65)
2019	1,39,123	3.42	5,30,54,609	6,465	21.55
2020	1,53,052	10.01	5,26,69,000	7,043	8.94
2021	1,64,033	7.17	5,28,95,000	8,067	14.54
Total	7,20,611		26,37,71,084	32,248	

Source: NCRB reports

It can be seen from the above table, the suicide rates increased from 8.94 *per cent* in the year 2020 to 14.54 *per cent* in 2021.

Even though the Department is required to provide care, treatment and rehabilitation to a person having severe stress and tendency to commit suicide, HM&FW Department has however, not linked this indicator to any of the scheme.

Government replied (August 2023) that State was implementing the National Mental Health Programme (NMHP) and providing community mental health services. It was further, stated that State Tele MANAS cell was established and is operational round-the-clock providing counselling services for individuals with anxiety, depression, substance abuse, stress, and suicidal tendencies. The counsellors at the Tele MANAS cell have successfully prevented 52 suicide attempts through effective counselling.

9.1.1.7 SDG 3.6-Death due to Road accidents

Reducing the number of deaths and injuries from road traffic accidents is one of the goals/indicators in the National Indicator Framework. As per SDG 3.6, deaths due to road accidents should be reduced to 5.81 per one lakh population by 2030. However, the State Government has not mapped any scheme to this indicator. As per National Crime Records Bureau in India, 11.56 persons per 1,00,000 population died in road accidents during 2021, as reported in the Accidental Deaths and Suicides. In Andhra Pradesh, the death rate was 15.47 persons per 1,00,000 population in 2021, which is above the national death rate. Deaths due to Road accidents in Andhra Pradesh during 2017 to 2021 are shown in **Table 9.5**.

Table 9.5: Deaths due to Road accidents in Andhra Pradesh during 2017 to 2021

Year	Road accidents	Deaths	Estimated population	Road accident deaths per 1,00,000 population
2017	22,456	8,060	5,23,42,459	15.40
2018	21,008	7,584	5,28,10,016	14.36
2019	20,677	7,984	5,30,54,609	15.04
2020	17,924	7,039	5,26,69,000	13.36
2021	21,556	8,186	5,28,95,000	15.47
Total	1,03,621	38,853	26,37,71,084	14.73

Source: NCRB reports

²³⁰ As per National Crime Records Bureau (NCRB) 2021 report, illness, family problems, bankruptcy or indebtedness and drug abuse or alcoholic addiction are the major causes for these suicides

The Ministry of Health and Family Welfare is implementing a Scheme named “Capacity Building for developing Trauma care Facilities in Government Hospitals on National Highways” with the objective to bring down preventable deaths because of road accidents. In the test checked HCFs of DH Tekkali and CHC Naidupeta, Trauma care facilities were sanctioned under the above scheme. We observed however, that the trauma care facilities at CHC Naidupeta were not yet established. In DH Tekkali, the trauma care facility was not functional due to lack of human resources.

Reply from Government is awaited.

9.1.1.8 SDG 3.7 - Institutional Deliveries in the State

Institutional deliveries mean the proportion of births occurring in health facilities in the area or institutional births. All women should have access to skilled care during pregnancy and childbirth to ensure prevention, detection and management of complications. Assistance by properly trained health personnel working within an enabling environment is needed to eliminate preventable maternal and newborn deaths.

Institutional deliveries in Andhra Pradesh ranged between 98.84 *per cent* in 2017-18 to 99.93 *per cent* in 2021-22.

9.1.1.9 SDG 3.8 - Monthly per capita out of pocket expenses

The monthly per capita out-of-pocket expenditure (MPCOOPE) on health constituted 13 *per cent* of the monthly per capita consumption expenditure (MPCE) in India²³¹. National average against the goal set at 7.83 *per cent* by 2030. However, in Andhra Pradesh MPCOOPE is 13.5 *per cent* of MPCE, which is above national average.

Reply of the Government is awaited.

Thus, performance of the State is below the National average in respect of SDG 3 indicators like ‘total case notification rate of Tuberculosis’, ‘death rate due to road traffic accidents’, ‘Suicide rate’ and ‘monthly per capita out-of-pocket expenditure (MPCOOPE)’ which are essential for health and well-being of the people of the State.

²³¹ NITI Aayog SDG Report for 2020-21

Chapter X

Functioning of AYUSH

Chapter X

Functioning of AYUSH

During the period 2017-22, out of ₹186.15 crore approved by Government of Andhra Pradesh only an amount of ₹26.62 crore (14.30 per cent) was spent towards capital works/development of infrastructure of AYUSH Medical Colleges. Out of the Budget approved/released, an amount of ₹159.53 crore was frozen by the State Government during 2017-22. The funds released ₹2.17 crore under National Health Mission could not be utilised, as State Government had not released the funds in each financial year and instead released the funds to the Commissioner, AYUSH in 2021 in one lump. State Government did not provide sufficient budgetary support for improvement of infrastructure facilities and required quantity of drugs in AYUSH Hospitals, colleges, and dispensaries. GoI released ₹47.42 crore for the years 2017-18 to 2020-21 towards implementation of National AYUSH Mission, out of which State Government released only ₹12.73 crore and retained the remaining funds of ₹34.69 crore till December 2022. Due to delay in release of funds, some approved activities under the State Annual Action Plan i.e., establishment of new AYUSH Hospitals, Ayurvedic Pharmacy, development/farming of medicinal plants and Establishment of health & wellness centres were not taken up. The test checked colleges and hospitals under AYUSH lacked infrastructure facilities, equipment, laboratories and development/farming of medicinal plants and there was shortfall in availability of drugs and medicines, thereby affecting the performance of these institutes. About 56 per cent of the posts of Medical and paramedical staff were vacant in all the test-checked AYUSH Hospitals and Colleges affecting the quality of services and education. Regulatory mechanism was not in place as per the provisions of Clinical Establishment Act 2010 for regulating Hospitals, Clinics, Diagnostic services, and Laboratories under AYUSH.

10.1 Introduction

AYUSH is the acronym of the medical systems that are being practiced in India such as Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy. These systems are based on definite medical philosophies and represent a way of healthy living with established concepts on prevention of diseases and promotion of health. The basic approach of all these systems on health, disease and treatment are holistic. The details of health care facilities available (as on September 2022) under AYUSH in the State of Andhra Pradesh is given in **Table 10.1** below.

Table 10.1: Availability of Health care facilities under AYUSH

Sl. No.	Health institution	System-wise					Total
		Ayurvedic	Naturopathy	Unani	Siddha	Homoeopathy	
1	Hospitals	3	Nil	2	Nil	3	8
2	Government Colleges	1	Nil	Nil	Nil	3	4
3	Government Dispensaries	333	Nil	74	Nil	182	589
4	National Health Mission Dispensaries	40	25	18	Nil	53	136

Source: Commissioner of AYUSH records

In the State of Andhra Pradesh, there is one Ayurvedic Medical College²³² with one attached teaching hospital²³³. In addition, there are two²³⁴ Ayurvedic hospitals. There are three²³⁵ Homoeopathy Medical Colleges. Each Medical college is attached with one Homoeopathy Hospital. There is no Government Unani Medical College in the State. However, one Medical College in private sector is functioning in Kurnool. Two²³⁶ Government Unani Hospitals are functioning in the State with twenty beds each.

10.2 Organisational set-up of AYUSH Department

The Department of AYUSH is headed by Commissioner functioning under the control of Principal Secretary, Health, Medical and Family Welfare (HM&FW) Department, Government of Andhra Pradesh. The Commissioner is assisted by Additional Director and Drug Licensing Authority (Homoeo), Inspector and Drug Licensing Authority (Ayurveda and Unani), four Regional Deputy Directors, Principals of Colleges, Superintendents of Hospitals and other supporting staff.

10.3 Scope and coverage of Audit

As a part of Audit, Office of the Commissioner, AYUSH and two medical colleges with attached two hospitals, one each from Ayurveda²³⁷ and Homoeopathy²³⁸, were selected for detailed examination. Further, a joint physical verification was conducted to assess the availability of infrastructure facilities in colleges and hospitals and wherever required, photographs were taken as evidence.

10.4 Finance

The Department of AYUSH receives budgetary support from State Government towards salaries, administrative expenses and drug procurement. In addition to this, Government

²³² Dr. N.R.S Government Ayurvedic College, Vijayawada 75 Undergraduate and 25 Post Graduate seats

²³³ Dr. A.L. Government Ayurvedic Hospital, Vijayawada with 140 beds

²³⁴ Government Ayurvedic Hospital, Alluru, SPSR Nellore District with five beds and Government Ayurvedic Hospital, Banaganapalli, Kurnool District with ten beds (with bed strength of 15 beds)

²³⁵ Dr. Gururaju Government Homoeo Medical College, Gudivada, with 50 UG, 23 PG seats and Dr. Allu Ramalingaiah Government Homoeo Medical College, Rajahmundry, with 63 UG, 23 PG seats, Government Homoeo Medical College, Kadapa, with 38 UG, 8 PG seats. Total intake capacity 151 UG and 54 PG seats

²³⁶ one in Kurnool and the other in Adoni, Kurnool district

²³⁷ Dr. N.R.S Government Ayurvedic College, Vijayawada and Dr. A.L. Government Ayurvedic Hospital, Vijayawada, NTR District

²³⁸ Dr. Gururaju Government Homoeo Medical College and Dr. Gururaju Government Homoeo Hospital, Gudivada, Krishna District

of India provides (w.e.f. FY 2016-17) funds under National AYUSH Mission (NAM²³⁹) and from State Government towards 40 per cent matching State share towards infrastructure development, procurement of drugs and medicines for 589 dispensaries, hospitals and colleges. The details of funds received under Central and State share under NAM during the period 2017-21 is given in **Table 10.3**. Further, GoI also provides funds under National Health Mission (NHM) schemes for procurement of drugs and medicines for 136 dispensaries.

10.4.1 State Budget

The details of State budget proposed, approved and expenditure incurred by AYUSH Department during 2017-22 is detailed in **Table 10.2**.

Table 10.2: Details of budget proposed /allocated and expenditure under State Budget

(₹ in crore)

Year	Component	Budget Proposed	Budget allocated	Expenditure	Percentage of expenditure against the allocation
2017-18	Salaries & Administration Expenses	133.82	142.13	118.54	
	Capital Works	39.50	30.05	0.39	
	Total	173.32	172.18	118.93	69.07
2018-19	Salaries & Administration Expenses	156.22	144.45	122.15	
	Capital Works	43.42	30.02	5.31	
	Total	199.64	174.47	127.46	73.06
2019-20	Salaries & Administration Expenses	232.22	138.34	117.70	
	Capital Works	51.08	51.08	10.07	
	Total	283.30	189.42	127.77	67.45
2020-21	Salaries & Administration Expenses	207.55	136.05	123.64	
	Capital Works	150.53	50.00	4.67	
	Total	358.08	186.05	128.31	68.97
2021-22	Salaries & Administration Expenses	146.65	130.28	121.96	
	Capital Works	101.89	25.00	6.19	
	Total	248.54	155.28	128.15	82.53

Source: records maintained by Commissioner of AYUSH

Note: The Administrative expenses include non-salaries component such as expenses towards procurement of drugs and medicines, water and electricity, rents, stationery, service postage, travelling allowances, etc.

We observe from the above that:

²³⁹ for mandatory components: AYUSH services and Educational Institutions, Quality control ASU & H drugs & Medicinal Plants and for Flexible components: Ayush Wellness Centres, Tele-medicine, Sports Medicine through AYUSH, Research & Development in areas related to Medicinal Plants etc.

(a) Short utilisation of allocated Budget

There was gap between the budget proposed and allocated during 2018-19 to 2021-22. Though there was an increase in budget proposals for AYUSH during 2017-22, the budget allocated during each year was less than the proposed. Further, the allocated budget was not utilised to the full extent during any of the years. The percentage utilisation of funds against allocation ranged between 67.45 and 82.53 *per cent*.

Government accepted (August 2023) Audit observation.

(b) Expenditure towards procurement of drugs and medicines

Out of the total expenditure towards Salaries and Administration expenses, an amount of ₹41.08 crore²⁴⁰ was proposed towards procurement of drugs and medicines for the period from 2017-18 to 2021-22. Out of the proposed amount, only ₹5.08 crore²⁴¹ (12.36 *per cent* of proposed amount) was authorised/ allocated and an expenditure of ₹4.88 crore²⁴² was incurred. The remaining amount of ₹0.20 crore could not be utilised due to freezing²⁴³ of budget by Finance Department.

Government accepted Audit observation (August 2023) and replied without specifying the reasons for short utilisation of funds.

(c) Expenditure on capital works

For the period 2017-22, an amount of ₹386.41 crore was proposed by the Department towards capital works (establishment/ upgradation of hospitals, dispensaries, *etc.*) under State budget. Out of ₹386.41 crore, an amount of ₹186.15 crore was approved and only an amount of ₹26.62 crore was spent towards capital works/development of infrastructure (14.33 *per cent* of approved budget).

Audit noticed that out of the Budget approved/released, an amount of ₹159.53 crore was frozen by the Finance Department during 2017-22. The reasons for non-utilisation of funds were release of funds at the fag end of the year, non-calling of tenders for the works proposed, *etc.* Further, the funds expended could not serve the purpose of providing infrastructure facilities as discussed in subsequent paragraphs.

Government accepted (August 2023) the Audit observation and stated that tenders were floated for proposed works at Dr. Gururaju Government Homoeo College & Hospital, Gudivada.

Thus, the State Government did not provide sufficient budgetary support for improvement of infrastructure facilities and sufficient quantity of drugs in AYUSH Hospitals, colleges and dispensaries.

²⁴⁰ 2017-18: ₹1.69 crore, 2018-19: ₹0.41 crore, 2019-20: ₹12.42 crore, 2020-21: ₹13.28 crore, 2021-22: ₹13.29 crore

²⁴¹ 2017-18: ₹1.69 crore, 2018-19: ₹0.66 crore, 2019-20: ₹0.30 crore, 2020-21: ₹0.30 crore, 2021-22: ₹2.14 crore

²⁴² 2017-18: ₹1.68 crore, 2018-19: ₹0.60 crore, 2019-20: ₹0.18 crore, 2020-21: ₹0.30 crore, 2021-22: ₹2.13 crore

²⁴³ not permitted to draw bills due to Government instructions (despite issue of Budget Release Orders)

10.4.2 Implementation of National AYUSH Mission scheme

Department of AYUSH, Ministry of Health and Family Welfare, Government of India has launched National AYUSH Mission (NAM) during 12th Plan. 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, Siddha, Unani and Homoeopathy (ASU&H) drugs and sustainable availability of ASU&H raw materials. It envisages flexibility in the implementation of the programmes for substantial participation of the State Governments.

Every year a tentative allocation by GoI is prepared by 31st December to have a Budget provision by the State Government along with matching State share by 31st March. The Executive Committee of State AYUSH Society prepares State Annual Actions Plan (SAAP) by 30 April and same has to reach GoI by first week of May for approval.

Audit noticed that the due dates were not adhered to by GoAP during the period 2017-22. This resulted in delayed approval of SAAP and delay in provisioning of funds.

(a) Short release of funds

During the period 2017-18 to 2020-21, State Annual Actions Plans (SAAPs) were proposed by State Government for ₹107.14 crore²⁴⁴. However, GoI approved the SAAPs for ₹79.03 crore²⁴⁵ and released its share of ₹47.42 crore. Out of the approved funds, an amount of ₹18.45 crore²⁴⁶ was released by the State Government and of which, only ₹16.55 crore²⁴⁷ was spent towards implementation of NAM from 2017-18 to 2020-21 as detailed in **Table 10.3** below.

Table 10.3: Statement showing the budget share of Central and State under NAM for the period 2017-18 to 2020-21

Year	Budget Proposed			Budget Approved			Budget Released			Expenditure		
	CS	SS	Total	CS	SS	Total	CS	SS	Total	CS	SS	Total
2017-18	11.18	7.46	18.64	11.76	7.84	19.6	6.43	3.37	9.80	6.06	3.10	9.16
2018-19	14.91	9.94	24.85	12.80	8.53	21.33	5.98	2.26	8.24	5.38	1.84	7.22
2019-20	16.63	11.09	27.72	18.23	12.15	30.38	0.24	0.04	0.28	0.17	0	0.17
2020-21	21.56	14.37	35.93	4.63	3.09	7.72	0.08	0.05	0.13	0.00	0.00	0.00
Total	64.28	42.86	107.14	47.42	31.61	79.03	12.73	5.72	18.45	11.61	4.94	16.55

Source: Information furnished by the Commissioner of AYUSH

CS-Central Share, SS-State Share

Thus, out of the proposed funds, only 73.76 per cent was approved by GoI, and the funds released out of approved SAAP was merely 23.34 per cent.

Further, out of the released GoI share of ₹47.42 crore, the State Government released only ₹12.73 crore to the hospitals/ colleges/ dispensaries and retained the remaining amount of ₹34.69 crore.

²⁴⁴ GoI: ₹64.28 crore, State: ₹42.86 crore

²⁴⁵ GoI: ₹47.42 crore, State: ₹31.61 crore

²⁴⁶ GoI: ₹12.73 crore, State: ₹5.72 crore

²⁴⁷ GoI: ₹11.61 crore, State: ₹4.94 crore

Out of the State share of ₹31.61 crore, the State Government released only ₹5.72 crore towards NAM implementation. Thus, overall, an amount of ₹60.58 crore was retained/not released by State Government, thereby prevented the implementation of various targeted works proposed under SAAP during the period 2017-18 to 2020-21 as detailed below in **Table 10.4:**

Table 10.4: Statement showing Information regarding balance amount to be released by State Government including GoI share

(₹ in crore)

Year	Approved			Funds released by the State Govt			Funds not released by State Government		
	Central share	State share	Total	Central share	State share	Total	Central Share	State Share	Total
2017-18	11.76	7.84	19.60	6.43	3.37	9.80	5.33	4.47	9.80
2018-19	12.80	8.53	21.33	5.98	2.26	8.24	6.82	6.27	13.09
2019-20	18.23	12.15	30.38	0.24	0.04	0.28	17.99	12.11	30.10
2020-21	4.63	3.09	7.72	0.08	0.05	0.13	4.55	3.04	7.59
Total	47.42	31.61	79.03	12.73	5.72	18.45	34.69	25.89	60.58

Source: Information furnished by O/o the Commissioner, AYUSH

Government replied (August 2023) that out of ₹60.58 crore, an amount of ₹60.56 crore²⁴⁸ was released by the State Government in three spells (December 2022, March 2023 and May 2023) and remaining amount of ₹0.02 crore (State share) was yet to be released. Thus, Government accepted delay in release of funds in SAAP during 2017-18 to 2020-21.

The delay in release of funds would impact the programme implementation.

(b) Non-release of budget during the year 2021-22

As per Para 10 of Framework for Implementation of NAM, due date for preparation of State Annual Actions Plan (SAAP) by Executive body of State AYUSH Society is 30 April of current financial year. However, the SAAP for the year 2021-22 proposed for ₹23.47 crore²⁴⁹ was not submitted to GoI.

Government replied (August 2023) that the SAAP 2021-22 was clubbed with that of 2023-24 and the State Government had already approved the same. However, documents in support of the reply was not furnished, to ensure whether the SAAP 2023-24 was submitted to GoI and approved, in time. Further, the SAAP for the years 2021-22 and 2022-23 were delayed indicating that the programme suffered with lack of funds.

(c) Non-execution of approved activities

During the period 2017-22, various activities have been approved/sanctioned under SAAP viz. establishment of AYUSH hospitals, Ayurvedic pharmacy, development /farming of medicinal plants, Establishment of health & wellness centres, etc. Due to non-release of funds by the State Government and non-provisioning of required land for construction activities, the works could not be taken up by the implementing hospitals/ colleges/dispensaries as detailed in **Appendix 10.1** as of March 2022, though approved in SAAP. Audit verified some of the cases in detail and observed the following.

²⁴⁸ GoI Share: ₹34.69 crore and State share of ₹25.87 crore

²⁴⁹ GoI Share: ₹14.08 crore and State share: ₹9.39 crore

- For construction of 50 bedded Integrated AYUSH Hospital in Kakinada, a proposal was made in SAAP 2014-15 for ₹7.92 crore. An extent of land measuring 2.54 acres was identified (April 2016) for the purpose by District Collector. The GoI approved (January 2018) the project for ₹7.82 crore on the said land. However, due to non-allotment of land by the District Collector (as of April 2022), the construction of proposed hospital did not materialise. Further, only partial funds of ₹1.50 crore (GoI share: ₹1.05 crore and State share: ₹0.45 crore²⁵⁰) were released for the purpose were lying with executing agency APMSIDC.
- A 50 bedded integrated AYUSH hospital at Visakhapatnam was approved in SAAP 2016-17 for ₹3.31 crore (GoI share: ₹1.99 crore and State share: ₹1.32 crore). Amounts were sanctioned belatedly in phase wise manner during 2016-17 to 2019-20. In spite of this, the works could not be grounded due to land acquisition problem as funds were not made available for the purpose. Ayurvedic Pharmacy at Visakhapatnam approved in SAAP 2016-17 with an amount of ₹4.78 crore (GoI share: ₹2.87 crore and State share: ₹1.91 crore) and the same were released during 2016-17 to 2019-20 in a phased manner. However, establishment of Ayurvedic Pharmacy could not be materialised due to non-availability of suitable site and funds.

The Department replied that the pendency is due to land alienation issues for the works sanctioned and non-release of funds by the State Government for activities proposed in SAAP.

Government replied (August 2023) that the procedure of tendering is under process for the HCFs in Kakinada and Visakhapatnam. Government further stated that out of 110 approved HWCs 78 were made functional.

(d) Non-release of sufficient budget for procurement of essential drugs/medicines

Availability of essential medicines is important for ensuring people's access to public health facilities. As per operational guidelines 2.1(II) of NAM, each Ayurveda and each Unani dispensary shall receive ₹Two lakh per annum and ₹One lakh per annum by each Homoeo dispensary towards procurement of essential drugs.

Similarly, ₹4.50 lakh per annum was to be provided towards procurement of drugs, medicines, diet and other consumables by AYUSH (Ayurveda, Unani and Homoeo) hospitals.

As there are 391 functional (out of 407 available) Ayurvedic & Unani dispensaries²⁵¹, 176 Homoeo dispensaries²⁵² and eight hospitals functioning in the State at present, a total

²⁵⁰ for the year 2014-15, 2015-16 NAM funds was released in the ratio of 75:25 (GoI: State) and from 2016-17 onwards the ratio of release was 60:40 by GoI: State respectively. During 2014-17 funds at ₹50 lakh (towards GoI and State share) was released each year

²⁵¹ 228 with regular medical officers & 163 with in charge medical officers

²⁵² 85 with regular and 91 with in-charge Medical Officers

of ₹49.70 crore (₹9.94 crore²⁵³ per year) has to be released to AYUSH dispensaries and hospitals over five years.

Audit noticed that out of ₹49.70 crore to be released/expended during 2017-18 to 2021-22, Government sanctioned ₹27.46 crore out of which ₹14.61 crore was shown as spent towards procurement of drugs and medicines under NAM. During 2020-21 and 2021-22 no amount was sanctioned. This resulted in non-availability of essential drugs in test checked AYUSH Hospitals.

The Commissionerate replied that based on the allocation made by the GoI, the amounts released were not sufficient to meet the requirement for supply of essential drugs and medicines.

The Department of AYUSH, GoI prepared Essential Drug List (EDL) during 2013 for Ayurveda²⁵⁴, Unani²⁵⁵ and Homoeopathic systems²⁵⁶. As per EDL list, 257 types of medicines²⁵⁷ for Homoeopathy Hospitals/dispensaries and 277 types of medicines for Ayurvedic hospitals/dispensaries were categorised as Essential Drugs.

Physical verification of Stores and verification of records of the test checked hospitals revealed that only 161 essential medicines were available in the stores in Dr. Gururaju Government Homoeopathic Hospitals, Gudivada, while 26 types of Ayurvedic medicines were available in Dr. A.L. Government Ayurvedic Hospital, Vijayawada.

Superintendent of Dr. A. L Government Ayurvedic Hospital replied that the hospitals were receiving only these medicines, even though all EDL medicines were indented for.

Government replied (August 2023) that the amount towards medicine component was released as per the allocations made by the GoI.

The reply is not acceptable, as an amount of ₹7.98 crore was released to APMSIDC towards procurement of drugs. Out of ₹7.98 crore, only an amount of ₹0.82 crore was spent and ₹7.16 crore remained unspent (89.72 *per cent*) as APMSIDC did not procure the requisite drugs in full as indented by AYUSH Hospitals for the period 2017-22.

(e) Non-submission of Utilisation Certificates

As per Para 8 of Framework for implementation of NAM and operational guidelines release of grant-in-aid in subsequent years would be done only after receipt of utilisation certificate on provisional basis in respect of grants of the preceding financial year. Release of Grants-in-Aid in excess of 75 *per cent* of the total amount sanctioned in the subsequent financial year shall be done, only after submitting the UC and the annual audited statement relating to the Grants-in-Aid released in the preceding year.

²⁵³ Ayurvedic/Unani dispensaries: ₹2.00 lakh x 391 dispensaries (₹7.82 crore), Homoeopathy dispensaries: ₹1.00 lakh x 176 dispensaries (₹1.76 crore) and Ayurvedic/Unani/Homoeopathy Hospitals: ₹4.50 lakh x 8 hospitals (₹0.36 crore)

²⁵⁴ https://arogya.maharashtra.gov.in/Site/PDFs/EDL_Ayurveda.pdf

²⁵⁵ https://upnrhm.gov.in/assets/site-files/gogl/fy2014-15/Essential_Unani_Medicines.pdf

²⁵⁶ https://ayushnext.ayush.gov.in/drugs/6128540521-Essential_Homoeopathic_Medicines-for-uploading-on-website2.pdf

²⁵⁷ which includes nine types of Ointments, 12 types of Biochemicals and three types of Ear/Eye drops

Audit noticed that during 2017-22, UCs were not furnished to the full extent of releases made as of March 2022, as detailed in the *Appendix 10.2*.

The Department replied that UCs are yet to be received from the nodal agencies viz. APMSIDC for grants given towards development of infrastructure and procurement of drugs and medicines for AYUSH Educational and Medical institutions and Andhra Pradesh Medicinal and Aromatic Plants Board (APMAPB) for Research and development of Medicinal and Aromatic Plants for preparation of medicines.

Government replied (August 2023) that out of Central share ₹47.42 crore for the years 2017-18 to 2020-21, the UCs for an amount of ₹6.93 crore was submitted to the GoI. It was further stated that ₹34.90 crore was released in December 2022 and March 2023.

Thus, balance amounting to ₹5.59 crore is yet to be released. In the absence of UCs, the actual and proper utilisations of funds for which it was released to the nodal agencies could not be ensured.

Thus, State Government did not release the approved funds under NAM, thereby prevented the implementation of various targeted activities proposed under State Annual Actions Plan.

10.4.3 Implementation of National Health Mission

The National Health Mission is a flagship health sector reform initiative started in 2005 as National Rural Health Mission (NRHM) and subsequently renamed National Health Mission (NHM) when National Urban Health Mission (NUHM) was conceptualised as a sub mission under NHM. NRHM introduced the concept of ‘mainstreaming of AYUSH and revitalisation of local health traditions’ to strengthen public health services. The department of AYUSH receives funds towards procurement of drugs and medicines under NHM (earmarked ₹0.40 lakh for each NHM dispensary per year). A total of 136 dispensaries²⁵⁸ are covered under NHM in the State.

10.4.3.1 Non procurement of drugs and medicines

The NHM approved/ earmarked ₹0.40 lakh per dispensary per year for 136 dispensaries amounting to ₹0.54 crore per year during 2018-19 to 2021-22.

During the year 2017-18, no funds were approved. During 2018-19 to 2021-22, the Mission Director, NHM released the funds of ₹2.17 crore at ₹0.54 crore per year for 2018-19 to 2021-22 to the Commissioner, AYUSH only in August 2021. Thus, not releasing the funds in corresponding financial year indicates that the funds allocated for AYUSH dispensaries were retained with State Government or State Health Society from 2018-19 to 2020-21. Hence it may be construed that AYUSH Department did not procure the medicines during the above-said period. However, even after the release of funds, the same was not utilised and the released funds were also lapsed to Government in March 2022.

²⁵⁸ Ayurveda: 40, Homoeo: 53, Unani: 18 and Naturopathy: 25

Government replied (August 2023) that the revalidation of the said amount was under consideration. Non-issue of drugs and medicines would have directly increased the Out-of-Pocket Expenditure (OOPE) of the patients.

Thus, the funds released amounting to ₹2.17 crore under National Health Mission pertaining to four years were not utilised, as State Government had not released the funds in each financial year and instead, released in one lump in 2021. Even the available funds were not utilised and hence they lapsed to the Consolidated Fund of the State.

10.5 Availability of infrastructure facilities in AYUSH institutes

The Central Council of Homoeopathy²⁵⁹ (CCH), is the regulatory authority which makes regulations called Homoeopathy Central Council (Minimum Standards Requirement of Homoeopathic Colleges and attached hospitals) Regulations, 2013, for Homoeopathic Medical Education. It grants permission and recognition for the opening of new medical colleges and to increase intake capacity for Undergraduate, Bachelor of Homoeopathic Medicine and Surgery (BHMS) and Post-Graduation courses.

Similarly, for Ayurvedic Medical Education, Indian Medicine Central Council²⁶⁰ is the regulatory authority which regulates Ayurvedic institutions under Indian Medicine Central Council (Requirements of minimum standards for under-graduate ayurveda colleges and attached hospitals), Regulations, 2016.

Homoeopathic and Ayurvedic colleges and their associated teaching hospitals shall have residential accommodation for teaching and technical staff and equipment for each department as given in the Schedule I & II of CCH Regulations and Schedule I, II, III of CCIM Regulations respectively. Further, every Homoeopathic and Ayurvedic college should have 14 non-clinical departments at medical colleges and four/eight Clinical departments at attached Hospital respectively as detailed in *Appendix 10.3*.

10.5.1 Availability of building/ infrastructure in Homoeopathy Institutions

- (a) As a part of Audit, we have conducted the physical verification of Dr. Guru Raju Government Homoeo Medical College Gudivada (intake capacity up to 60 students) to ascertain whether sufficient infrastructure facilities were available as per the norms/standards. The shortfall noticed is detailed in the subsequent paragraphs.

During physical verification it was observed that the infrastructure facilities were not as per norm as detailed in *Appendix 10.4*. Some of the critical gaps in infrastructure facilities in the college were as under.

- (i) The College was established in 1945 and at present the condition of the building was not fit for use. The built-up area of the college building was 1,058 sq.m as against the required 1,210 sq.m. The area available with each Department was 12 to 30 sq.m (for up to 60 students intake) as against 40 to 60 sq.m as per new CCH norms. Further, out of five classrooms, two classrooms on the first floor

²⁵⁹ constituted under Homoeopathy Central Council Act 1973

²⁶⁰ established under Indian Medicine Central Council (CCIM) Act, 1970

of the building were not being used, as approach passage to the classrooms was in dilapidated condition.

- (ii) The Homoeopathic Pharmacy and Pathology Department blocks were in dilapidated condition and might collapse at any time²⁶¹ as reported by APMSIDC authorities. While they are presently not in use, some specimens and instruments were lying idle inside. The lab/pharmacy was temporarily arranged with other labs in the college.



Figure 10.1: Dilapidated condition of Homoeopathic Pharmacy Block (October 2022)



Figure 10.2: Dilapidated condition of Department of Pathology Block (October 2022)



Figure 10.3: Pathology department equipment are placed in Gynaecology department due to dilapidated condition of Pathology Block (October 2022)

- (iii) Physical verification of library building (constructed in 1945) revealed that the building was in a dilapidated condition (shown in Figure 10.4) and not functional. Temporary arrangements have been made in a classroom for the purpose. Audit further noticed that:

As per CCH norms, every Homoeo Medical college should have Central library with a seating capacity of at least 50-60 students with separate reading room for teachers, PG students and librarian. The Library shall have at least 2,000 books on prescribed subjects.

²⁶¹ the APMSIDC authorities stated (dated 01-02-2022) that "the roof slab is totally dilapidated condition and it may collapse at any time" in respect of Pathology and Pharmacy labs block

However, only ten seats were provided in the library for students. Separate seating facility was not provided for librarian and teachers. No toilet and drinking water facilities were available in Library.

- Librarian post was lying vacant for more than two years (since July 2020). The Junior Assistant (in-charge librarian) posted in the library does not possess a degree/diploma in librarian course. The posts of Assistant Librarian and Library attendant were lying vacant. Due to operation of the college in the old building being in dilapidated condition, the lives of the students/teaching/non-teaching staff are at risk.



Figure 10.4: Dilapidated condition of Library Building of Dr. Gururaju Homoeo Co, Gudivada (October 2022)

(iv) Incomplete Homoeo Medical College building

GoAP accorded (March 2017) administrative sanction²⁶² for construction of a new building at a cost of ₹10.00 crore and upgradation of attached teaching hospital at a cost of ₹8.00 crore. However, work was not taken up due to non-release of funds. In July 2017, a letter was addressed by the Commissioner, AYUSH Department to the Managing Director, APMSIDC, Guntur²⁶³ to take up the work “Strengthening & Upgradation of Dr. Gururaju Govt. Homoeo Medical College & Hospital” with a unit cost of ₹18.00 crore, from the budget for the year 2021-22. As per the report submitted (February 2022) by the EE, APMSIDC Division, Vijayawada, the existing building structure was not fit for repair and the total structure was proposed for demolition. Hence, only construction of new building was taken up.

²⁶² G.O.Rt.No.230 dated 22-03-2017 HM &FW (F.2) Department

²⁶³ letter No.2475/G1/2017-01 dated 02.07.2021



**Figure 10.5: Incomplete structure of new building
for Homoeo Medical College attached Hospital at Gudivada (October 2022)**

During physical verification, it was noticed (October 2022) that no construction was ongoing and the proposed building remained incomplete even after incurring expenditure of ₹11.02 crore due to non-release of balance funds (October 2022).

Government accepted (August 2023) the Audit observation and assured future compliance.

Due to the delay in construction of the building, the college was functioning in the old building with less space and medical students were deprived of the facilities.

(v) Dr. Gururaju Government Homoeo Hospital, Gudivada

The Hospital was established in 1968 at Gudivada with a capacity of 70 beds. There are four departments viz. Medicine, Surgery, Gynaecology and Paediatrics in the hospital with one ward in each department. Built up area provided for each Department as per Homoeopathy Central Council (Minimum Standards Requirement of Homoeopathic colleges and attached Hospitals) Regulations, 2013, (Schedule-I) is detailed in **Appendix 10.5**.

Audit noticed that:

- Certain important facilities were not available viz. Operation Theatre, Labour room, Antenatal room, facilities for neonatal care, Central sterilisation/ autoclave unit, Doctors' duty room with attached toilet and bathroom, Interns/house officer/resident doctors room with attached toilet and bathroom, Nursing staff room with attached toilet and bathroom, Seating arrangement for internees/students in various OPDs, etc.
- As per Homoeopathic Central Council regulations²⁶⁴ one bed shall be earmarked per student for each clinical subject of speciality (PG courses).

As the college is having an intake capacity of 50 UG students (requires minimum of 20 beds in the inpatient department) and 23 PG students²⁶⁵ (requires 23 beds), a minimum of 43 beds should be available. However, out of 48 beds which were available in the hospital, only 31 are in functional condition.

Further, during physical verification of OPD/IP blocks it was noticed that:

²⁶⁴ Homoeopathy (Post Graduate Degree Course) M.D. (Hom.) Regulations, 1989

²⁶⁵ Organon of medicine (8), Materia medica (8) and Repertory department (7)

- No room was provided for General Medicine OPD and OPD was conducted in open area on the ground floor of the hospital building.
- The Outpatient Department clinic (Paediatrics, Obstetrics/Gynaecology) was conducted in a temporarily constructed shed. The ceiling/roof of the shed was in damaged condition.



Figure 10.6: Condition of Ceiling in Outpatient Departments of Dr. Gururaju Govt. Homoeo College, Gudivada (October 2022)

The Medical Superintendent replied that due to space constraints and paucity of funds, the facilities were not provided in the hospital.

(vi) Availability of equipment in Homoeopathic Medical college and Hospital

Homoeopathic colleges and the attached hospitals shall fulfil the requirements of minimum standard for infrastructure and teaching and training facilities prescribed by CCH 2013 (Schedule III)²⁶⁶. Minimum equipment required in a Homoeopathic Medical college and hospital with intake capacity up to 60 seats were compared with the available equipment in the test checked Homoeopathic Medical college (Dr. Gururaju Government Homoeo College, Gudivada) and hospital (Dr. Gururaju Government Homoeo Hospital, Gudivada).

It was noticed that the percentage shortfall in availability of major types of equipment in hospital (5) and college (48) ranged between 51 to 100 *per cent* (as detailed in *Appendix 10.6*).

As per GoI norms, Homoeopathic Teaching Hospital should be equipped with a functional ECG machine. Though ECG Machine was available in the Hospital, it was non-functional since September 2020. Further, X-ray and Ultra Sonography unit were not available in the hospital.

The Hospital Superintendent replied that proposals for ECG machine were submitted to the Department and X-Ray and USG were not provided due to insufficient space, lack of funds and staff constraints. Thus, the Hospital is functioning without essential equipment which is required for treatment. This will directly increase the Out-of-Pocket Expenditure (OOPE) to the patients.

Government accepted (August 2023) the Audit observation and promised future compliance.

²⁶⁶ Schedule III of Homoeopathy Central Council (Minimum Standards Requirement of Homoeopathic colleges and attached Hospitals) Regulations, 2013

Non-availability/shortfall in availability/non-functioning of instruments is a barrier to deliver quality health services. In respect of colleges, non-provisioning of equipment in the laboratories would hamper practical teaching as envisaged in the syllabus, thereby depriving practical knowledge/ demonstration for the students.

10.5.2 Availability of infrastructure facilities in Ayurveda College and Hospital

- (a) As a part of Audit, we have conducted (September 2022) the physical verification of Dr.N.R.S Government Ayurvedic College, Vijayawada (established in the year 1922), to ascertain whether sufficient infrastructure facilities are available as per the norms/standards. At present, the intake capacity of the college is 100 (75 for UG course and 25 for PG courses). Schedule II of CCIM 2016 stipulates norms (*as detailed in Appendix 10.7*) for establishment of Ayurvedic Medical colleges. The deviations noticed are detailed in the subsequent paragraphs.
- (i) The total constructed area of the college building is 2,421 sq.m against the required area of 4,000 sq.m as per CCIM norms, resulting in shortfall in area of 1,579 sq.m.
- (ii) Out of four lecture halls, audio-visual teaching aids were provided in only two lecture halls. Separate examination hall and common rooms for boys and girls with adequate space and sitting arrangement were not provided. Canteen facility with sitting arrangement for about 100 persons (CCIM) was also not provided.
- (iii) Two Departments (Rasasatra evam Bhaishajya Kalpaa Tantra) were accommodated in the Indira Gandhi Stadium Complex and not in the college premises due to space constraint in the existing building.
- (iv) Teaching Pharmacy and Quality testing laboratory with 200 sq.m space is to be provided for preparation of different types of Ayurveda medicines. As per Indian Medical Central Council (Post Graduate Ayurveda Education) Regulation 2016, the institute shall have Central Research lab and Animal house for starting post-graduate course. Animal House shall be either owned or in collaboration.

However, the above facilities were provided in the college.

- (v) Indian Medicine Central Council (Requirement of minimum standard for undergraduate Ayurveda Colleges and attached hospitals) Regulations 2016 (Schedule-III) stipulated that a well-developed Medicinal Plants Garden with 250 species of medicinal plants and a demonstration room of 25-50 sq.m area should be maintained by the college.

However, in the herbal garden maintained by the college, there were only 156 species of plants available as against 250. Further, no demonstration room²⁶⁷ was provided for the Herbal Garden.

²⁶⁷ Demonstration room is used for collection of herbarium sheets, charts, specimens and raw drugs to train undergraduate Ayurveda medical students about medicinal plants

The Principal of the Ayurvedic College, Vijayawada replied (October 2022) that due to space constraints and shortage of staff, the herbal garden could not be developed as per CCIM norms.

- (vi) During the year 2014-15, the Commissioner, AYUSH submitted²⁶⁸ (March 2015) the Annual Action Plan proposals to GoI for ₹11.47 crore, which included establishment of Mini Pharmacy at Dr. N.R.S. Government Ayurvedic Medical College, Vijayawada for ₹0.53 crore. The pharmacy was proposed with two objectives viz. for demonstrating the manufacturing process of medicines to the students as part of studies and to establish full-fledged Drug Testing Laboratory (Quality Control Lab).

The entire amount of ₹0.56 crore²⁶⁹ was released to the college between March 2016 to August 2018. Out of this, only ₹0.22 crore was spent (September 2022) under various heads²⁷⁰ by the college as detailed in **Appendix 10.8**. The balance funds were refunded to AYUSH Society.

Audit also noticed that Government permitted (September 2017) the AYUSH Commissioner to engage staff for Mini pharmacy on outsourcing basis. However, no manpower was recruited till March 2021. Without recording any reasons, the AYUSH Commissioner cancelled (April 2021) the notification issued in March 2021. Due to lack of required manpower and electricity supply, the Mini pharmacy was not in operation and equipment procured was kept idle as of September 2022. Hence, the expenditure incurred so far has become unfruitful.

It was replied that the equipment is being used for manufacturing medicines by the Full Time Supervisor (FTS) and PG students as a part of their studies.

During physical verification (October 2022) it was observed that the Mini Pharmacy was non-functional due to short circuit and power cut in the building. However, the date from which the mini pharmacy was non-functional was not available with the college. Further, only 39 per cent (₹0.22 crore) of funds were utilised out of the amount released (₹0.56 crore).

The Government accepted (August 2023) the Audit observation and assured to make the Mini pharmacy functional.



**Figure 10.7: Mini pharmacy with idle equipment
at Dr. N.R.S Govt. Ayurveda College Vijayawada (October 2022)**

²⁶⁸ Lr.No.2049/ G.4/2014-3 dated 18 March 2015

²⁶⁹ ₹0.03crore was approved in 2015-16 for the same purpose

²⁷⁰ procurement of equipment, raw drugs recurring expenditure etc.

- (vii) A minimum of five acres of land is required²⁷¹ for establishment of Ayurvedic Medical College with hospital having intake capacity of sixty-one to hundred seats. A lease agreement should be made for a period not less than 99 years or the maximum permissible period as per rules, if the college is established prior to 2003.

Audit noticed that the college and hospital were established in 1922 and 1968 respectively and are functioning in 4,145 sq. yards (0.86 acres) of leased land pertaining to the Irrigation Department. The college has paid the canal berum²⁷² rent to the Irrigation Department up to March 1997. Though the lease expired in 1981, lease rent was paid till 1997. The details of lease rent paid after 1997 are not available in the records.

In July 2018, Government allotted an extent of 5.43 acres of land to the college and hospitals²⁷³. However, the land was not handed over by the authorities till September 2022. The Commissioner, AYUSH, requested (September 2020) the Government to extend the lease period of the building for another five years or till the construction of new campus. Decision of the Government is awaited. At present, the college and hospital are functioning with inadequate space and illegal occupation.

The Department replied that land to an extent of 2.45 acres near AIIMS, Mangalagiri, is being pursued with the District Collector, Guntur for alienation. Soon after the allocation, the space constraints would be resolved.

Thus, the Dr.NRS Govt. Ayurveda College had no ownership of the land, even though it had started functioning since the year 1922. The Government neither took action to extend the lease period nor handed over allotted land to the College and attached hospital.

(b) Availability of infrastructure at Ayurvedic Hospital

Dr. A.L Government Ayurvedic hospital, Vijayawada was established in 1968, having a bed capacity of 140. The hospital is functioning with eight departments. With reference to Schedule-I of CCIM norms 2016, the following deviations/shortfalls were observed in respect of infrastructure development.

Table 10.5: Showing space requirement for various facilities in Ayurvedic Hospital

Sl. No.	Department	Built up area As per CCIM norms (in sq.m)	Actual area available (in sq.m)	Shortfall (in sq.m)
1	Total constructed area of the Hospital building	3,500	2,633	867
2	Area of Hospital Administration Block	150	72	78
3	Area of Inpatient Department	1,650	867	783
4	Area of Physiotherapy Unit	150	79	71
5	Area of Clinical Laboratory	150	75	75

²⁷¹ as per CCIM 2016 norms 4(2)

²⁷² Canal Berum is a narrow strip of land left on either side of the channel at ground level, between upper edge of the cut and inside toe of the bank

²⁷³ vide G.O.Ms.No.233 MA&UD (CRDA-2) Department dated 19 July 2018

Sl. No.	Department	Built up area As per CCIM norms (in sq.m)	Actual area available (in sq.m)	Shortfall (in sq.m)
6	Area of Radiology or Sonography Section	100	43	57
7	Area of Hospital Kitchen and Canteen	150	Not available	--
8	Area of Stores/Mortuary	50	20	30

Source: Information furnished by A.L Government Ayurvedic hospital

The Superintendent, Dr. A.L. Government Ayurveda Hospital replied that due to space constraints, the above facilities were not provided as per said norms.

Thus, the college and hospital did not have proper accommodation with adequate space. The requested land at Mangalagiri is also not adequate as per the stipulated standards. Being the one and only institution for Ayurveda in the State imparting education at graduation and post-graduation level, Government needs to focus on the issue by allocating sufficient and suitable land for smooth functioning of the Institute.

(c) Availability of equipment in Ayurvedic institutions

Ayurvedic colleges and the attached hospitals shall fulfil the requirements of minimum standard for infrastructure and teaching and training facilities prescribed by the CCIM 2016 (Schedule VII)²⁷⁴. Minimum equipment required in an Ayurvedic Medical college and Hospital with intake capacity of 61 to 100 were compared by Audit with the available equipment in the test-checked Ayurvedic Medical college and hospital.

In Dr A.L Government Ayurveda Hospital, Vijayawada the percentage availability of major equipment (246) was far less than the norms and ranged between zero to 25 *per cent*. Similarly, in Dr. NRS Govt. Ayurveda College, Vijayawada, the percentage availability of major equipment (69) was far less than the norms and ranged between zero to 25 *per cent* (as detailed in Appendix 10.9).

Government replied (August 2023) that an amount of ₹Four crore (at ₹One crore for each College & Hospital) has been proposed in the SAAP 2023-24 and is under active consideration.

(d) Physical verification

The following major deficiencies were noticed during physical verification:

- Though X-ray facility²⁷⁵ was available in Dr. A.L Government Ayurveda Hospital, Vijayawada, it was non-functional since December 2020. The Hospital requested the AYUSH Commissioner to supply of 300 mA GE X-Ray machine in January 2022. However, neither the new machine was supplied nor alternate arrangements were made by the Department.

Government accepted (August 2023) the audit observation and promised future compliance.

²⁷⁴ Schedule VIII of Indian Medicine Central Council (Requirements of Minimum Standards for under- graduate Ayurvedic Colleges and attached Hospitals) Regulations, 2016

²⁷⁵ CCIM regulations 2016



**Figure 10.8: Non-Functioning X-Ray machine
in Dr AL Ayurveda Hospital, Vijayawada (October 2022)**

X-Ray machine is an essential equipment for treating patients in the Hospital. However, the Hospital is functioning without the X-Ray machine for two years which would directly increase the Out-of-Pocket Expenditure (OOPE) to the patients.

- The CCIM norms 2016 stipulate that every Ayurvedic hospital should be equipped with a clinical laboratory with proper infrastructure and manpower as specified, for carrying out routine pathological, bio-chemical and haematological investigations and ayurvedic diagnostic techniques.

During physical verification of the clinical laboratory at Dr.AL Government Ayurvedic hospital, Vijayawada, we observed that no separate Clinical laboratory with separate sections for pathology, biochemistry, and microbiology along with attached toilet for collection of urine samples were available due to space constraint and essential bio-chemical tests *viz.*, blood sugar, S-Bilirubin, Blood urea, Lipid profile test and pregnancy tests were not being conducted at the hospital. Micro biological tests *viz.*, malarial parasite confirmation, Widal test for Typhoid confirmation, HIV test, VDRL, *etc.* were not available at the Hospital.

It was replied that, due to non-availability of required kits, these tests were not being conducted since April 2021. It was further stated that some tests were conducted with the kits donated by the doctors working in the Hospital. However, the details of tests conducted, and donations made were not furnished to audit.

Government stated (August 2023) that an amount of ₹One lakh out of released ₹Five lakh to the Ayurveda hospital was earmarked for procurement of lab reagents and chemicals. However, no documents in support of such releases were furnished to Audit.

The test-checked colleges and hospitals under AYUSH lacked infrastructure facilities, equipment, laboratories and development/farming of medicinal plants, thereby affecting the performance of these institutes.

10.6 Strengthening of institutional capacity at the State level

Government Sanctioned²⁷⁶(March 2017) 65 works (includes 12 capital works) at a cost of ₹70.38 crore for construction and establishment of AYUSH University, standalone AYUSH dispensaries and new AYUSH hospitals at various places. Government during

²⁷⁶ G.O.Rt. No.230 HM&FW(F.2) Department dated 22.03.2017

May 2019 instructed²⁷⁷ to cancel the works which were not grounded and to review the works where expenditure was less than 25 *per cent* of the estimated value.

In view of instructions of Government, 45 works valued at ₹33.34 crore were cancelled²⁷⁸ due to non-grounding of the works. Only 13 works costing ₹2.44 crore were completed and the remaining seven works of ₹34.60 crore (49.16 *per cent*) were at various stages of progress (October 2022).

The Department replied (November 2022) that a proposal has been forwarded to the Government to take up works sanctioned and not grounded prior to April 2019. However, orders from the Government are awaited.

From the above, it was construed that no new educational institutions/ hospitals were created under the control of Department of AYUSH between 2016-17 to 2021-22 due to non-release of funds by the State Government.

10.7 Human Resources

The objective of the National AYUSH Mission is to promote AYUSH medical systems through cost effective AYUSH services and strengthening of education systems. To achieve these objectives, it was envisaged to upgrade AYUSH Hospitals and Dispensaries and co-locate AYUSH facilities at PHCs, CHCs and District Hospitals by deploying sufficient number of Medical Personnel/ Human Resources.

10.7.1 Shortage of Manpower in AYUSH Department

Scrutiny of records at AYUSH Commissionerate revealed that, there was shortage of Staff (Medical/Paramedical/and other supporting staff) in the State. About 56 *per cent*²⁷⁹ of the posts were vacant as of September 2022 as detailed in the *Appendix 10.10*.

10.7.1.1 Shortage of Medical Officers

AYUSH Medical Officers along with other staff contribute to the effective implementation of National Health Programmes. AYUSH doctors also undertake health check-up camps and conduct awareness building activities through Gram Panchayats involving schools, Anganwadis, self-help groups and other community organisations.

There are 735 AYUSH dispensaries functioning towards four²⁸⁰ systems of AYUSH in the State. Each dispensary should be provided with one Medical Officer (MO). The system wise sanctioned and available Medical Officer posts are detailed in *Table 10.6* below.

²⁷⁷ U.O. Note No.FIN01-FMU0ASD(WR1)80/2019 (Comp No.898809) dated 29.05.2019

²⁷⁸ one Ayush University, 14 standalone dispensaries, ten co-located dispensaries, four Ayush hospitals and wings, eight wellness centres, establishment of Ayush hospital with 50 beds (1), 20 beds (4), 5 beds (2) and upgradation of teaching hospital

²⁷⁹ total sanctioned strength 2,730, filled 1,198 (43.89 *per cent*) and vacant 1,532 (56.11 *per cent*) posts

²⁸⁰ Ayurvedic, Homoeopathy, Unani and Naturopathy

Table 10.6: System wise dispensaries functioning with regular and in charge Medical officers

System	No. of Dispensaries	Number of dispensaries having regular MO	Number of dispensaries functioning with in- charge MO	Number of dispensaries without MO
Dispensaries functioning with State Budget support				
Ayurvedic	333	192	127	14
Homoeopathy	192	85	91	16
Unani	74	36	36	2
Total	599	313	254	32
Dispensaries functioning with NHM scheme funds				
Ayurvedic	40	31	0	9
Homoeopathy	53	43	0	10
Unani	18	14	0	4
Naturopathy	25	19	0	6
Total	136	107	0	29
Grand Total	735	420	254	61

Source: Information furnished by the Commissionerate of AYUSH

The above table establishes that only 420 dispensaries are functional with full-fledged Medical Officers, 254 are partially functional with the help of in charge MOs and 61 dispensaries did not have Medical Officers and were proposed for temporary closure.

Regarding sanctioned strength of the MOs under GoAP, Commissioner, AYUSH replied that about 314 MOs are on rolls (September 2022) against sanctioned strength of 576 posts²⁸¹. Thus, about 45.5 *per cent* (262 posts) of Medical Officer posts were lying vacant in the State.

Government accepted (August 2023) the audit observation and stated that the process of filling up of vacant post through APPSC is at final stage and the same would be completed within short time and the dispensaries would be made functional.

10.7.1.2 Closure of NRHM dispensaries

During bifurcation of States (2014), 587 NRHM dispensaries were allocated to the residuary State of Andhra Pradesh. Out of 587, 451 NRHM dispensaries were closed (92 *per cent*) due to non-availability of Medical Officers since April 2017²⁸².

The department replied that the closed dispensaries would be functional as and when required HR support is extended by the State Government.

This indicates that the Government was not keen on making AYUSH dispensaries functional by recruiting the required number of Medical Officers.

National Health Policy, 2017 also prioritises utilisation of AYUSH personnel in urban health care and emphasises developing a protocol for mainstreaming AYUSH as an integrated medical care, which was not adhered to.

Reply from the Government is awaited.

²⁸¹ sanctioned Strength (regular staff) of the Ayush Department including Dispensaries and hospitals

²⁸² Memo No.3353/A2/NRHM/2016 dated 20-04-2017 issued by the Commissioner, Department of Ayush

10.7.1.3 Shortage in paramedical staff in AYUSH dispensaries

Compounder and Sweeper cum Nursing Orderly are the other essential posts for smooth functioning of the dispensary. These staff are to support the Medical Officer in preparation, issue, and accounting of medicines as well as in providing support services to the patients. The sanctioned posts and availability are detailed in **Table 10.7** below.

Table 10.7: Status of sanctioned and in-position of paramedical staff in dispensaries

System	Number of dispensaries	Compounder			Sweeper cum Nursing Orderly		
		Sanctioned	In-position	Vacant	Sanctioned	In-position	Vacant
Ayurvedic	333	226	91	135	NA	NA	NA
Homoeopathic	192	189	76	113	NA	NA	NA
Unani	74	69	34	35	NA	NA	NA
Total	599	484	201	283	729	335	394

Source: Information furnished by the Commissionerate of AYUSH

From the above, it can be seen that only 484 posts of compounders were sanctioned against requirement of 599. Further, more than 50 *per cent* of the posts in both cadres were vacant. Thus, about 50 *per cent* of the dispensaries were functioning without support staff / paramedical staff.

Government accepted (August 2023) the audit observation and stated that the proposal for filling up of posts of paramedical staff was under active consideration.

Healthcare professionals such as MOs, and paramedical staff are responsible for the health and safety of the patients who are under their observation and treatment. Paramedical staff provide quality care of health and other provisions that a patient needs with due diligence. However, in the absence of paramedical staff in dispensaries, Medical Officers alone cannot discharge their responsibilities.

10.7.2 Availability of teaching staff in AYUSH Colleges

(a) Ayurvedic College

As per IMCC²⁸³ (Minimum Standard Requirements of Ayurveda Colleges and attached Hospitals) Regulations, 2016 (Schedule V), there should be a minimum 30 fulltime teachers appointed on regular basis for intake capacity up to sixty students and 45 full time teachers for sixty-one to hundred students intake capacity. In addition, there should be 10 part time teachers (eight teachers of Modern Medicine, one Yoga teacher and one Biostatistician). Further, in addition to the teachers stipulated for UG, the PG department or specialty shall have minimum one Professor in concerned subject or specialty from the academic session 2017-18.

The test checked Ayurvedic college had an intake capacity of 60 Undergraduate (UG) and 20 Postgraduate (PG) students during the period 2017-19 and 75 UG and 25 PG students during 2019-22. The college had 14 specialties in UG and four specialties in PG courses. The availability of teachers at the college is as detailed in **Table 10.8** below.

²⁸³ Indian Medicine Central Council

**Table 10.8: Sanctioned strength and staff in-position in
Dr. NRS Ayurveda College, Vijayawada**

Name of the College	Name of the cadre	Sanctioned strength	In position	Vacant
Dr. NRS Ayurveda College, Vijayawada	Professors	14	4	10
	Associate Professors/Readers	14	9	5
	Asst. Professors/Lecturers	17	6	11
Total		45	19	26

Source: Information furnished by the Ayurvedic College

Against total requirement of 59 Professors/Associates/Readers/Asst. Professors/ Lecturers (45 Regular, 10 Part-time and four subject specialists for PG courses), only 45 posts were sanctioned by the Government. Against sanctioned posts, only 19 were in position. Thus, there was a shortfall of 57.78 *per cent* of posts.

The College replied that the issue was brought to the notice of Government to fill the higher faculty posts with retired faculty and permission is awaited.

Government accepted (August 2023) the audit observation and stated that the process of filling up of vacant post through APPSC was at final stage and the same would be completed within short time and the services of some of the Medical Officers of Ayurveda were being utilised for smooth functioning of the college.

As per the IMCC Regulations, the deficiency of teachers should not exceed more than 10 *per cent* of total requirement with availability of at least one teacher in each department seeking conditional permission to undertake admission.

(b) Homoeopathic College

As per “Homoeopathy Central Council Regulations 2013” there should be 12 teaching departments for B.H.M.S. course and two²⁸⁴ exclusive departments for P.G. level courses. Further, there should be 24 full time teaching faculty²⁸⁵ and eight guest faculty for admission up to 60 students. Each PG speciality should have one Professor or Associate Professor or Reader along with one Assistant Professor or Lecturer. As per Note 5 below Schedule IV of the regulations, the deficiency of teachers should not exceed more than 10 *per cent* of the total requirement with availability of one teacher in each department.

The test-checked Homoeopathic college had an intake capacity of 50 UG and 23 PG students during the period 2017-22. The college had 12 departments in UG and three specialities in PG courses. The availability of teachers at the college is detailed in **Table 10.9** below.

²⁸⁴ Psychiatry and Paediatrics

²⁸⁵ 12 Professors or Associate Professors or Readers and 12 Assistant Professor or Lecturers for UG course

Table 10.9: Showing the status of sanctioned strength and in-position of staff in Dr. Gururaju Government Homoeo College, Gudivada

Name of the College	Course	Name of the cadre	Sanctioned strength (up to 60 admissions)	Men in position	Vacant
Dr. Gururaju, Govt Homoeo College, Gudivada	UG course	Professors/ Associate Professors	12	3+8	1
		Asst. Professors	12	8	4
		Total	24	19	5
	PG Courses	Professors/ Associate Professors/Reader	7	0	7
		Asst. Professors/Lecturer	7	0	7
		Total	14	0	14

Source: Information furnished by the Homoeopathic College

Against total requirement of 38 posts of regular and part-timers for UG courses, only 24 posts were sanctioned by the Government. Against sanctioned posts, only 19 were in position. Thus, there was a shortfall of 21 *per cent* against the sanctioned posts. Further, all the posts sanctioned for PG courses were vacant in the Homoeopathic college.

Student-supervisor/guide ratio should also be maintained for PG courses. As the college had 23 intake capacity of PG students, eight Professors/ Associate Professors or 12 Readers or 23 Lecturers are to be available to supervise/guide the PG students. However, no teachers were posted for the purpose.

Government accepted (August 2023) the audit observation and stated that the process of filling up of vacant post through APPSC was at final stage and the same would be completed within short time. Further, the services of retired officials on contract basis were being utilised for smooth functioning of the Colleges.

Government was silent on non-sanction of teaching posts for PG courses. Though PG course was sanctioned in 2016, due to non-sanction of the faculty for PG courses, the students were deprived of quality education. PG courses being conducted without at least one specialist teacher and UG courses with more than thirty *per cent* teaching staff vacancy would deprive the students of quality education.

10.7.3 Human Resource position in Teaching Hospitals

Availability of Human Resources at the teaching hospitals is discussed in the following paragraphs.

(a) Ayurvedic Hospital

The minimum technical and other staff required to be engaged in the Hospital are detailed in the Schedule IV of the IMCC Regulations, 2016. Shortfall in some of the Medical cadres and supporting cadres in the teaching hospital is detailed in **Table 10.10** below.

Table 10.10: Sanctioned strength, staff in-position in Dr. A.L. Government Ayurveda Hospital, Vijayawada

Name of the Teaching Hospital	Name of the cadre	Sanctioned strength	Men in position	Vacant
Dr. AL Government Ayurveda Hospital, Vijayawada	Medical Superintendent	1	0	1
	Modern medical staff	11	1	10
	Staff Nurses	14	5	9
	Compounder	6	4	2
	Panchakarma Assistant	4	1	3
	Ward boys	7	0	7
	Dresser	2	0	2
	Dark room attender	1	0	1
	Nursing Orderly	13	3	10

Source: Information furnished by the Hospital Superintendent

The Hospital Superintendent replied that the matter was brought to the notice of higher authorities.

Government accepted (August 2023) the audit observation and stated that the proposal of recruitment of staff is under active consideration.

Government should ensure to complete the recruitment process so as to deploy the staff for smooth and effective functioning of the healthcare facility.

(b) Homoeopathic Hospital

The minimum staff required for the attached hospital is specified in Schedule-II of the CCH Regulations, 2013. The staff should be increased proportionately in accordance with the increase in bed strength (70 numbers). Availability of the staff against sanctioned strength in some of the cadres is detailed in **Table 10.11** below.

Table 10.11: Sanctioned strength and staff in-position in Dr. Gururaju Government Homoeo Hospital, Gudivada

Name of the College	Name of the cadre	Sanctioned strength	Men in position	Vacant
Dr. Gururaju Govt Homoeo Hospital, Gudivada	Medical Officers	4	3	1
	Resident Medical officer	2	1	1
	Laboratory Technician	2	1	1
	Nursing staff	9	5	4
	Dresser	1	0	1
	X ray attendant	1	0	1
	Ward boys	9	1	8
	Store Keeper	1	0	1
	Registration clerk/telephone operator	1	0	1
	Dietician	1	0	1

Source: Information furnished by the Medical Superintendent

It is clear from the above table that there are huge vacancies in the cadres of Nursing staff and ward boys.

The Medical Superintendent replied that necessary proposals were submitted to Commissionerate from time to time for filling the required staff and in respect of sanitation and cleaning, private persons were engaged by contributions from the hospital staff.

Government accepted (August 2023) the observation and stated that the proposal of recruitment of staff is under active consideration.

Shortage of Medical and paramedical permanent staff in all the test-checked AYUSH Hospitals and educational institutions was noticed. About 56 *per cent* of the posts were vacant in AYUSH Department, thereby affecting its performance.

10.8 Regulatory Mechanism

Clinical Establishment (Registration and Regulation) Act, 2010 (CEA) is applicable to all types²⁸⁶ of Clinical establishments (public and private sectors), belonging to all recognised systems of medicines including single doctor clinics. Every State Government shall by notification constitute a State Council for clinical establishments and the State Council shall perform various functions²⁸⁷.

Further the State Government shall, by notification, set-up the District Registering Authority (DRA) for each district for registration of clinical establishments and no person shall run a clinical establishment unless it has been duly registered in accordance with the provisions of this Act. For registration and continuation, every clinical establishment shall fulfil the conditions prescribed in the Act.

The Department replied that no such regulatory mechanism is in existence in the State for Clinical Establishment as far as AYUSH Systems are concerned. Thus, there exist no prescribed guidelines for registration of Hospitals, Clinics, Diagnostic services, or Laboratories under AYUSH.

The Government accepted the observation (August 2023) and stated that steps would be taken to operate the Clinical Establishment Act.

Thus, there was no Regulatory mechanism to exercise control over the clinical establishments related to AYUSH. The Government should initiate steps to bring AYUSH into the ambit of Clinical Establishment Act in the State.

Regulatory mechanism was not in place as per the provisions of Clinical Establishment Act 2010 for regulating Hospitals, Clinics, Diagnostic services and Laboratories under AYUSH.

10.9 Key Performance Indicators

Key Performance Indicators (KPIs) help to systematically monitor, evaluate, and continuously improve service performance. KPIs provide 'signposts' that signal progress toward goals and objectives as well as opportunities for improvement. Central Councils of

²⁸⁶ both the therapeutic and diagnostic types

²⁸⁷ (a) compiling and updating the State Registers of clinical establishment; (b) sending monthly returns for updating the National Register (c) representing the State in the National Council; (d) hearing of appeals against the orders of the authority; and (e) publication on annual basis a report on the state of implementation of standards within their respective States

Indian Medicine and Homoeopathy prescribed norms for minimum number of beds, bed occupancy and Out-Patient department attendance with respect to intake capacity of the students in the Teaching hospital. The requirement of beds, IP and OP are as detailed in **Table 10.12** below.

Table 10.12: Minimum requirements of IP and OP in Ayush Teaching Hospitals

Stream	Intake capacity per year	Minimum number of beds in IP department	Minimum number of bed occupancy in IP department	Minimum number of patients in OP/ per day
Ayurvedic UG	75	75 (1:1 student-bed ratio)	30 (40 per cent of beds)	150 (1:2 student: patient ratio)
Ayurvedic PG	25	100 (1:4 student-bed ratio)	50 (50 per cent of beds)	200 (min. 200 patients per day college having PG course with 61-100 UG seats)
Homoeo UG	50	20 (Min. No. Of bed in IPD)	6 (30 per cent of beds)	100 (1:2 student: patient ratio)
Homoeo PG	23	23 (1:1 student-bed ratio)	7 (30 per cent of beds)	250 (min. No of patients per day for hospital attached with PG course or running with BHMS Course)

Source: CCIM regulations, 2016 for UG and PG & CCH regulations, 2013 for UG and CCH 1989 for PG courses

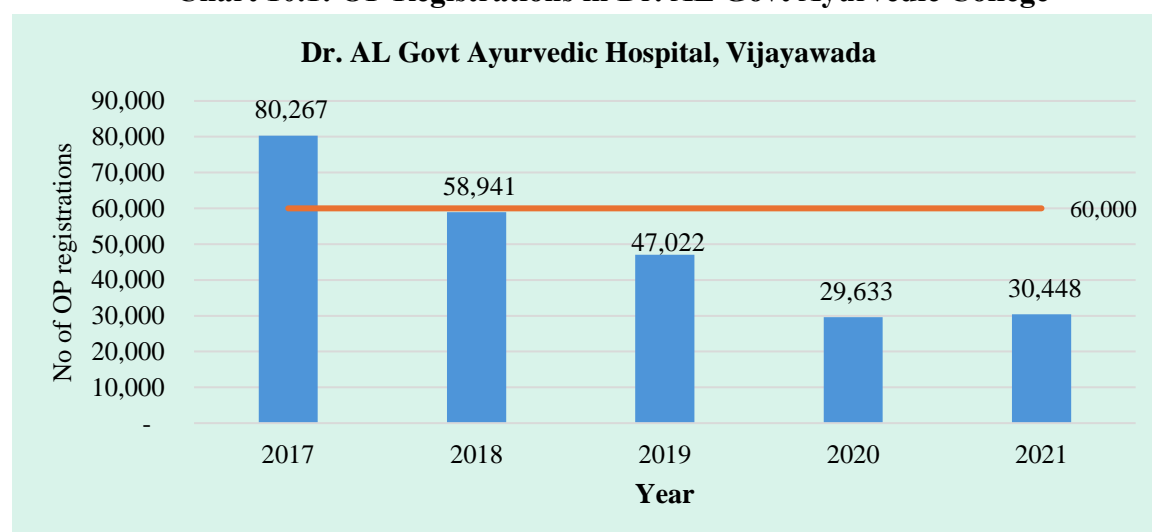
10.9.1 Outpatient load

10.9.1.1 Ayurveda Teaching Hospital

To assess the KPIs, the records of the test checked hospital has been reviewed and observed that:

- On an average, 200 patients are expected to visit hospital per day. Ayurvedic teaching hospital must have 300 working days. Thus, it is expected that about 60,000 patients would visit per year. However, there was decreasing trend in patients preferring to visit Ayurvedic hospitals for treatment during 2018 to 2021 as shown in **Chart 10.1**.

Chart 10.1: OP Registrations in Dr. AL Govt Ayurvedic College

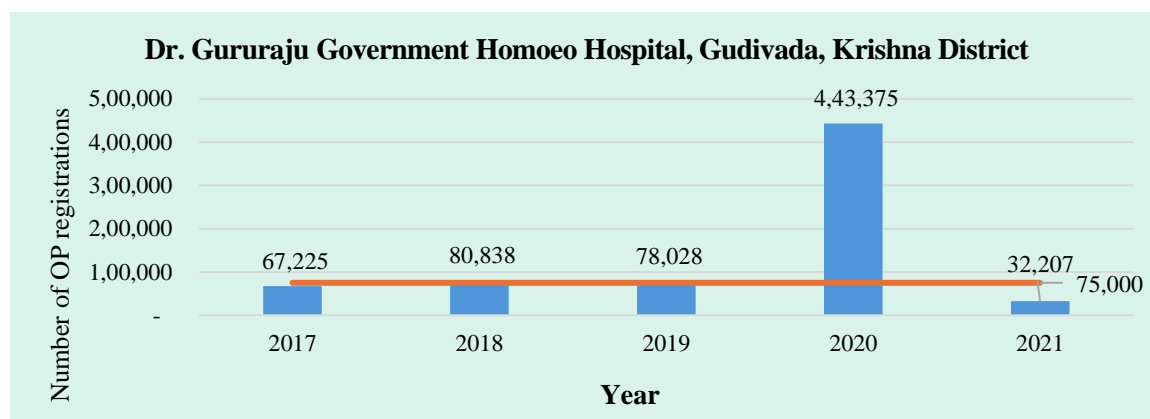


Source: Information furnished by Commissioner, AYUSH

10.9.1.2 Homoeopathic Teaching Hospital

Similarly, on average 250 patients are expected to visit hospital per day. Homoeopathic teaching hospital must have 300 working days in a year. Thus, it is expected that about 75,000 patients would visit per year. Patients preferring to visit Homoeopathic hospital for treatment during 2017 to 2020 is detailed in **Chart 10.2**. However, patient registrations decreased in the year 2021.

Chart 10.2: OP Registrations in Dr. Gururaju Government Homoeo Hospital, Gudivada, Krishna District



Source: Information furnished by the O/o the Commissioner, AYUSH

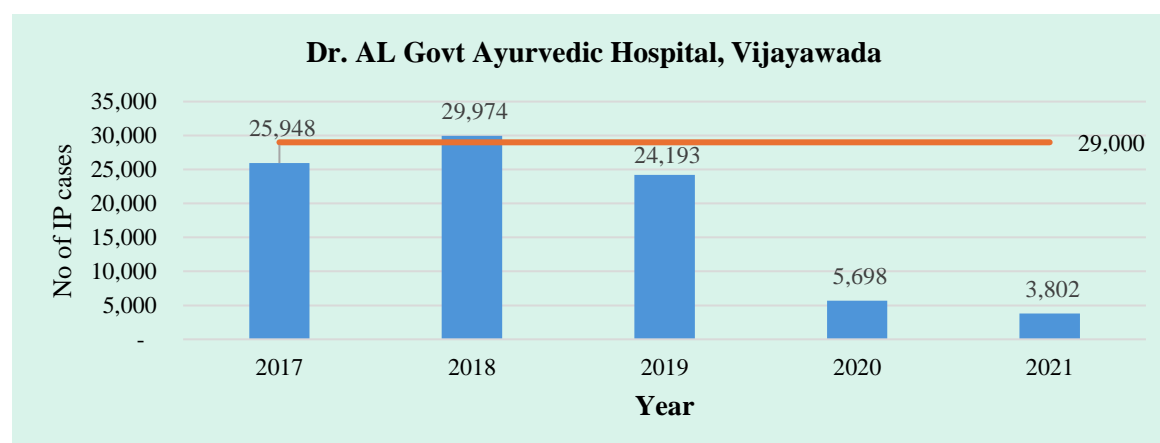
The decreased registrations in the year 2021 can be attributed to COVID

10.9.2 Inpatient load

10.9.2.1 Ayurveda Teaching Hospital

The beds were provided in the hospital based on the student-patient ratio as prescribed in CCIM norms²⁸⁸. As such, about 29,000 inpatients are expected to avail the services in Ayurvedic teaching hospital (detailed in **Appendix 10.11**). Audit noticed that patients have not preferred to avail inpatient services through Ayurvedic hospitals during 2019 to 2021. The data visualisation is given in **Chart 10.3**.

Chart 10.3: IP cases in Dr. AL Govt Ayurvedic College

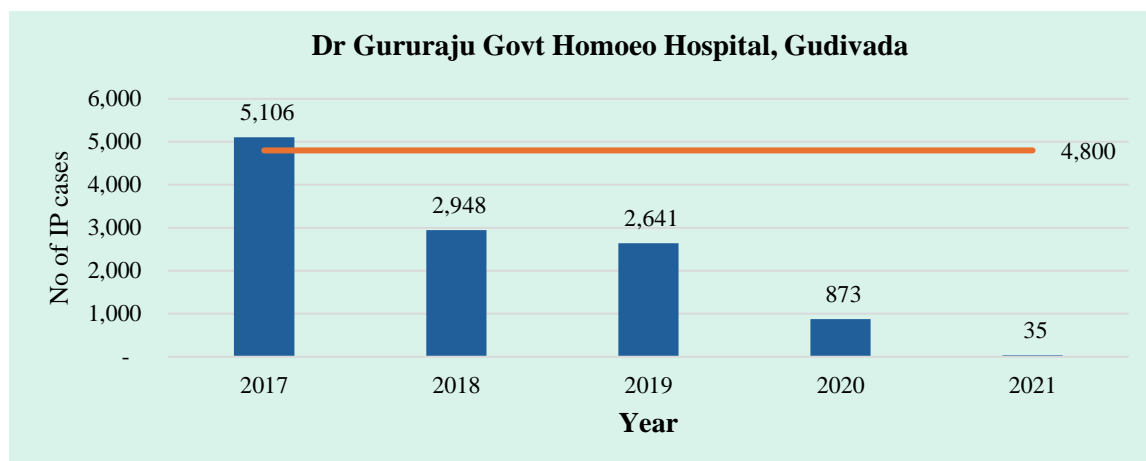


²⁸⁸ CCIM Norms for Undergraduate and for Post Graduate

10.9.2.2 Homoeopathic Teaching Hospital

The beds were provided in the hospital based on the student-patient ratio as prescribed in CCH norms²⁸⁹. As such, about 4800 inpatients are expected to avail the services in Homoeopathy teaching hospital in a calendar year (detailed in *Appendix 10.11*). Audit noticed that patients have not preferred to avail inpatient services through Homoeopathic hospitals during 2018 to 2021 as depicted in *Chart 10.4*.

Chart 10.4: IP cases in Dr. Gururaju Government Homoeo Hospital, Gudivada, Krishna District



The departmental authorities replied that due to COVID pandemic, insufficient supply of medicines *etc.* OP cases were drastically reduced. In respect of reduction in IP cases, lack of provision of accommodation, insufficient budget and non-recruitment of class-IV staff *etc.* are the reasons.

Poor performance in providing hospital services may result in non-achievement of basic objectives to provide cost effective AYUSH services to the patients.

10.10 Other Issues

10.10.1 Non-maintenance of official website

An amount of ₹38.20 lakh²⁹⁰ was sanctioned (2014-15 to 2019-20), under the sub-component “Andhra Pradesh Ayush Journal & Maintenance of Web portal (Component: Flexi pool)”. An amount of ₹15.00 lakh was spent, leaving a balance of ₹23.20 lakh unspent.

Audit noticed (September 2022) that the official web portal in respect of the Department of AYUSH, Government of Andhra Pradesh was not being maintained due to non-release of funds during 2020-21 and 2021-22.

Due to non-maintenance of Departmental official web portal, vital information about Department of AYUSH/AYUSH services *i.e.*, Citizen’s charter, RTI, Key contacts, Government Orders & Circulars, Central/State Schemes and information regarding

²⁸⁹ CCH Norms for Undergraduate and for Post Graduate

²⁹⁰ GoI Share: ₹24.42 lakh and GoAP Share: ₹13.78 lakh

Educational and medical institutions, availability of dispensaries, Research Departments, AYUSH Statistics, Drug Licensing Authority, Feedback *etc.*, was not made available to public to create awareness about AYUSH services in the State.

10.10.2 Non-updation of college website

As per prescribed Regulations²⁹¹, the Homoeopathic /Ayurvedic college authorities should maintain the college website with necessary information *viz.*, the details of Principal and Medical Superintendent of the College/Hospital, details of teaching and non-teaching staff, list of students admitted merit/category-wise (UG and PG) for the current and previous years, research publications, Continuing Medical Education²⁹² programmes conducted, result of all the examinations, details of clinical material in the Hospital *etc.* However, these were not available/not updated in the website maintained by the test-checked Homoeopathic/Ayurveda College authorities.

The Principal, Homoeopathy Medical College replied (October 2022) that due to non-receipt of funds, the website could not be maintained. The Principal, Ayurvedic college replied that the website would be updated and maintained.

10.10.3 Non-maintenance of computerised Central Registration System

As per prescribed Regulations²⁹³, the Ayurvedic and Homoeopathic Colleges and Hospitals shall maintain web based computerised Central Registration System for maintaining the records of patients in OP and IP Department. The Colleges shall also maintain the Department-wise records, case papers of OP and IP Department, laboratory and radiological investigation reports, medicines dispensing register, diet register for IP Department patients, duty roster of hospital staff, birth and death certificates *etc.*

However, web based computerised central Registration system was not developed in the test-checked Ayurvedic and Homoeopathic colleges & Hospitals.

Government replied (August 2023) that the requirement was submitted to NIC, Vijayawada for developing official website and dashboard for daily OPD cases.

10.11 Recommendations

- ***The State Government needs to release the funds provisioned as per approved State Annual Action Plan (SAAP) and ensure timely release of funds towards matching share under National Ayush Mission for optimal utilisation of scheme funds.***

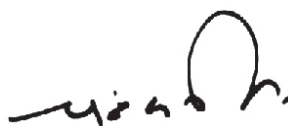
²⁹¹ Regulation 10 of Homoeopathy Central Council (Minimum Standards Requirement of Homoeopathic colleges and attached Hospitals) Regulations 2013 and Regulation 9(2) of IMCC (Requirements of Minimum Standard for undergraduate Ayurveda Colleges and attached Hospitals) Regulations, 2016

²⁹² Sensitisation programme for Allopathic doctors on potentialities of AYUSH system/Orientation Programme for AYUSH doctors on modern trends in AYUSH systems

²⁹³ Indian Medicine Central Council (Requirements of Minimum Standard for undergraduate Ayurveda Colleges and attached Hospitals) Regulations 2016 (7.3) and Homoeopathy Central Council (Minimum Standards Requirement of Homoeopathic Colleges and attached Hospitals) Regulations 2013 (7.3)


- *The State Government may ensure that adequate infrastructure facilities, equipment, and drugs are provided to the hospitals/dispensaries under AYUSH as per norms.*
- *The State Government may take steps to recruit required staff for AYUSH in medical and educational institutions.*
- *The State Government may ensure implementation of Clinical Establishment Act 2010 (CEA) for regulating Hospitals, Clinics, Diagnostic services and Laboratories under AYUSH.*

Vijayawada
The 30 October 2024


(CHANDRA MAULI SINGH)
Principal Accountant General (Audit)
Andhra Pradesh

Countersigned

New Delhi
The 05 November 2024


(GIRISH CHANDRA MURMU)
Comptroller and Auditor General of India

Appendices

Appendix- 1.1

(Reference: Paragraph No.1.4 Page No. 5)

Details of Administrative authorities in the Organisational set up.

Principal Secretary, Health Medical & Family Welfare

Principal Secretary to the Government of Andhra Pradesh is the administrative head of the Health Medical & Family Welfare department.

Commissioner, Health & Family Welfare (CH&FW)

The responsibility of the Commissioner of Health and Family Welfare is implementation of Maternal and Child Health Care and Family Welfare services viz., Family Planning, Antenatal care, Postnatal Care including Immunisation services in Andhra Pradesh. The focus is mainly on promotive and preventive care. All the programmes, Schemes and activities implemented by the Government for the promotion of Public Health & Family Welfare in the State including Centrally sponsored schemes and externally financed projects are executed by CH&FW through the various public health facilities and field offices.

Mission Director, National Health Mission

The main programmatic components of NHM include Health System Strengthening, Reproductive-Maternal-Neonatal-Child and Adolescent Health (RMNCH+A), and prevention of Communicable and Non-Communicable Diseases. The State Program Management Unit (SPMU) acts as the Secretariat to the State Health Mission. The State Health Society is headed by a Mission Director. Every district has a District Health Society (DHS), which is headed by the District Collector.

Director, Medical Education (DME)

The Director of Medical Education is responsible for administration of all tertiary care facilities - Medical colleges and attached Teaching hospitals, Dental colleges, Nursing schools and Nursing colleges.

Commissioner, Andhra Pradesh Vaidya Vidhana Parishad (APVVP)

APVVP, a statutory body as per Andhra Pradesh Vaidya Vidhana Parishad (APVVP) Act (1986) was constituted to manage the secondary level Healthcare Institutions, which include the CHCs, AHs and the DHs.

Director, Public Health & Family Welfare (DPH&FW)

DPH&FW monitors the public health services, prevention and control of communicable diseases and implementation of related national and state health programmes. The department is also responsible for prevention, control and management of endemic and epidemic diseases, health promotion, management of all primary health institutions in the State and implementation of Births and Deaths act.

Commissioner, AYUSH

Ayush Commissionerate provides health services through Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy system of medicines. The Department also regulates manufacturing and sale of Ayurvedic, Unani and Homeopathy drugs, apart from administration of the dispensaries, hospitals and medical colleges related to this system of medicine.

Managing Director, Andhra Pradesh Medical Services & Infrastructure Development Corporation (APMSIDC)

APMSIDC is entrusted²⁹⁴ with the responsibility of procurement of drugs and medicines for supply to the hospitals under the control of the Director of Public Health & Family Welfare (DPH&FW), AP Vaidya Vidhana Parishad (APVVP) and Directorate of Medical Education (DME), and Institute of Preventive Medicine (IPM) through the Central Drug/Medicines Stores (CDS/CMS) established in the districts. APMSIDC was also entrusted with the procurement of medical equipment²⁹⁵ and providing infrastructure for medical services.

Director General, Drugs Control Administration (DCA)

DCA regulates the manufacture, sale, and distribution of Drugs in Andhra Pradesh through enforcement of the following legal provisions.

- i. Drugs and cosmetics Act, 1940 and Rules, 1945
- ii. Drugs and Magic Remedies (Objectionable Advertisement) Act, 1954 & Rules, 1955
- iii. Drugs (Price Control) Order, 1995 & Essential Commodities Act, 1955
- iv. AP Narcotic Drugs and Psychotropic Substances Rules, 1986 (For limited purpose)

²⁹⁴ vide G.O. Rt. No. 1357 dated 19.10.2009.

²⁹⁵ vide G.O.Ms.No.7 dated 13.01.2016

Appendix – 1.2

(Reference: Paragraph No.1.7 Page No 8)

Statement showing sampled HCFs and Teaching Hospitals (THs)

District/Sector	Primary Health	Secondary Health	Tertiary Health
Srikakulam	Urlam PHC Yarabadu SC	CHC Sompeta	GMC, Srikakulam and attached GGH, Srikakulam
	Karajada PHC Gokarnapuram SC	AH Seethampeta	
	Edupuram PHC Kesupuram SC	DH Tekkali	
SPSR Nellore	Inamadugu PHC Leguntapadu SC	CHC Naidupeta	A.C.S.R. GMC, Nellore and attached GGH, Nellore
	Tummalapenta PHC Chenchuganipalem SC	AH Kavali	
	Chennuru PHC Chennuru-I SC	DH Atmakur	
Anantapur	Kudair PHC Thimmapuram SC	CHC Kothacheruvu	GMC, Anantapur and attached GGH, Anantapur
	Kondapuramu PHC Gorantla-3 SC	AH Kadiri	
	Narpala PHC Ganganapalli SC	DH Hindupur	
AYUSH	---	---	Dr. N.R.S Govt. Ayurvedic College, Vijayawada and attached Dr.A.L. Govt. Ayurvedic Hospital, Vijayawada
	---	---	Dr. Gururaju Govt. Homeo College, Gudivada and attached Homeo Hospital, Gudivada.

Appendix-2.1

(Reference: Paragraph No 2.2.2.2 Page No. 16)

Specialty wise availability of Doctors in Secondary healthcare across the districts

Speciality	Srikakulam			Vizianagaram			Visakhapatnam			East Godavari			West Godavari			Krishna			Guntur		
	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V
ENT	8	8	0	10	10	0	12	11	1	12	11	1	9	9	0	8	8	0	8	8	0
General Medicine	23	20	3	16	10	6	22	15	7	34	17	17	24	13	11	18	13	5	26	23	3
Paediatrics	24	21	3	16	15	1	24	23	1	34	25	9	24	17	7	17	17	0	28	26	2
General Surgery	23	18	5	16	12	4	22	14	8	34	25	9	24	23	1	17	13	4	26	24	2
Ophthalmology	9	7	2	10	7	3	14	9	5	12	11	1	9	9	0	8	8	0	9	9	0
Dental	19	11	8	13	6	7	18	9	9	29	16	13	18	11	7	15	6	9	21	15	6
Obstetric & Gynaecology	31	31	0	25	23	2	34	31	3	46	37	9	32	26	6	26	25	1	34	31	3
Psychiatry	2	2	0	1	1	0	4	4	0	0	0	0	1	1	0	0	0	0	2	2	0
Orthopedics	8	8	0	10	10	0	12	10	2	12	11	1	9	9	0	8	7	1	8	8	0
Dermatology & venereology	5	5	0	4	4	0	6	5	1	5	4	1	7	7	0	2	2	0	5	4	1
Anaesthesia	24	23	1	16	16	0	24	21	3	34	29	5	24	21	3	17	17	0	27	25	2
Radiology	5	4	1	4	4	0	6	2	4	5	0	5	7	1	6	2	2	0	6	6	0
Pathology	6	5	1	4	3	1	8	5	3	5	5	0	7	6	1	2	2	0	8	8	0
Micro Biologist	1	1	0	1	0	1	2	2	0	0	0	0	1	1	0	0	0	0	2	2	0
Forensic Medicine	1	0	1	1	0	1	2	1	1	0	0	0	1	1	0	0	0	0	2	2	0
General Doctor (MBBS)	52	30	22	36	25	11	56	37	19	68	45	23	52	42	10	35	31	4	62	53	9
CS RMO	5	0	5	4	1	3	6	2	4	5	0	5	7	2	5	2	1	1	5	1	4
Chest Diseases Specialist	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	246	194	52	187	147	40	272	201	71	335	236	99	256	199	57	177	152	25	279	247	32

Department/ Speciality	Prakasam			SPSR Nellore			Chittoor			Anantapur			Kurnool			YSR		
	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V
ENT	11	8	3	7	6	1	14	10	4	12	8	4	5	5	0	9	8	1
General Medicine	22	8	14	20	10	10	29	20	9	30	17	13	25	13	12	19	14	5
Paediatrics	28	26	2	20	17	3	29	28	1	29	26	3	30	26	4	21	20	1
General Surgery	23	18	5	20	17	3	29	23	6	28	18	10	25	22	3	20	16	4
Ophthalmology	11	11	0	7	7	0	14	12	2	13	13	0	5	5	0	9	9	0
Dental	18	8	10	18	13	5	24	10	14	22	10	12	20	16	4	14	7	7
Obstetric & Gynaecology	41	32	9	26	24	2	42	39	3	40	31	9	39	32	7	28	25	3
Psychiatry	1	1	0	1	1	0	1	1	0	2	2	0	0	0	0	0	0	0
Orthopedics	11	11	0	7	7	0	14	12	2	12	12	0	5	5	0	9	9	0
Dermatology & venereology	5	5	0	3	3	0	6	6	0	7	5	2	4	4	0	5	5	0
Anaesthesia	25	23	2	20	14	6	29	22	7	29	18	11	27	25	2	20	19	1
Radiology	6	1	5	3	2	1	6	1	5	7	0	7	5	1	4	6	3	3
Pathology	5	3	2	3	2	1	6	5	1	9	6	3	4	4	0	7	5	2
Micro Biologist	1	1	0	1	1	0	1	1	0	2	2	0	0	0	0	1	1	0
Forensic Medicine	1	1	0	1	1	0	1	1	0	1	1	0	0	0	0	1	1	0
General Doctor (MBBS)	50	42	8	44	33	11	62	50	12	65	45	20	51	42	9	43	36	7
CS RMO	5	0	5	3	2	1	6	2	4	7	1	6	4	1	3	5	1	4
Chest Diseases Specialist	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0
TOTAL	264	199	65	204	160	44	313	243	70	317	215	102	249	201	48	217	179	38

S-Sanctioned, F-Filled, V-Vacancies

Appendix-2.2

(Reference: Paragraph No.2.2.2.4 Page No. 19)

District wise availability of Staff nurses in secondary health care

Sl. No.	District	Sanctioned	Filled	Vacant	Vacancy Percentage
1	Srikakulam	264	201	63	24
2	Vizianagaram	205	184	21	10
3	Visakhapatnam	300	262	38	13
4	East Godavari	348	277	71	20
5	West Godavari	286	199	87	30
6	Krishna	181	150	31	17
7	Guntur	302	201	101	33
8	Prakasam	275	226	49	18
9	SPSR Nellore	208	148	60	29
10	Chittoor	336	268	68	20
11	Anantapur	348	297	51	15
12	YSR	250	247	3	1
13	Kurnool	248	148	100	40
	Total	3551	2808	743	21

Appendix- 2.3: District wise availability of Paramedical staff in secondary health care
(Reference: Paragraph No.2.2.2.5 Page No. 20)

District-wise Paramedical staff	Srikakulam			Vizianagarm			Visakhapatnam			East Godavari			West Godavari			Krishna			Guntur			Prakasam			SPSR Nellore			Chittoor			Anantapur			Kurnool			YSR		
	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V
Radiographers	19	12	7	12	10	2	18	17	1	29	13	16	17	12	5	15	10	5	23	7	16	17	12	5	17	16	1	23	21	2	23	21	2	20	8	12	16	16	0
Dietician	1	1	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	1	1	1	0	1	0	0	0	0	0	0	1	1	0	1	0	1	1	0	1
Pharmacist (Gr-I,II & Supervisor)	51	29	22	35	31	4	50	46	4	73	40	33	54	33	21	37	30	7	56	41	15	49	30	19	42	32	10	63	47	16	28	15	13	54	37	17	43	31	12
Theatre Assistant	35	22	13	25	19	6	38	37	1	44	29	15	39	28	11	21	21	0	42	31	11	37	34	3	27	25	2	42	39	3	44	33	11	36	23	13	34	29	5
Junior Analyst	1	0	1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	1	1	0
Lab Technician	44	41	3	30	26	4	44	42	2	63	53	10	43	32	11	33	31	2	53	48	5	43	36	7	39	39	0	54	51	3	53	46	7	47	36	11	37	33	4
Dark Room Assistant	16	6	10	12	2	10	18	5	13	15	4	11	21	3	18	6	3	3	16	7	9	17	9	8	9	4	5	18	9	9	21	5	16	14	4	10	16	6	10
Ophthalmic Assistant	2	1	1	5	5	0	4	3	1	7	1	6	1	1	0	6	0	6	1	1	0	5	2	3	3	2	1	7	0	7	4	4	0	1	1	0	3	3	0
Biomedical Engineer	5	4	1	4	4	0	6	6	0	5	1	4	7	6	1	2	2	0	5	3	2	6	2	4	3	3	0	6	6	0	8	8	0	5	2	3	5	5	0
Audio metrician	4	0	4	4	2	2	4	3	1	5	0	5	7	1	6	2	0	2	3	2	1	5	1	4	3	0	3	6	1	5	6	4	2	4	0	4	4	4	0
Dental Technician	1	0	1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1
Lab Attendant	7	3	4	5	1	4	10	8	2	5	1	4	8	7	1	2	2	0	9	5	4	8	3	5	4	4	0	7	5	2	10	9	1	6	4	2	7	4	3
Physiotherapist	4	3	1	3	3	0	4	4	0	5	3	2	6	5	1	2	2	0	4	3	1	4	4	0	2	2	0	5	5	0	6	6	0	4	2	2	5	5	0
Counsellor	4	2	2	3	3	0	4	4	0	5	4	1	6	5	1	2	2	0	3	3	0	4	4	0	2	2	0	5	5	0	6	7	-1	4	0	4	4	4	0
Postmortem Assistant	19	19	0	13	12	1	18	18	0	29	28	1	18	16	2	15	14	1	22	21	1	18	16	2	18	17	1	24	24	0	23	22	1	20	18	2	15	12	3
Total	213	143	70	151	118	33	224	199	25	285	177	108	227	149	78	143	117	26	243	176	67	214	153	61	169	146	23	260	213	47	236	182	54	216	135	81	192	153	39
Vacancy in percentage	33			22			11			38			34			18			28			29			14			18			23			38			20		

S-Sanctioned, F-Filled, V-Vacancies

Appendix 2.4: District wise availability of administrative and other staff in Secondary healthcare

(Reference: Paragraph No.2.2.2.6 Page No. 21)

Description	Srikakulam			Vizianagaram			Visakhapatnam			East Godavari			West Godavari			Krishna			Guntur			Prakasam			SPSR Nellore			Chittoor			Anantapur			Kurnool			YSR		
	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V
Hospital Administrator	4	0	4	3	0	3	4	0	4	5	0	5	6	0	6	2	0	2	3	0	3	4	0	4	2	0	2	5	0	5	6	0	6	4	0	4	4	0	4
Administrative Officer	4	0	4	4	0	4	4	0	4	5	1	4	7	1	6	2	1	1	3	0	3	5	2	3	3	0	3	6	1	5	6	2	4	4	0	4	4	0	4
Office Superintendent	5	2	3	4	4	0	6	5	1	5	1	4	7	3	4	2	0	2	5	2	3	5	3	2	3	2	1	6	3	3	7	5	2	4	0	4	5	4	1
Medical Record Assistant	2	2	0	5	2	3	4	4	0	7	6	1	1	1	0	6	1	5	1	1	0	5	5	0	3	3	0	7	5	2	4	3	1	1	1	0	3	2	1
Junior Assistant / DEO	44	31	13	31	26	5	44	29	15	63	44	19	44	33	11	34	28	6	53	30	23	45	34	11	40	29	11	55	38	17	53	31	22	49	22	27	36	38	(2)
Junior Accountant	5	0	5	4	0	4	6	0	6	5	0	5	7	0	7	2	0	2	5	0	5	6	0	6	3	0	3	6	0	6	8	0	8	5	0	5	5	0	5
Senior Assistant	12	4	8	13	4	9	16	5	11	17	5	12	15	11	4	11	3	8	12	4	8	15	6	9	9	2	7	19	11	8	19	6	13	10	3	7	13	18	(5)
General Duty Attendant /MNO/FNO	138	123	15	101	87	14	140	138	2	201	146	55	139	87	52	106	94	12	163	143	20	144	79	65	125	121	4	177	138	39	172	151	21	148	106	42	119	111	8
Electrician	5	3	2	3	3	0	6	6	0	5	4	1	6	5	1	2	2	0	4	1	3	4	4	0	2	2	0	5	5	0	7	7	0	4	1	3	4	3	1
Plumber	5	1	4	3	0	3	6	6	0	5	0	5	6	1	5	2	1	1	4	1	3	4	1	3	2	0	2	5	0	5	7	7	0	4	1	3	4	4	0
Office subordinate	20	16	4	13	10	3	20	20	0	29	16	13	18	13	5	16	13	3	25	19	6	22	13	9	18	17	1	24	11	13	24	21	3	25	18	7	16	16	0
Total	244	182	62	184	136	48	256	213	43	347	223	124	256	155	101	185	143	42	278	201	77	259	147	112	210	176	34	315	212	103	313	233	80	258	152	106	213	196	17

S-Sanctioned, F-Filled, V-Vacancies

Appendix-3.1

(Reference: Paragraph No.3.3.1.3 Page No. 35)

Availability of Lab tests in test checked Community Health Centres

Sl No	Speciality	Diagnostic Services/Tests	CHC, Sompeta	CHC, Naidupeta	CHC, Kothacheruvu
I	Clinical Pathology (25 tests)				
	(a) Haematology	Haemoglobin estimation	Yes	Yes	Yes
		Total Leucocyte count	Yes	No	No
		Differential Leucocyte count	No	No	No
		Absolute Eosinophil count	Yes	No	No
		Reticulocyte count	No	No	No
		Total RBC count	Yes	No	No
		E.S.R.	Yes	No	No
		Peripheral Blood Smear, Malaria/Filaria parasite	Yes	Yes	No
		Platelet count	No	No	No
		Packed Cell volume	No	No	No
		Blood grouping	Yes	Yes	Yes
		Rh typing	Yes	Yes	No
		Blood Cross matching	Yes	Yes	No
	(b) Urine Analysis	Urine for Albumin,	Yes	Yes	Yes
		Sugar,	Yes	Yes	Yes
		Deposits,	No	No	No
		bile salts,	Yes	No	No
		bile pigments,	Yes	No	No
		acetone,	No	No	No
		specific gravity,	No	No	No
		Reaction (pH)	No	No	No
	(c) Stool Analysis	Stool for Ova cyst (Eh)	No	No	No
		Hanging drop for V. Cholera	No	No	No
		Occult blood	No	No	No
II	PATHOLOGY				
	a) Sputum	Sputum cytology	No	No	No
III	MICROBIOLOGY	Smear for AFB, KLB	No	No	Yes
		Grams Stain for Throat swab, sputum etc.	No	No	No
IV	SEROLOGY	VDRL	Yes	Yes	No
		Pregnancy test (Urine gravity index)	Yes	Yes	Yes
		WIDAL test	Yes	No	Yes
V	BIOCHEMISTRY	Blood Sugar	Yes	No	Yes
		Blood urea	Yes	No	No
		Liver function tests	No	No	No
		Kidney function tests	Yes	No	No
		Blood lipid profile	No	No	No

Appendix-3.2

(Reference: Paragraph No.3.3.2.2 Page No. 42)

Availability of Lab tests in test checked Area Hospitals

Sl. No.	Speciality	Diagnostic Services/Tests	AH, Kadiri	AH, Seethampeta	AH, Kavali
I	Clinical Pathology				
	(a) Haematology	Haemoglobin estimation	Yes	Yes	Yes
		Total Leucocyte count	Yes	Yes	Yes
		Differential Leucocyte count	Yes	Yes	Yes
		Absolute Eosinophil count	Yes	Yes	Yes
		Reticulocyte count	Yes	No	Yes
		Total RBC count	Yes	Yes	Yes
		E.S.R.	Yes	Yes	Yes
		Bleeding time,	Yes	Yes	Yes
		Clotting time,	Yes	Yes	Yes
		Prothrombin time	No	No	No
		Peripheral Blood Smear	No	Yes	No
		Malaria/Filaria Parasite	Yes	Yes	Yes
		Platelet count	Yes	Yes	Yes
		Packed Cell volume	Yes	Yes	Yes
		Blood grouping	Yes	Yes	Yes
		Rh typing	Yes	Yes	Yes
		Blood Cross matching	Yes	No	Yes
	(b) Urine Analysis	Urine for Albumin, Sugar, Deposits, bile salts, bile pigments, acetone, specific gravity, Reaction (pH)	Yes	Yes	Yes
	(c) Stool Analysis	Stool for Ova and Cysts	Yes	Yes	No
		Hanging drop for V. Cholera	No	Yes	No
		Occult blood	Yes	No	No
	(d) Semen Analysis	Morphology, Count, Motility <i>etc.</i>	No	Yes	No
	(e) CSF Analysis	Analysis, Cell count <i>etc.</i>	No	No	No
	(f) Aspirated fluids	Cell count, cytology	No	No	No
II	PATHOLOGY				
	a) Sputum	Sputum cytology	No	Yes	Yes
III	MICROBIOLOGY	Smear for AFB, KLB	No	Yes	Yes
		Grams Stain for Meningococci	No	No	No
		KOH study for fungus	No	No	No
		Grams stain for Throat swab, sputum <i>etc.</i>	No	No	No
IV	SEROLOGY	RPR Car Test for Syphilis	Yes	No	Yes
		Pregnancy test (Urine gravindex)	Yes	Yes	Yes
		WIDAL test	Yes	Yes	Yes
		Rapid test for HIV, HBs Ag, HCV, Stocking of rapid H ₂ S based test for bacteriological examination of water	Yes	Yes	Yes

Sl. No.	Speciality	Diagnostic Services/Tests	AH, Kadiri	AH, Seethampeta	AH, Kavali
V	BIOCHEMISTRY	Blood Sugar	Yes	Yes	Yes
		Blood urea , blood cholesterol, Lipid Profile	Yes	Yes	Yes
		Liver function tests	Yes	Yes	Yes
		Kidney function tests	Yes	Yes	Yes
		Stocking of OT test for residual chlorine in water	No	No	Yes
		CSF for protein, sugar	No	No	No

Appendix-3.3

(Reference: Paragraph No 3.3.3.3 Page No. 46)

Availability of Lab tests in all 12 District Hospitals

			Tekkali	Atmakur	Hindupur	Paderu	Parvathi puram	Anakapalli	Tanuku	Tenali	Markapur	Madanapalle	Chittoor	Proddatur
I	Clinical Pathology (29 tests)													
(a)	Haematology	Haemoglobin estimation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Total Leukocytes counts	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Differential Leukocytes counts	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Absolute Eosynophyl count	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No
		Reticulocyte count	No	No	No	Yes	No	No	No	Yes	No	No	Yes	No
		Total RBC count	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		ESR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Immunoglobulin Profile, IGM, IGG, IGE, IGA	Bleeding time	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
	Fibrinogen Degradation Product	Clotting time	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Prothrombin time	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes
		Peripheral Blood Smear	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No
		Malaria/Filari a Parasite	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
		Platelet count	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
		Packed Cell Volume	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
		Blood grouping	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Rh typing	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

			Tekkali	Atmakur	Hindupur	Paderu	Parvathi puram	Anakapalli	Tanuku	Tenali	Markapur	Madanapalle	Chittoor	Proddatur
		Blood Cross matching	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		ELOSA for HIV, HCV, HBs Ag	No	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
		ELISA for TB	No	No	No	No	Yes	No	No	No	Yes	Yes	Yes	No
		APTT	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No
		ANA/ANF, Rheumatoid Factor	No	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No
(b)	Urine Analysis	Urine for Albumin, Sugar, Deposits, bile salts, bile pigments, acetone, specific gravity, Reaction(pH)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(c)	Stool Analysis	Stool for Ovacyst (Ph),	Yes	No	No	Yes	No	Yes	Yes	No	Yes	No	Yes	No
		Hanging drop for V. Cholera	No	No	No	No	No	No	Yes	Yes	No	No	Yes	No
		Occult blood	No	No	No	Yes	No	Yes	Yes	Yes	Yes	No	Yes	No
		Bacterial culture and sensitivity	No	No	No	Yes	No	No	No	Yes	No	No	Yes	No
(d)	Semen Analysis	Morphology, count	Yes	No	No	No	No	Yes	No	Yes	Yes	No	Yes	No
(e)	CSF Analysis	Analysis, Cell count etc.	No	No	No	Yes	No	Yes	No	Yes	No	No	Yes	No
(f)	Aspirated fluids	Cell count cytology	No	No	No	Yes	No	No	No	Yes	No	No	Yes	No
II	Pathology (8 tests)													
(a)	PAP smear	Cytology	No	No	No	No	No	No	No	Yes	No	No	Yes	Yes
©(c)	Haematology	Bone Marrow Aspiration	No	No	No	No	No	No	No	Yes	No	No	Yes	No
		Immuno Haematology	No	No	No	No	No	No	No	Yes	No	No	Yes	No
		Coagulation disorders	No	No	No	No	No	No	No	No	No	No	Yes	No
		Sickle cell anaemia	No	No	No	Yes	No	No	No	No	No	No	Yes	No
		Thalassemia	No	No	No	Yes	No	No	No	No	No	No	Yes	No
(d)	Histo-pathology	All types of Specimens, Biopsies	No	No	No	No	No	No	No	No	No	No	Yes	No

			Tekkali	Atmakur	Hindupur	Paderu	Parvathi puram	Anakapalli	Tanuku	Tenali	Markapur	Madanapalle	Chittoor	Proddatur
III	Microbiology (7 tests)	KOH study for fungus	No	No	No	Yes	No	No	No	No	No	No	Yes	No
		Smear for AFB, KLB (Diphtheria)	No	Yes	No	Yes	Yes	No	Yes	No	No	No	Yes	Yes
		Culture and sensitivity for blood, sputum, pus, urine <i>etc.</i>	No	No	No	Yes	No	No	No	No	No	No	Yes	No
		Bacteriological analysis of water by H ₂ S based test	No	No	No	No	No	No	No	No	No	No	Yes	No
		Stool Culture for Vibrio Cholera and other bacterial enteropathogene	No	No	No	Yes	No	No	No	No	No	No	Yes	No
		Supply of different media* for peripheral Laboratories	No	No	No	No	No	No	No	No	No	No	Yes	No
		Grams Stain for Throat swab, sputum <i>etc.</i>	No	No	No	Yes	No	No	No	No	No	No	Yes	No
IV	Serology (7 tests)	RPR Card test for syphilis	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes
		Pregnancy test (Urine gravindex) ELISA for Beta HCG	Yes	No	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes
		Leptospirosis , Brucellosis	No	No	No	No	No	No	No	No	No	No	Yes	No
		WIDAL test	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Elisa test for HIV, HBsAG, HCV	No	No	No	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes
		DCT/ICT with Titre	No	No	No	No	No	Yes	No	Yes	No	No	Yes	No
		RA factor	No	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes
V	Biochemistry (19 tests)	Blood Sugar	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

			Tekkali	Atmakur	Hindupur	Paderu	Parvathi puram	Anakapalli	Tanuku	Tenali	Markapur	Madanapalle	Chittoor	Proddatur
		Glucose Tolerance Test	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Glycosylated Haemoglobin	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
		Blood Urea, Blood cholesterol	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Serum bilirubin	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Icteric index	No	No	No	No	No	Yes	No	Yes	Yes	No	Yes	No
		Liver function tests	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Kidney function test	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Lipid Profile	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Blood Uric acid	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
		Serum calcium	No	Yes	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
		Serum Phosphorous	No	No	No	Yes	No	Yes	No	No	Yes	No	Yes	No
		Serum Magnesium	No	No	No	No	No	No	No	No	No	No	Yes	No
		CSF for protein, sugar	No	No	No	Yes	No	Yes	No	No	No	No	Yes	No
		Blood gas analysis	No	Yes	No	Yes	Yes	No	Yes	No	Yes	No	Yes	No
		Estimation of residual chlorine in water	No	No	No	No	No	No	No	No	No	No	Yes	No
		Thyroid T3,T4,TSH	No	No	No	Yes	No	No	No	No	No	No	Yes	No
		CPK	No	No	No	Yes	No	No	No	No	No	No	Yes	No
		Iodometry Titration	No	No	No	No	No	No	No	No	No	No	Yes	No

Appendix- 3.4

(Reference: Paragraph No. 3.3.4.4 Page No 52)

Ward-wise allocation of beds in District Hospitals

Ward-wise allocation of Beds in DHs																
Sl. No.	Name of the Ward	101-200 Bedded	201-300 Bedded	500 Bedded	Paderu	Parvatipuram	Anakapalli	Tanuku	Tenali	Markapur	Madanapalle	Chittoor	Proddatur	Tekkali	Atmakur	Hindupur
					200 Bedded	150 Bedded	200 Bedded	150 Bedded	300 Bedded	150 Bedded	150 Bedded	400 Bedded	350 Bedded	200 Bedded	150 Bedded	200 Bedded
1	General Medicine	15 + 15	25 + 25	40 + 40	40	30	66	26	62*	20	36	170	52	35	30	40
2	New-born ward	5	5	10	12	10	3	-	-	10	10	18	20	-	-	10
3	Mothers room with dining and toilets	5	5	10	4	4	-	-	-	5	-	-	12	-	-	5
4	Paediatrics ward	10	20	40	15	20	23	10	20	6	10	100	20	5	5	50
5	Critical care ward – IMCU/ICU/HDU	5	10	10	0	0	8	-	20	12	15	5	-	-	4	-
6	Isolation Ward	4	5	5	15	0	6	-	5	4	6	-	13	15	-	4
7	Dialysis unit (as per specifications)	-	3	3	5	10	-	-	-	11	15	10	15	-	-	-
8	Thoracic medicine ward with room for pulmonary function test	-	5 + 5	10 + 10	0	0	-	-	-	-	6	-	-	-	-	-
9	Blood bank	Yes	Yes	Yes	-	-	4	-	-	-	2	-	-	-	-	-
10	General surgery ward (incl. Urology, ENT)	15 + 15	25 + 20	35 + 35	25	15	-	50	45	20	30	170	48	12	30	30
11	Post – Operative Ward	10 + 16*	10 + 10	15 + 15	10	15	29	26	20	20	12	45	15	-	-	-
12	Accident and Trauma ward/casualty	10	10	15	10	10	-	4	10	5	10	-	12	18	14	13
13	Labour room	3	8	8	3	3	4	24	100	10	2	10	5	-	17	4
14	Labour room (Eclampsia)	-	3	3	0	0	1	-	-	1	-	5	1	-	-	-
15	Septic Labour room	-	2	2	0	0	1	-	-	2	-	-	1	-	-	-
16	Ante-natal ward	15	15	30	20	15	5	-	-	5	10	30	11	15	-	15
17	Post-natal ward	15	15	30	19	15	41	-	-	5	10	30	24	-	30	15
18	Postpartum ward	20	30	50	10	0	10	-	-	2	4	-	12	-	-	-

Ward-wise allocation of Beds in DHs																
Sl. No.	Name of the Ward	101-200 Bedded	201-300 Bedded	500 Bedded	Paderu	Parvatipuram	Anakapalli	Tanuku	Tenali	Markapur	Madanapalle	Chittoor	Proddatur	Tekkali	Atmakur	Hindupur
					200 Bedded	150 Bedded	200 Bedded	150 Bedded	300 Bedded	150 Bedded	150 Bedded	400 Bedded	350 Bedded	200 Bedded	150 Bedded	200 Bedded
19	Post operative ward	-	20	40	4	20	50	-	-	10	20	10	-	-	-	7
20	Ophthalmology ward	5	10	20	10	5	16	10	18	12	6	40	20	12	4	7
21	Burns Ward	-	5	10	5	5	-	-	-	1	-	10	2	-	-	-
	Total Beds	-	-	-	207	177	267	150	300	161	204	653	283	112	134	200
*Including Ortho wards																
Blank column indicates that no information was furnished by the Hospital																

Appendix-3.5

(Reference: Paragraph No 3.3.4.8 Page No. 57)

Availability of Linen in 12 District Hospitals

S.No.	Name of linen article	Requir ed Numb ers	Available in Numbers											
		101 - 200 Bedded hospital	DH Paderu	DH Parvatipuram	DH Anakapalle	DH Tanuku	DH Tenali	DH Markapur	DH Madanapalle	DH Chittoor	DH Proddutur	DH tekkali	DH Atmakur	DH Hindupur
1	Bedsheets	800	0	800	600	150	660	163	166	1920	1500	700	441	400
2	Bedspreads	1200	0	0	800	900	0	0	168	0	0	0	1200	4000
3	Blankets Red and blue	50	0	0	40	0	39	7	0	61	50	20	100	50
4	Patna towels	300	0	0	0	0	0	0	17	0	0	0	0	--
5	Table cloth	60	0	0	25	20	10	0	0	0	50	0	20	10
6	Draw sheet	100	0	0	25	0	0	0	0	0	10	0	0	0
7	Doctor's overcoat	60	0	0	40	0	0	0	8	84	0	0	5	60
8	Hospital worker OT coat	250	15	0	150	0	0	0	10	0	100	3	25	24
9	Patients house coat (for female)	600	0	10	200	0	0	195	0	0	300	120	146	200
10	Patients Pyjama (for male) Shirt	300	0	10	100	0	0	0	6	200	200	0	0	50
11	Over shoes pairs	80	0	0	30	0	0	0	0	yes	0	0	50	50
12	Pillows	300	0	20	150	0	0	0	16	0	300	4	48	100
13	Pillows covers	600	0	0	200	0	0	0	0	0	300	510	0	0
14	Mattress (foam) Adult	200	200	150	100	0	300	115	90	0	300	110	196	200

S.No.	Name of linen article	Requir ed Numb ers	Available in Numbers											
		101 - 200 Bedded hospital	DH Paderu	DH Parvatipuram	DH Anakapalle	DH Tanuku	DH Tenali	DH Markapur	DH Madanapalle	DH Chittoor	DH Proddutur	DH tekkali	DH Atmakur	DH Hindupur
15	Paediatric Mattress	20	20	10	10	150	40	4	10	10	20	8	43	50
16	Abdominal sheets for OT	150	10	20	100	10	120	38	30	50	50	10	30	150
17	Pereneal sheets for OT	150	0	30	100	50	0	28	5	0	50	1 pair	7	150
18	Leggings	100	0	10	50	50	50	4	0	0	50	1 pair	2	100
19	Mortuary sheet	50	0	0	10	0	0	0	0	0	20	0	0	0
20	Mats (Nylon)	100	0	0	10	10	0	0	0	0	20	0	2	0
21	Mackintosh sheet (in meters)	200	30	200	100	0	150	0	38	0	300	0	800	200

Appendix 4.1

(Reference: Paragraph No.4.1 Page No. 69)

Brief History of APMSIDC

Andhra Pradesh Health, Medical, Housing and Infrastructure Development Corporation (APHMHIDC) was set up by GoAP in 1984 for construction and maintenance of hospital buildings. Further, procurement and distribution of medicines, surgicals, consumables and equipment were also entrusted in the year 2011 to APMHIDC by the Government and the nomenclature was changed to Andhra Pradesh Medical Services and Infrastructure Development Corporation (APMSIDC).

APMSIDC is headed by the Chairman and the Managing Director along with four Chief Engineers at Headquarters, Mangalagiri. Seven circles are headed by Superintending Engineers while Divisions/Central Drug Stores (CDSs) in district headquarters are managed by the Executive Engineers. CDSs are assisted by three Pharmacists for distribution of drugs to various HCFs in the Divisions.

2. Fund flow mechanism to APMSIDC

Government releases funds to Director of Health (for procurement and distribution of drugs and specific surgical items) and to Director of Medical Education (for procurement and distribution of surgical items and equipment), who in turn transfer the funds to Personal Deposit (PD) account of APMSIDC. Further, funds meant for procurement of medicines, consumables, equipment and for creation of infrastructure received from National Health Mission (NHM) are also transferred to APMSIDC as it is the nodal agency for these activities.

The amounts released were apportioned²⁹⁶ as per the provisions contained in Government orders²⁹⁷ and are utilised by APMSIDC towards procurement of medicines, surgical items, and equipment through centralised purchases.

²⁹⁶ DME: 40 per cent; DH: 40 per cent; CAPVVP: 18 per cent; and DIPM: 2 per cent

²⁹⁷ GoAP GO Rt. No.1357, Health, Medical & Family Welfare (M1) Department, dated 19 October 2009

Appendix 4.2

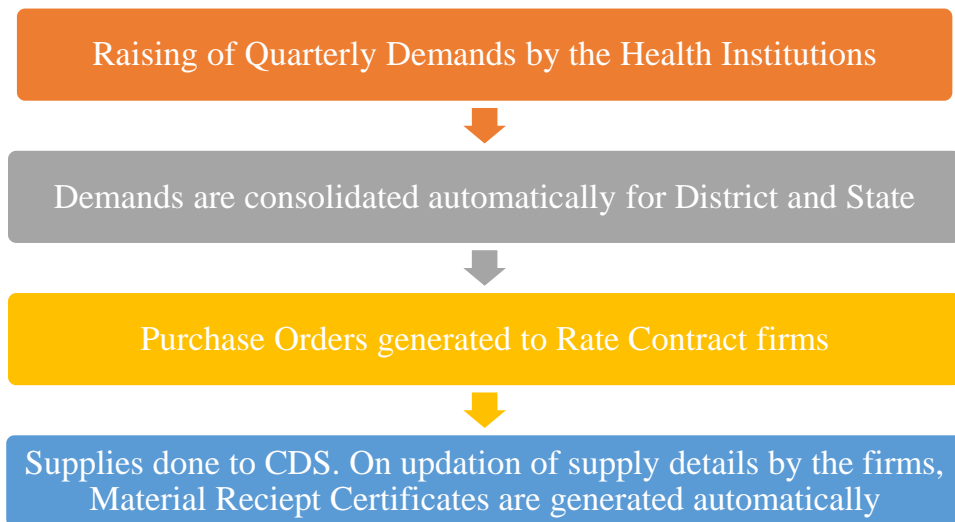
(Reference: Paragraph No.4.3 Page No. 71)

Supply chain mechanism of medicines

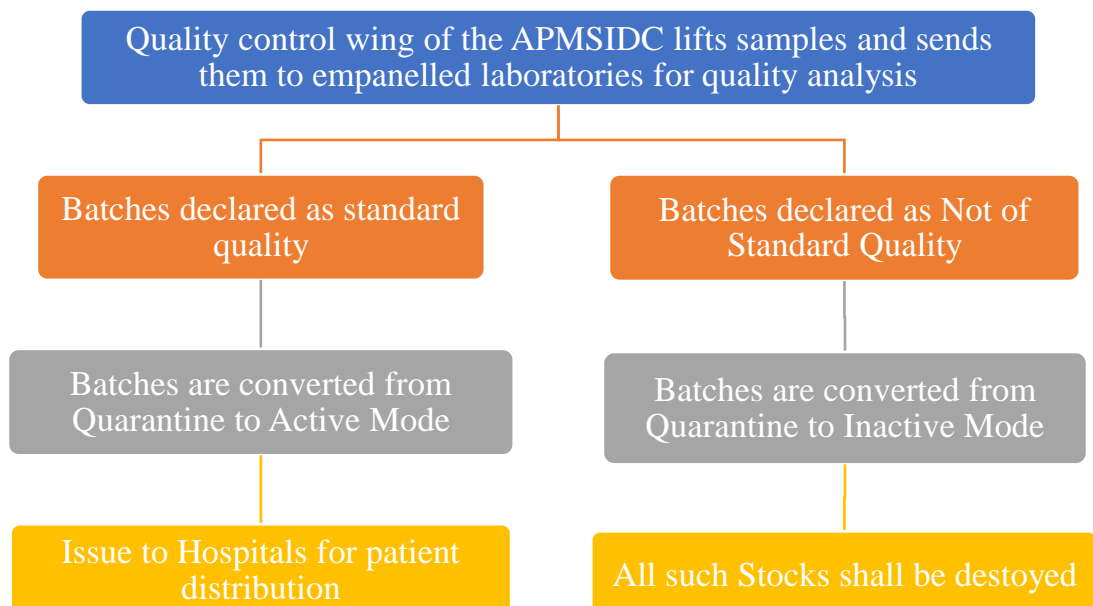
1. HoDs allot hospital wise budget for medicines and surgical consumables.
2. APMSIDC receives quarterly demand from hospitals as per the budget given by HoDs.

1. Workflow mechanism:

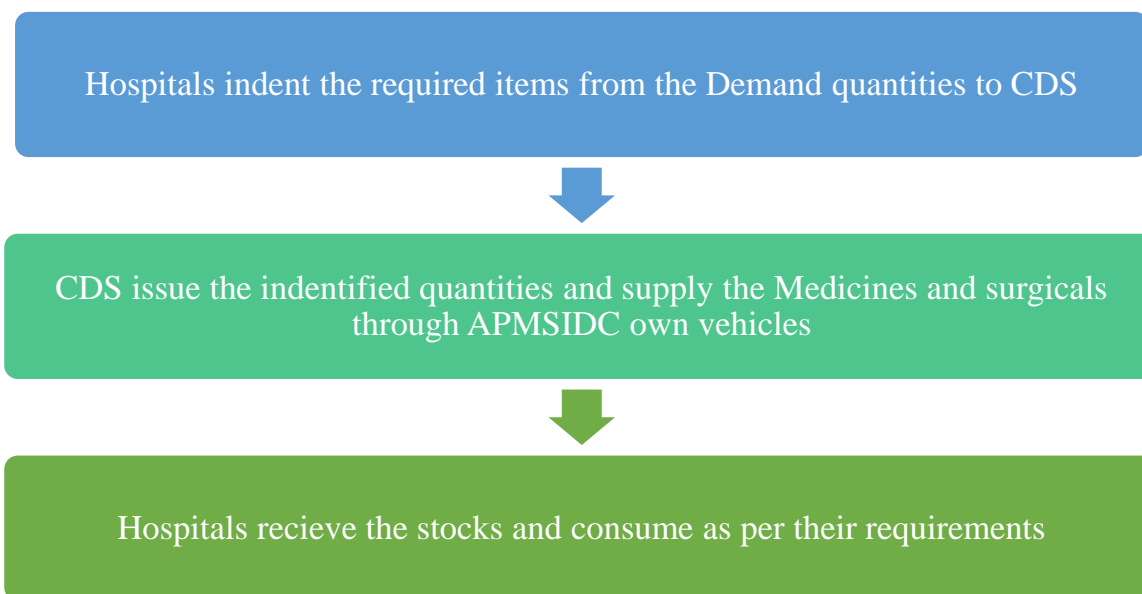
a. Demand Process



b. Quality Process



c. Indenting Process



Appendix-4.3

(Reference: Paragraph No.4.5.1 Page No. 80)

Availability of drugs in the test checked Health Care Facilities

Speciality		Drugs prescribed for treatment	DH Tekkali	AH Seethampeta	CHC Sompeta	DH Hindupur	AH Kadiri	CHC Kothacheruvu	DH Atmakur	AH Kavali	CHC Naidupeta
			Whether available Yes/No								
1	Pregnancy and childbirth	Tab. Nitrofurantion	No	Yes	Yes	No	No	No	Yes	Yes	Yes
		Inj. Normal saline (Sod chloride) 500 ml bottle	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Tab. Ferrous sulphate 500 mg + Folic acid	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Inj. Iron Dextran/Iron sorbitol	Yes	No	Yes	Yes	Yes	Yes	No	No	No
		Tab. Misoprostol	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
		Inj. Magnesium Sulphate	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Inj. Pitocin (Oxytocin)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Tab. Ascorbic acid 100 mg	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
2	Child health (Newborn/Infant/under five)	Inj. Crystalline penicillin	No	No	No	No	No	No	No	No	No
		Inj. Gentamycin	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Inj. Isolyte-P	No	No	No	Yes	No	No	Yes	No	No
		Syp. Ferrous Gluconate 100 ml bottle	No	Yes	No	Yes	No	No	No	No	No
		Inj. Vit K	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
3	Diabetes	Inj. Insulin Rapid	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Inj. Mixtard	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
		Inj. Dextrose 10% 500 ml bottle	No	Yes	No	Yes	No	No	No	No	No
		Inj. Dextrose 50%	No	No	No	No	No	Yes	No	No	No
4	Hypertension	Tab. Atenolol	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Tab. Methyldopa	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Tab. Propranolol	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
		Tab. Enalapril 2.5/5 mg	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
		Tab. Metoprolol	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
		Tab. Amlodipine 5 mg, 10 mg	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Tab. Nefidipine 10 mg, 20 mg, 30 mg	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No

Speciality		Drugs prescribed for treatment	DH Tekkali	AH Seethampeta	CHC Sompeta	DH Hindupur	AH Kadiri	CHC Kothacheruvu	DH Atmakur	AH Kavali	CHC Naidupeta
			Whether available Yes/No								
		Tab. Hydrochlorthiazide 12.5, 25 mg	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
5	Cardiovascular diseases	Inj. Nor adrenaline	Yes	Yes	No	Yes	No	No	Yes	Yes	No
		Inj. Adrenaline Bitartrate IP	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
		Tab. Digoxine	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
		Tab. Isosorbide Dinitrate (Sorbitrate)	No	Yes	Yes	Yes	Yes	No	Yes	No	Yes
		Tab. Clopidogrel	No	Yes	Yes	Yes	Yes	No	Yes	No	No
		Tab. Atrovastatin 10 mg	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
		Inj. atropine sulphate	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Inj. Digoxin	No	No	No	No	No	No	No	No	No
		Inj. Dopamine	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
		Inj. Frusemide	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
6	Diarrhoea	Inj. Metronidazole 100 ml	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		ORS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Syrup. Metronidazole	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes
7	Malaria	Tab. Chloroquine phosphate	Yes	No	Yes	Yes	Yes	No	No	No	Yes
		Inj. Quinine Dihydrochloride	No	No	No	Yes	No	Yes	No	No	No
8	Pneumonia (Both children & adults)	Tab. Trimethoprim + Sulphamethoxazole	Yes	No	No	Yes	Yes	No	No	No	Yes
		Tab. Azithromycin – 500 mg	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Syrup. Cotrimoxazole 50 ml	No	Yes	No	Yes	No	No	Yes	No	Yes
		Syrup. Ampicillin 125 mg/5 ml, 60 ml	No	Yes	Yes	Yes	No	Yes	Yes	No	No
		Inj. Ceftriaxone	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
		Inj. Amoxyclav 1.2 gm	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes
		Syp. Salbutamol	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
		Tab. Salbutamol 2 mg, 4 mg	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes

Speciality		Drugs prescribed for treatment	DH Tekkali	AH Seethampeta	CHC Sompeta	DH Hindupur	AH Kadiri	CHC Kothacheruvu	DH Atmakur	AH Kavali	CHC Naidupeta
			Whether available Yes/No								
		Nebulisable Salbutamol nebusol solution	Yes	Yes	No	Yes	Yes	No	Yes	No	No
		Inj. Deriphylline	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	Bite injuries: Snakes and dogs	Anti-Rabies Serum (ARS)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Inj. Antirabies vaccine	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Inj Anti snake venom	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	Psychiatric conditions	Tab. Diazepam 5 mg	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
		Tab. Phenobarbitone 30 mg, 60 mg	No	No	No	Yes	No	No	No	No	No
		Tab. Risperidone 2 mg	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
		Tab. Lorazepam 2 mg	No	Yes	Yes	No	No	No	Yes	Yes	Yes
		Tab. Amitriptyline	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes

Appendix-5.1

(Reference: Paragraph No.5.2.1 Page No. 86)

Requirement and availability of Sub Centres in Andhra Pradesh

S.No.	District	Rural population	Tribal population	Net rural population	Rural SCs required	Tribal SCs required	Total SCs required	SCs available	Shortage
1	Srikakulam	23,28,543	7,87,071	15,41,472	308	262	570	764	-
2	Vizianagaram	22,10,645	4,61,029	17,49,616	350	154	504	622	-
3	Visakhapatnam	26,55,164	7,00,300	19,54,864	391	233	624	677	-
4	East Godavari	42,09,028	3,64,032	38,44,996	769	121	890	1,127	-
5	West Godavari	33,32,657	1,97,248	31,35,409	627	66	693	844	-
6	Krishna	32,33,383	-	32,33,383	647	-	647	783	-
7	Guntur	36,44,227	1,41,075	35,03,152	701	47	748	730	-
8	Prakasam	31,34,025	2,57,618	28,76,407	575	86	661	813	-
9	SPSR Nellore	23,36,839	-	23,36,839	467	-	467	596	-
12	YSR	22,74,864	12,852	22,62,012	452	4	456	904	-
10	Kurnool	31,31,229	-	31,31,229	626	-	626	593	33
11	Anantapur	33,93,837	-	33,93,837	679	-	679	831	-
13	Chittoor	33,00,091	-	33,00,091	660	-	660	748	-
	Total	3,91,84,532	29,21,225	3,62,63,307	7,252	973	8,225	10,032	33

Source : Information furnished by Department

Appendix-5.2

(Reference: Paragraph No.5.2.1 & 5.2.3 Page No. 86 & 91)

Requirement and availability of Primary Health Centres in Andhra Pradesh

District	Total Rural Population	Tribal Population	Net rural population	Rural PHCs required	Tribal PHCs required	Total required	Functioning	Shortfall
1	2	3	4=2-3	5= 4/30000	6= 3/20000	7=5+6	8	9=7-8
Srikakulam	23,28,543	7,87,071	15,41,472	51	39	90	78	12
Vizianagaram	22,10,645	4,61,029	17,49,616	58	23	81	73	8
Visakhapatnam	26,55,164	7,00,300	19,54,864	65	35	100	88	12
East Godavari	42,09,028	3,64,032	38,44,996	128	18	146	123	23
West Godavari	33,32,657	1,97,248	31,35,409	105	10	115	94	21
Krishna	32,33,383	-	32,33,383	108	-	108	90	18
Guntur	36,44,227	1,41,075	35,03,152	117	7	124	79	45
Prakasam	31,34,025	2,57,618	28,76,407	96	13	109	92	17
SPSR Nellore	23,36,839	-	23,36,839	78	-	78	81	(3)
Kurnool	31,31,229	12,852	31,18,377	104	-	104	86	18
YSR	22,74,864	-	22,74,864	76	-	76	75	1
Anantapur	33,93,837	-	33,93,837	113	-	113	86	27
Chittoor	33,00,091	-	33,00,091	110	-	110	100	10
Total	3,91,84,532	29,21,225	3,62,63,307	1,209	145	1,354	1,145	209

Source : Information furnished by Department

Appendix-5.3

(Reference: Paragraph No.5.2.3.4 Page No 94)

Availability of equipment in eight test checked Primary Health Centres

S. No.	List of suggested equipment and furniture including reagents and diagnostic kits	As per Norms	Utlam	Karajada	Inamadugu	Thummalapenta	Chennur	Kudair	Kondapuram	Narpala
1	Normal Delivery Kit.		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Equipment for assisted vacuum delivery.		No	No	No	No	No	No	Yes	No
3	Equipment for assisted forceps delivery.		No	No	Yes	No	No	No	Yes	No
4	Standard Surgical Set (for minor procedures like episiotomies stitching).		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	Equipment for Manual Vacuum Aspiration.		No	No	No	No	No	Yes	No	No
6	Equipment for New Born Care and Neonatal Resuscitation.		Yes	Yes	Yes	No	No	Yes	Yes	Yes
7	IUCD insertion kit.		No	Yes	Yes	Yes	Yes	No	Yes	Yes
8	Equipment/reagents for essential laboratory investigations.		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	Refrigerator.		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	ILR (Small) and DF (Small) with Voltage Stabiliser		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11	Cold Boxes (Small & Large): Small- one, Large – two.	S-1 & L-2	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
12	Vaccine Carriers with 4 Icepacks: Two per SC (maximum 2 per polio booth) + 1 for PHC.		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	Spare ice pack box: 8, 25 & 60 ice pack boxes per vaccine carrier, Small cold box & Large cold box respectively.		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	Waste disposal twin bucket, hypochlorite solution/ bleach: As per need.		Yes	Yes	Yes	No	No	No	Yes	Yes

S. No.	List of suggested equipment and furniture including reagents and diagnostic kits	As per Norms	Urlam	Karajada	Inamadugu	Thummalapenta	Chennur	Kudair	Kondapuram	Narpala
15	Freeze Tag: 2 per ILR bimonthly.		Yes	Yes	Yes	Yes	Yes	No	No	Yes
16	Thermometers Alcohol (stem): Need Based		Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
17	Ice box.		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
18	Binocular microscope.		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
19	Equipment under various National Programmes.		Yes	Yes	NA*	NA	NA	NA	Yes	Yes
20	Radiant warmer for new born baby.		No	Yes	Yes	No	No	Yes	Yes	Yes
21	Adult weighing scale.		Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
22	Baby weighing scale.		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
23	Height measuring Scale.		Yes	Yes	Yes	No	No	Yes	Yes	Yes
24	Table lamp with 200 watt bulb for New born baby.		No	Yes	Yes	No	No	Yes	No	Yes
25	Phototherapy unit (Desirable).		No	Yes	Yes	No	No	Yes	No	No
26	Self-inflating bag and mask- neonatal size.		Yes	Yes	Yes	No	Yes	Yes	Yes	No
27	Laryngoscope and Endotracheal intubation tubes (neonatal)		No	Yes	No	No	No	Yes	No	No
28	Mucus extractor with suction tube and a foot operated suction machine.		No	No	Yes	No	Yes	Yes	Yes	No
29	Feeding tubes for baby.		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
30	Sponge holding forceps – 2.		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
31	Vulsellum uterine forceps – 2.		Yes	Yes	No	Yes	No	No	Yes	Yes
32	Tenaculum uterine forceps – 2.		No	Yes	No	No	No	No	No	No
33	MVA syringe and cannulae of sizes 4-8 (2 sets; one for back up in case of technical problems).		No	No	NA	No	No	Yes	No	No
34	Kidney tray for emptying contents of MVA syringe.		Yes	Yes	Yes	Yes	No	Yes	No	Yes
35	Torch without batteries – 2.		Yes	Yes	No	Yes	Yes	Yes	No	Yes
36	Battery dry cells 1.5 volt (large size) – 4.		Yes	Yes	No	Yes	Yes	Yes	No	No
37	Bowl for antiseptic solution for soaking cotton swabs.		Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

S. No.	List of suggested equipment and furniture including reagents and diagnostic kits	As per Norms	Urlam	Karajada	Inamadugu	Thummalapenta	Chennur	Kudair	Kondapuram	Narpala
38	Tray containing chlorine solution for keeping soiled instruments.		Yes	Yes	No	Yes	No	Yes	Yes	Yes
39	Kits for testing residual chlorine in drinking water.		Yes	Yes	Yes	Yes	No	Yes	No	Yes
40	H2S Strip test bottles.		No	Yes	No	Yes	No	Yes	No	Yes
41	Head Light.		Yes	Yes	No	No	Yes	Yes	No	No
42	Ear specula.		Yes	Yes	No	No	Yes	Yes	No	No
43	B.P. Apparatus table model – 2.	2	Yes	Yes	No	Yes	Yes	No	No	Yes
44	Stethoscope – 2.	2	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
45	3 sets of NSV instruments.	3 sets	No	Yes	No	No	No	Yes	No	Yes
46	Minilap kits –5.	5	Yes	Yes	No	No	No	Yes	No	No
Requirements for a fully equipped and operational labour room										
47	A labour table	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
48	Suction machine		No	Yes	No	Yes	Yes	Yes	Yes	No
49	Facility for Oxygen administration		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
50	Sterilisation equipment		No	Yes	No	Yes	Yes	No	Yes	Yes
51	24-hour running water		Yes	Yes	No	Yes	Yes	Yes	NA	Yes
52	Electricity supply with back-up facility (generator with POL)		Yes	No	Yes	Yes	No	No	NA	No
53	Newborn Corner: Details mentioned in Annexure 3A		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
54	Emergency drug tray: This must have the following drugs: Inj. Oxytocin Inj. Diazepam Tab. Nifedepine Inj. Magnesium sulphate Inj. Lignocaine hydrochloride Inj. Methyl ergometrine maleate IV Haemaccel Sterilised cotton and gauze		Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes
55	Delivery kits, including those for normal delivery and assisted deliveries. Privacy of a woman in labour should be ensured as a quality assurance issue.		Yes	Yes	Yes	Yes	Yes	No	Yes	No

S. No.	List of suggested equipment and furniture including reagents and diagnostic kits	As per Norms	Urlam	Karajada	Inamadugu	Thummalapenta	Chennur	Kudair	Kondapuram	Narpala
56	List of equipment for Pap smear		No	Yes	No	No	No	NA	NA	No
57	Cusco's vaginal speculum (each of small, medium and large size)		Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
58	Sim's vaginal speculum – single & double ended - (each of small, medium and large size)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
59	Anterior Vaginal wall retractor		Yes	Yes	No	No	No	Yes	Yes	Yes
60	Sterile Gloves		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
61	Sterilised cotton swabs and swab sticks in a jar with lid		Yes	Yes	No	Yes	Yes	No	NA	Yes
62	Kidney tray for keeping used instruments		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
63	Bowl for antiseptic solution		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
64	Antiseptic solution: Chlorhexidine 1% or Cetrimide 2% (if povidone iodine solution is available, it is preferable to use that)		Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
65	Cheatle's forceps		Yes	Yes	Yes	Yes	No	Yes		Yes
66	Proper light source/torch		Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
67	For vaginal and Pap Smears: Clean slides with cover slips Cotton swab sticks KOH solution in bottle with dropper Saline in bottle with dropper Ayre's spatula Fixing solution/hair spray		Yes	No	No	No	No	NA	No	No
68	Requirements of the laboratory		No	Yes	Yes	No	Yes	NA	Yes	Yes
69	Essential Reagents		Yes	Yes	Yes	No	Yes	NA	Yes	Yes
70	Reagents of Cyan meth - haemoglobin method for Hb estimation		Yes	Yes	No	Yes	Yes	No	Yes	Yes
71	Uristix for urine albumin and sugar analysis		Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
72	ABO & Rh antibodies		Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
73	KOH solution for Whiff test		No	No	No	No	No	No	No	No

S. No.	List of suggested equipment and furniture including reagents and diagnostic kits	As per Norms	Urlam	Karajada	Inamadugu	Thummalapenta	Chennur	Kudair	Kondapuram	Narpala
74	Gram's iodine		No	Yes	No	No	No	No	No	No
75	Crystal Violet stain		No	No	No	No	No	No	No	Yes
76	Acetone-Ethanol decolourising solution.		No	Yes	No	No	No	No	No	No
77	Safranin stain		No	Yes	No	No	No	No	No	No
78	PH test strips		No	Yes	No	No	No	No	No	Yes
79	RPR test kits for syphilis		Yes	Yes	Yes	No	Yes	No	Yes	No
80	H2S Strip test kits for fecal contamination of drinking water		No	Yes	Yes	No	No	No	No	No
81	Test kits for estimation of residual chlorine in drinking water using orthotoluidine reagent		No	Yes	No	yes	No	No	No	Yes
82	1000 Nos Whole Blood Finger Prick HIV Rapid Test and STI Screening Test each.		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
83	Essential Glassware and other equipment:		Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes
84	Colorimetre		No	Yes	Yes	Yes	Yes	Yes	Yes	No
85	Test tubes 3. Pipettes		Yes	Yes	No	Yes	Yes	No	Yes	Yes
86	Glass rods		Yes	Yes	No	Yes	Yes	Yes	No	Yes
87	Glass slides		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
88	Cover slips		Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
89	Light Microscope		No	Yes	Yes	Yes	Yes	Yes	No	Yes
90	Differential blood cell counter (Desirable)		No	Yes	Yes	Yes	No	No	No	Yes
91	Glucometer (Desirable)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
92	Examination table	4	2	2	2	1	2	2	3	4
93	Writing tables with table sheets	6	4	4	6	3	7	6	6	6
94	Plastic chairs (for in-patients' attendants)	6	6	6	6	6	6	6	29	6
95	Armless chairs	16	16	16	9	16	16	16	0	16
96	Full size steel almirah	7	7	7	7	6	3	5	0	7
97	Table for Immunisation/FP/Counselling	1	1	1	0	1	0	0	1	1
98	Bench for waiting area	2	2	2	2	0	2	2	0	4
99	Wheel chair	2	0	1	0	2	0	1	0	0
100	Stretcher on trolley	2	1	0	0	0	0	1	2	0

S. No.	List of suggested equipment and furniture including reagents and diagnostic kits	As per Norms	Urlam	Karajada	Inamadugu	Thummalapenta	Chennur	Kudair	Kondapuram	Narpala
101	Wooden screen	1	1	0	0	0	0	1	0	0
102	Foot step	5	3	4	2	1	3	1	4	2
103	Coat rack	2	0	2	0	0	0	0	0	0
104	Bed side table	6	0	0	0	0	1	1	0	0
105	Bed stead iron (for in-patients)	6	0	6	4	4	4	1	0	0
106	Baby cot	2	0	0	0	0	0	1	0	0
107	Stool	10	5	5	3	4	3	3	10	2
108	Medicine chest	1	0	NA	1	0	0	1	0	0
109	Lamp	3	2	1	0	1	1	3	0	1
110	Side Wooden racks	4	1	2	0	0	0	4	0	0
111	Fans	6	6	NA	6	6	8	6	15	20
112	Tube light	8	8	8	8	8	8	8	25	30
113	Basin	2	2	2	2	1	0	0	0	1
114	Basin stand	2	0	0	2	1	0	0	0	2
115	Buckets	4	4	4	4	4	4	4	0	3
116	Mugs	4	4	4	4	4	4	4	0	4
117	LPG stove	1	0	1	0	0	0	0	0	0
118	LPG cylinder	2	0	1	0	0	0	0	0	0
119	Sauce pan with lid	2	0	0	0	0	0	0	0	0
120	Water receptacle	3	0	1	0	0	0	0	0	0
121	Rubber/plastic shutting 2 metres	3	1	0	0	0	0	0	0	0
122	Drum with tap for storing water	1	0	0	0	0	0	0	0	1
123	Drum with tap for storing water	2	0	0	0	0	0	0	2	0
124	Mattress for beds	12	6	6	12	10	4	0	0	10
125	Foam Mattress for OT table	2	0	2	0	0	2	0	1	0
126	Foam Mattress for labour table	2	0	0	0	0	2	0	8	0
127	Bed sheets	30	12	52	0	10	5	0	6	8
128	Pillows with covers	6	6	6	4	0	6	0	4	5
129	Blankets	18	1	1	0	0	4	0	0	0
130	Baby blankets	4	2	0	0	0	0	0	0	0
131	Towels	18	4	0	0	0	0	4	0	2
132	Curtains with rods	20 metres	20	20	0	0	0	5	0	2

S. No.	List of suggested equipment and furniture including reagents and diagnostic kits	As per Norms	Urlam	Karajada	Inamadugu	Thummalapenta	Chennur	Kudair	Kondapuram	Narpala
133	Dustbin	5	5	5	5	5	5	5	5	5
134	Coloured Puncture proof bags as per need	as per need	3	NA	Yes	NA	Yes	Yes	Yes	0
135	Generator (5 KVA with POL for immunisation)	1	0	0	0	0	0	0	1	0
	Essential Medical/Surgical items									
136	Blood Pressure Apparatus (Non-mercury is desirable)	3	3	3	0	0	2	2	3	2
137	Stethoscope	3	3	3	0	2	2	3	3	2
138	Tongue Depressor	10	10	10	0	0	3	1	0	2
139	Torch	2	2	2	0	1	1	0	0	1
140	Thermometre Clinical	4	2	4	1	2	2	0	0	2
141	Hub cutter	2	2	2	2	3	2	3	1	1
142	Needle Destroyer	2	1	1	2	0	1	1	1	1
143	Labour table	1 or 2	1	1	1	1	2	1	1	2
144	OT table	1	1	0	0	1	2	0	1	1
145	Arm board for adult and child	4	0	0	0	1	0	0	0	0
146	Instrument trolley	2	0	0	0	2	3	0	2	2
147	I V stand	10	4	4	4	4	4	6	6	10
148	Shadowless lamp light (for OT and Labour room)	2	0	1	0	0	1	0	2	0
149	Macintosh for labour and OT table	As per need	Yes	NA	Yes	Yes	Yes	0	Yes	Yes
150	Kelly's pad for labour and OT table	2 sets	0	1	0	0	0	0	0	2
151	Red Bags	As per need	Yes	NA	Yes	Yes	0	Yes	Yes	Yes

*NA indicates the Non-availability

Appendix-5.4

(Reference: Paragraph No.5.3.1.1 Page No. 95)

District wise availability of Community Health Centres

	Population	Total health care facilities to be available	Available	Shortfall
Srikakulam	27,03,114	22	13	09
Vizianagaram	23,44,474	19	08	11
Visakhapatnam	42,90,589	36	10	26
East Godavari	51,54,296	43	24	19
West Godavari	39,36,966	33	10	23
Krishna	45,17,398	38	13	25
Guntur	48,87,813	41	15	26
Prakasam	33,97,448	28	12	16
SPSR Nellore	29,63,557	25	14	11
YSR	28,82,469	24	09	15
Kurnool	40,53,463	34	16	18
Anantapur	40,81,148	34	14	20
Chittoor	41,74,064	35	17	18
		412	175	237

Appendix-5.5

(Reference: Paragraph No.5.3.2.2 Page No. 103)

Availability of laboratory equipment in test checked AHs

Sl. No.	Laboratory Equipment Name	No. of Items to be available for 51-100 bedded Hospital	AH Seethampeta		AH Kavali		AH Kadiri	
			Whether available Yes/No	No. of items available	Whether available Yes/No	No. of items available	Whether available Yes/No	No. of items available
1	Binocular Microscope	4	Yes	3	Yes	2	Yes	2
2	Balance (Electrical Monopan)	1	No		No		No	
3	Simple balance	1	No		No		No	
4	Electric Colorimeter	1	Yes	1	Yes	1	No	
5	Auto analyser*	1	No		Yes	1	No	
6	Semi auto analyser	1	Yes	1	Yes	1	No	
7	Micro pipettes of different volume range	4	Yes	2	Yes	1	Yes	4
8	Water bath	1	Yes	1	No	1	Yes	1
9	Hot Air oven*	1	Yes	1	No	1	No	
10	Lab incubator*	1	Yes	1	Yes	1	No	
11	Distilled water plant	2	No		Yes	1	No	
12	Electric centrifuge Table Top	2	Yes	1	Yes	-	Yes	1
13	Cell Counter Electronic*	1	Yes	1	Yes	1	Yes	-
14	Hot plates	2	No		No		No	
15	Rotor / Shaker	1	No		No		Yes	
16	Counting chamber	2	No		No		Yes	1
17	PH meter	1	Yes	1	Yes	1	Yes	1
18	Paediatric Glucometer / Bilirubinometer*		No		-		No	
19	Glucometer	1	Yes	1	Yes	1	Yes	1
20	Haemoglobinometer	1	Yes	1	No	1	Yes	1
21	TCDC count apparatus	1	Yes	1	No	1	No	
22	ESR stand with tubes	3	No		Yes	1	Yes	2
23	Test tube stands*	5	Yes	5	Yes	3	No	
24	Test tube rack*	5	Yes	5	No		Yes	5
25	Test tube holders*	5	No		No		Yes	1
26	Spirit lamp*	6	No		No		Yes	1
27	Timer stop watch	2	No		Yes	1	No	
28	Alarm clock	1	No		No		No	
29	Lab Autoclaves	2	Yes	1	No		No	

Sl. No.	Laboratory Equipment Name	No. of Items to be available for 51-100 bedded Hospital	AH Seethampeta		AH Kavali		AH Kadiri	
			Whether available Yes/No	No. of items available	Whether available Yes/No	No. of items available	Whether available Yes/No	No. of items available
30	Refrigerators	2	Yes	1	Yes	2	Yes	2
31	Bio-safety Cabinet (Class-I)	1	No		No		No	
32	Automatic Blood Gas Analyser	1	No		Yes	1	Yes	1
33	Whole Blood Finger Prick HIV Rapid Test and STI Screening Test each	2000	Yes	2000	No		No	
* To be provided as per need								

Appendix 5.6

(Reference: Paragraph No.5.3.3.1 Page No. 105)

Availability of Laboratory equipment in all 12 District Hospitals

Sl. No	Laboratory Equipment Name	Paderu	Parvatipuram	Anakapalle	Tanuku	Tenali	Markapur	Madanapalle	Chittoor	Proddatur	Tekkali	Atmakur	Hindupur
1	Binocular Microscope	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Chemical Balances	No	No	No	No	No	Yes	No	No	Yes	No	No	No
3	Simple balances	Yes	No	No	No	No	Yes	No	No	No	No	No	No
4	Electric Calorimeter	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
5	Fully Automated Auto-analyser	No	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes
6	Semi auto analyser	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes
7	Micro pipettes of different volume range	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	Water bath	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
9	Hot Air oven	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
10	Lab incubator	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
11	Distilled water plant	No	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No
12	Electric centrifuge, Table Top	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
13	Cell Counter Electronic	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	Hot plates	No	Yes	Yes	No	Yes	Yes	No	Yes	No	Yes	No	No
15	Rotor / Shaker	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes
16	Counting chamber	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
17	PH meter	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
18	Paediatric Glucometer / Bilirubinometer	Yes	No	No	Yes	No	No	Yes	Yes	No	No	Yes	Yes
19	Glucometer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
20	Haemoglobinometer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
21	TCDC count apparatus	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	No
22	ESR stand with tubes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
23	Test tube stands	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
24	Test tube rack	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No

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Sl. No	Laboratory Equipment Name	Paderu	Parvatipuram	Anakapalle	Tanuku	Tenali	Markapur	Madanapalle	Chittoor	Proddatur	Tekkali	Atmakur	Hindupur
25	Test tube holders	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No
26	Spirit lamp	Yes	Yes	Yes	No	Yes	Yes	No	Yes	No	No	No	No
27	Rotary Microtome	No	No	No	No	No	No	No	No	Yes	Yes	No	No
28	Wx Embel Bath	No	No	Yes	No	Yes	No	No	No	No	Yes	No	No
29	Auto Embedic Station	No	No	Yes	No	Yes	No	No	Yes	Yes	Yes	No	No
30	Timer stop watch	Yes	No	No	No	Yes	No	No	No	No	No	No	Yes
31	Alarm clock	No	No	No	No	Yes	No	No	No	No	No	No	No
32	Elisa Reader Cum washer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
33	Blood gas Analyser	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes
34	Electrolyte Analyser	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
35	Glycosylated Haemoglobinometer	No	No	No	No	No	No	Yes	No	No	No	No	No
36	Haematology Analyser with 22 parameters	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes
37	Blood Collection Monitor	Yes	No	No	No	Yes	Yes	No	No	No	No	Yes	Yes
38	Laboratory Autoclavers	Yes	Yes	Yes	No	Yes	Yes	No	Yes	No	Yes	Yes	Yes
39	Ordinary Refrigerator	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
40	Flotation Bath	No	No	No	No	Yes	No	No	Yes	No	No	No	No
41	Emergency Drug Trolley with auto cylinder	No	No	No	No	Yes	No	No	No	No	No	No	No
42	Dialected Tube Scaler	No	No	No	No	Yes	No	No	No	No	No	Yes	No
43	Class – I Bio Safety Cabinet	Yes	No	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
44	Knife Sharpner	No	No	No	No	No	No	No	No	No	No	No	No
45	Air Conditioner with Stabilizer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
46	Cyto Spin	No	No	No	Yes	No	No	No	No	No	No	No	No
47	RO Plant	No	Yes	No	No	No	No	Yes	Yes	No	No	No	No
48	Computer with UPS and Printer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
49	Automated Blood Gas Analyzer	No	No	No	Yes	Yes	Yes	No	No	No	No	No	Yes

Sl. No	Laboratory Equipment Name	Paderu	Parvatipuram	Anakapalle	Tanuku	Tenali	Markapur	Madanapalle	Chittoor	Proddatur	Tekkali	Atmakur	Hindupur
50	Fine Needle Aspiration Cytology	No	No	No	No	Yes	No	No	Yes	No	No	No	No
51	Histopathology Equipment	No	No	Yes	No	Yes	No	No	Yes	No	Yes	No	No
52**	Pipette – 1 ml & 5 ml	No	No	No	No	No	Yes	No	No	No	No	No	No
	Burette 10 ml	No	No	No	No	No	No	No	No	No	No	No	No
	Conical Flask Biker/Glass bottles	No	No	No	No	No	No	No	No	No	No	No	No
	Glass or plastic funnel	No	No	No	No	No	No	No	No	No	No	No	No
	Glass stirring rod	No	No	No	No	No	No	No	No	No	No	No	No
	Small stainless steel bowl	No	No	No	No	No	No	No	No	No	No	No	No
	Electronic weighing scale	No	No	No	No	No	No	No	No	No	No	No	No
	Measuring cylinder	No	No	No	No	No	No	No	No	No	No	No	No
	Gas Burner	No	No	No	No	No	No	No	No	No	No	No	No
	Laboratory balance	No	No	No	No	No	No	No	No	No	No	No	No
	Stop watch, Cyclomixer	No	No	No	No	No	No	No	No	No	No	No	No
	Micro pipette 10-100 ml :10-200 ml	No	No	Yes	No	No	No	No	No	No	No	No	No
	Micro Tips	No	No	No	No	No	No	No	No	No	No	No	No
	Centrifuge, Oven	No	No	No	No	No	Yes	No	No	No	No	No	No
	Bath Serological	No	No	Yes	No	No	Yes	No	No	No	No	No	No
	Digital calorie meter	No	No	No	No	No	No	No	No	No	No	No	No
	Stirrer with stainless steel stirring rod	No	No	No	No	No	Yes	No	No	No	No	No	No
	Digital electronic temperature controller	No	No	No	No	No	No	No	No	No	No	No	No
53** *	I. Ion – meter Table Top (specific for fluoride estimation in biological fluid)	No	No	No	No	No	No	No	No	No	No	No	No
	II. Table Top Centrifuge without refrigeration	No	No	No	No	No	No	No	No	No	No	No	No
	III. Digital PH Meter	No	No	No	No	No	Yes	No	No	No	No	No	No
	IV. Metaler Balance	No	No	No	No	No	No	No	No	No	No	No	No
	V. Mixer	No	No	No	No	No	Yes	No	No	No	No	No	No

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Sl. No	Laboratory Equipment Name	Paderu	Parvatipuram	Anakapalle	Tanuku	Tenali	Markapur	Madanapalle	Chittoor	Proddatur	Tekkali	Atmakur	Hindupur
	Vi. Incubator vii. Pipettes/Micropipettes	No	No	No	No	No	No	No	No	No	No	No	No
54	CO Analyser	No	No	No	No	No	No	No	No	No	No	No	Yes
55	Dry Biochemistry	No	No	No	No	Yes	No	No	No	No	No	No	No
56	Whole Blood Finger Prick HIV Rapid Test and STI Screening Test each	No	Yes	No	Yes	Yes	Yes	No	No	No	No	No	Yes
57	Blood Component Separator	Yes	No	No	No	No	Yes	No	Yes	No	No	Yes	No
58	Platelet Agitator	Yes	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes
59	Platelet Thawing Machine	Yes	No	Yes	No	Yes	No	No	Yes	No	No	Yes	No
60	Laminar Flow	Yes	No	Yes	No	Yes	No	No	Yes	Yes	Yes	No	Yes

Appendix –7.1**(Reference: Paragraph No7.9.4.1 Page No. 169)****List of procedures reserved for public Network Hospitals**

Sl. No	Code	Name of Procedure / Treatment
1	S1.3.2.1	Laparoscopic Appendicectomy
2	S2.3.3	Tympanoplasty
3	S2.3.1	Endoscopic Sinus Surgery
4	S1.5.2	Laparoscopic Cholecystectomy
5	S10.2.7	Laminectomy
6	S4.2.1	Laparoscopic Vaginal Hysterectomy
7	S1.1.5.1	Hemithyroidectomy
8	S4.2.10	Vaginal Hysterectomy with Pelvic Floor Repair (70.79)
9	S1.3.1.9	Ventral And Scar Hernia repair with Mesh
10	S10.5.4	Spinal Fixation Rods and Plates, Artificial Discs

Appendix –7.2**(Reference: Paragraph No.7.9.6 Page No. 171)****Utilisation Certificates for funds received****(Amount in ₹)**

Sl. No.	District	Amount Paid	UCs Submitted	Balance
1.	Anantapur	189,00,000	189,00,000	Nil
2.	Chittoor	152,00,000	122,00,000	30,00,000
3.	East Godavari	72,00,000	9,96,000	62,04,000
4.	Guntur	88,00,000	15,00,000	73,00,000
5.	Krishna	88,00,000	4,80,000	83,20,000
6.	Kurnool	88,00,000	Nil	88,00,000
7.	SPSR Nellore	72,00,000	15,16,000	56,84,000
8.	Prakasam	72,00,000	29,96,000	42,04,000
9.	Srikakulam	72,00,000	80,000	71,20,000
10.	Visakhapatnam	72,00,000	Nil	72,00,000
11.	Vizianagaram	72,00,000	32,80,000	39,20,000
12.	West Godavari	72,00,000	37,22,882	34,77,118
13.	YSR	132,00,000	72,00,000	60,00,000
Total		1241,00,000	528,70,882	712,29,118

Appendix -8.1

(Paragraph No. 8.2.3 Page No. 175)

Release of funds by GoI and State under Centrally Sponsored Schemes

(₹ in crore)

Sl. No.	Installment	CSS share and release date	MSS share and release dates	Total	UCs (Issued by APMSIDC & Department)	Purpose for which utilised
1	1 ST Revalidated and released as	7.01 (20.02.2017)	4.67 (11.07.2017)	11.68	0.34	Utilised by Department for providing mobility to Enforcement officers and lifting of samples for analysis.
		6.79 (20.02.2017)	4.55 (11.07.2017)	11.34	4.11 (Against 11.34)	Construction of Drug Testing Laboratory & Head office at Old GGH, Hanumanpet, Vijayawada.
2	2 nd	18.77 (27.07.2018)	12.31 (24.07.2019)	31.08	1.34 (Against 1.34)	Purchase of Machinery
					2.23 (Against 19.88)	Construction of (2) Regional Laboratories and (27) office buildings in Dist.
3	3 rd	6.15 (13.03.2020)	4.10 (16.10.2020)	10.25	1.52 (Against 2.372)	Purchase of Machinery and Equipment For procurement
					0.36	Consumable/ Stationery and Laboratory Materials and Supply
Total		31.93	21.08	53.01		
Expenditure Incurred		4.11	5.80	9.91		
Balance		27.82	15.28	43.10		
BRO issued to SNA Account		11.10	5.90	17.00		
Balance		16.72	9.38	26.10		

Appendix-8.2**(Paragraph No. 8.3.2 Page No. 178)****Statement showing delay in obtaining renewal by Private Medical Care Establishments**

Sl. No.	Name of the HCF	Registration number	Date of last renewal	Due date for next renewal	Application Date for renewal	Delay (in days)
Anantapur District						
1	Roopa Dental Hospital	54/2010-11	01.07.2010	30.06.2015	28.03.2017	640
2	Dr. Desai Subba Reddy	99/2012	08.09.2012	18.07.2017	22.01.2018	185
3	Anantapur Orthopaedic Centre	60/2011	12.01.2016	11.01.2021	23.04.2021	103
4	Guru Diagnostic Centre	380/2017	25.04.2016	24.04.2021	10.08.2021	108
5	Kriston Dental Care	438/2017	24.01.2017	23.01.2022	08.05.2022	106
6	Eswar Dental Care	386/2016	18.05.2016	17.05.2021	24.05.2022	373
7	Maruthi Multi Speciality	407/2016	04.10.2016	03.10.2021	31.05.2022	209
8	Gandhi Dental Clinic	439/2017	24.01.2017	23.01.2022	09.06.2022	138
SPSR Nellore District						
9	Rich Multi Specialty Hosp., Nellore	NA	NA	07.07.2021	26.02.2022	235
Srikakulam District						
10	Sri Venkata Sai Medical Centre	391/2016	05.03.2016	04.03.2021	12.08.2021	160

Appendix - 8.3**(Paragraph No. 8.5.4 Page No. 185)****Availability of Common bio-medical waste treatment facilities in the State**

Sl.No.	Name of the CBMWTF	Districts covered
1	M/s Rainbow Industries	Srikakulam, Vizianagaram
2	M/s Maridi Echo Industries,	Visakhapatnam
3	M/s EVB Technologies	East Godavari
4	M/s Safe Environ and associates	West Godavari
5	M/s Safe Environ	Krishna
6	M/s Safe Environ	Guntur
7	M/s Ongole Medical Waste Treatment Facility	Prakasam
8	M/s SS bio-care	SPSR Nellore
9	M/s AWM Consulting Ltd.	Chittoor
10	M/s Sriven Environ Technologies	YSR and Anantapur
11	M/s Medical Waste Solutions	Kurnool

Appendix-10.1

(Reference to Paragraph 10.4.2(c) Page No. 204)

Statement showing non-execution of approved activities under NAM for the period 2017-22

Sl. No.	Year of approved SAAP	Nature of work proposed	Cost (₹ in crore)
1	2017-18	Ayurvedic pharmacy at Visakhapatnam	0.74
		50 bedded integrated AYUSH hospital at Visakhapatnam	1.22
		50 bedded integrated AYUSH hospital at Kakinada	1.22
		Upgradation of AYUSH hospitals	0.20
		Upgradation of AYUSH Dispensaries	0.39
		Establishment of AYUSH wellness centre including Yoga	0.72
2	2018-19	50 bedded integrated AYUSH hospital at Kakinada	2.55
		Establishment of Ayurvedic Pharmacy	0.84
		Development /Pharming of Medicinal Plant	1.28
		Upgradation of AYUSH hospitals	0.80
		Upgradation of AYUSH Dispensaries	1.10
		School health Program through AYUSH	0.13
		IEC activities	0.16
		AYUSH Educational institutions	0.42
		Establishment of AYUSH wellness centre including Yoga	0.70
		Innovation & mainstreaming of AYUSH	1.09
		Tele-medicine	1.12
		Alcohol de-addiction centres	0.75
		HIV Project	0.29
		Supply of medicines for AYUSH hospitals	0.50
3	2019-20	Supply of medicines for AYUSH Dispensaries	10.67
		Establishment of 50 bedded integrated AYUSH hospital at Kakinada	2.55
		Establishment of 50 bedded integrated AYUSH hospital at Visakhapatnam	1.09
		School health Program through AYUSH	0.13
		Establishment of health & wellness centres	3.52
		Yoga wellness centre	0.70
		Alcohol de-addiction centres	0.48
		HIV Project	0.17
		Establishment of Ayurvedic Pharmacy, Visakhapatnam	0.60
		Drug Testing Lab Visakhapatnam	0.26
		AYUSH Educational institutions	0.51
		Development /Pharming of Medicinal Plant	3.15
		Establishment of health & wellness centres	7.71
		Establishment of health & wellness centres	7.71
4	2020-21	Establishment of health & wellness centres	7.71

Appendix 10.2

(Reference to Paragraph 10.4.2(e) Page No. 206)

Year wise UCs submitted to GoI under NAM

(₹ in crore)

Year	GoI share released to State Government	GoI share released to the units/nodal agencies	Amount for which UCs submitted to GoI	UCs pending for balance amount
2017-18	11.76	6.43	6.06	5.7
2018-19	12.80	5.98	1.04	11.76
2019-20	18.23	0.24	0.17	18.06
2020-21	4.63	0.08	0	4.63
2021-22	0	0	0	0
Total	47.42	12.73	7.27	40.15

Source: Information furnished by AYUSH Commissionerate

Appendix 10.3

(Reference to Paragraph 10.5 Page No. 208)

List of Departments in AYUSH medical colleges and hospitals

Homoeopathy College Departments (Non-clinical)	Teaching Hospital/ Departments (Clinical)	Ayurvedic College Departments (Non-clinical)	Teaching Hospital/ Departments (Clinical)
1. Anatomy 2. Physiology 3. Pharmacy 4. Pathology 5. Forensic Medicine and Toxicology Museum 6. Community medicine 7. Practice of medicine 8. Gynaecology and Obstetrics 9. Surgery 10. Materia medica 11. Organon of medicine 12. Repertory with Computer Lab 13. Psychiatry 14. Paediatrics	1. General Medicine 2. Paediatrics 3. Surgery 4. Obstetrics/ Gynaecology	1. Samhita and Siddhanta Department 2. Rachana Sharir Department 3. Kriya Sharir Department 4. Dravyaguna Department 5. Rasa Shastra evam Bhaishajya Kalpana Department 6. Roganidan evam Vikriti Vigyan Department 7. Swasthavritta and Yoga Department 8. Agada Tantra evam Vidhi Vaidya Department 9. Kayachikitsa Department 10. Panchakarma Department 11. Shalya Department 12. Shalakya Department 13. Prasuti evam Stri Roga Department 14. Kaumarbhritya (Balaroga) Department	1. Kayachikitsa (Internal medicine) 2. Panchakarma 3. Shalya 4. Shalakya Tantra 5. Stri Rog evum Prasooti Tantra 6. Kaumarbhritya (Balarog) 7. Swasthavrittaevum Yoga 8. Atyayika (casualty)

Appendix 10.4

(Reference to Paragraph 10.5.1(a) Page No.208)

Statement showing availability of building/ infrastructure facilities in Homoeo Medical College, Gudivada

Sl. No.	Constructed area	As per CCH Norms (Sq. meters)	Availability (Sq m)	Remarks
(i)	Total constructed area of the college building	1,210	1,058	
(ii)	Number of Departments	14 (in numbers)	12 (in numbers)	Psychiatry & Paediatrics (Not Available)
(iii)	Area of Administrative Section	120	30	
(iv)	Area of Seminar or conference or Examination Hall (including sitting capacity)	100	NA	
(v)	Area of all Teaching Departments			
	(a) Anatomy Department with a well-ventilated dissection hall with wash basin, storage for cadaver and museum with facility of histology demonstration	50	12	
	(b) Physiology with separate laboratories for physiology and biochemistry, museum and demonstration room	60	15	
	(c) Homoeopathic Pharmacy Laboratory with museum cum Demonstration Room	60	30	
	(d) Pathology Laboratory with museum cum demonstration room	60	20	
	(e) Forensic Medicine & Toxicology Museum cum Demonstration Room	40	10	
	(f) Community medicine museum cum demonstration room	40	15	
	(g) Practice of Medicine Museum cum Demonstration Room	40	15	
	(h) Gynaecology & Obstetrics Museum cum Demonstration Room	40	15	
	(i) Surgery Museum cum Demonstration room	40	10	
	(j) Homoeopathic Materia Medica Museum cum Demonstration Room	40	15	
	(k) Organon of Medicine including History of Medicine Museum cum Demonstration Room	40	15	
	(l) Repertory with Computer lab & Demonstration Room	40	15	
	(m) Psychiatry		NA	Shall provide at least 60 sq.m space for P.G. Courses
	(n) Paediatrics			
(vi)	Separate Common Rooms for Boys and Girls with adequate sitting arrangement and locker	25	NA	
(vii)	Canteen Facility in the college premises	40		

Source: Records of Dr. Guru Raju Govt. Homoeo Medical College, Gudivada

Appendix-10.5

(Reference to Paragraph 10.5.1(a)(v) Page No. 211)

Statement showing availability of building/ infrastructure
in Homoeopathy Hospital Gudivada

Sl. No.	Description	As per CCH norms (in sq. m.)	Actual area (in sq. m.)	Remarks
(i)	Area of the Hospital (Land) including college	2.5 acres		
(ii)	Total constructed area of the Hospital building			
(iii)	No. of Departments	4.00	4.00	Medicine, Surgery, Gynaecology and Paediatrics
(iv)	Area of Hospital Admn. Block	50.00	464.01	
(v)	Area of Out-Patient Department	100.00	800.00	
(vi)	Area of Inpatient Department	350.00	1,930.40	
(vi)	Area of Operation Theatres Block	100.00	--	No Operation Theatre
(vii)	Area of Rehabilitation unit including physiotherapy and Yoga	40.00	--	
(viii)	Area of Central Clinical Laboratory	40.00	227.50	
(ix)	Area of Radiology or Sonography Section	40.00	171.00	
(x)	Area of Hospital Kitchen and Canteen	20.00	--	
(xi)	Area of Stores	25.00	189.80	

Source: Records of Dr. Guru Raju Govt. Homoeo Medical Hospital, Gudivada

Appendix-10.6

(Reference to Paragraph 10.5.1(a)(vi) Page No. 212)

(A) Statement showing availability of equipment
in Dr Gururaju Government Homoeo Hospital, Gudivada

Sl. No.	Name of the articles	Required quantity as per CCH 2013 Regulations	Available quantity	Functional	Non Functional	Shortfall	Shortfall (per cent)
1	Iron beds (Simple, Surgical & Paediatrics)	50	48	31	17	19	38
2	Stretcher with trolley	1	2	1	1	0	0
3	Sterilisers	2	2	1	1	1	50
4	B.P. Instrument	8	30	5	25	3	38
5	Urine pots, male and female	10	4	3	1	7	70
6	Bed pans E.I.	10	13	12	1	0	0
7	Tongue depressor (Disposable)	As required	10	10			0
8	Suction Machine	1	2		2	1	100
9	Suction tube	As required	2		2	2	100

Sl. No.	Name of the articles	Required quantity as per CCH 2013 Regulations	Available quantity	Functional	Non Functional	Shortfall	Shortfall (per cent)
10	Artery forceps, small and big	12 each	60(30 Large & 30 Small)	All			0
11	Back rest	4	5	2	3	2	50
12	Oxygen cylinder with stand	1 in each ward	2	2			0
13	Dressing drums (big)	3	3	3		0	0
14	Diagnostic set (ENT)	1 in each ward	1		1	1	100
15	Infra-red lamp	1				1	100
16	Chair trolley with wheels	2	1	1		1	50
17	Refrigerator	1	1	1		0	0
18	Weighing Machine	4	10	5	5	0	0

(B) Statement showing availability of equipment in Dr Gururaju Government Homoeo College, Gudivada

(i) Department of Anatomy

SL. No	Name of the Equipment/Instrument	Required Quantity as per CCH 2013 Regulations	Actual Quantity	Whether functional (or) not	Short	Shortfall (in percentage)
1	Dissection Tables with marble tops or stainless steel (6' x 1' x 2' x 3')	4	4	Functional	0	0
2	Dissection set complete	As required	1	Functional	0	0
3	Saw for sectioning body and limbs	1	2	Functional	0	0
4	Storage tanks to hold cadavers	As required	2	Functional	0	0
5	Teaching \materials like Models, charts, diagrams, slides soft part, Mummified bodies, bones, latest diagrams <i>etc.</i>	-do-	Available as required (Set of 50)	Functional	0	0
6	Microscope (Medical)	25	25	20 Functional & 5 Non Functional	5	20

(ii) Department of Physiology

SL. No	Name of the Equipment/Instrument	Required Quantity	Actual Quantity	Whether functional (or) not	Shortage	Shortfall (in percentage)
1	Medical Microscope	25	25	Non-Functional	25	100
2	Equipment for ESR estimation/ Westergren's pipette for ESR on stand	25 (with spare pipettes)	30	Functional	0	0
3	Haematocrit tubes	30 (with spares)	14	10 Functional & 4 Non-Functional	20	67
4	Auto Analyser or Semi Auto Analyser	1	1	Non-Functional	1	100
5	Haemoglobinometer Sahli	25(with spare)	5	Functional	20	80
6	Haemocytometer	25(with spare)	12	Functional	13	52
7	Sphygmomanometer	25	20	Functional	5	20
8	Stethoscope	25	11	Functional	14	56
9	Clinical thermometer (Digital)	25	0	Functional	25	100
10	Knee hammer	25	17	Functional	8	32
11	Tuning forks to test hearing (32-10000 Hzs)	1 set	1	Functional	0	0
12	Steth graphs or pneumographs	5	5	Functional	0	0
13	Electrocardiograph (ECG Machine)	1	1	Non-Functional	0	0
14	Electronic Stop Watches 1/10 sec.	4	2	Functional	2	50
15	Glass Distillation (double) apparatus	1	1	Non-Functional	1	100
16	Centrifuge (Medium speed)	2	2	Functional	0	0
17	Colorimeter (photo electric)	2	2	Functional	0	0
18	pH Meter electric	2	2	1 Non-Functional	1	50
19	Colour perception lantern (Edridge Green)	1	1	Functional only Red color	0	0
20	Incubator	1	2	Non-Functional	1	100
21	Educational CD, DVD, films, slides, models with Audio Visual Aids	As required	CD,DVD, Film-0, AVA-2	Non-Functional	0	0
22	Perimeter	3	0		3	100
23	Spirometer	1	0		1	100
24	Tonometer	1	1	Functional	0	0
25	Handgrip dynamometer	1	1	Functional	0	0
26	Bicycle Ergometer	1	1	Functional	0	0

(iii) Department of Biochemistry

SL. No	Name of the Equipment/Instrument	Required Quantity	Actual Quantity	Whether functional (or) not	Shortage	Shortfall (in percentage)
1	Electronic/Monopan Balance	1	1	Functional	0	0
2	Centrifuge	1	1	Functional	0	0
3	Balance, chemical/ordinary	2	2	Functional	0	0
4	Water baths	2	2	Non Functional	2	100
5	Urinometer	25	25	Functional	0	0
6	Hydrometer (0.700 to 1.00)	2	2	Functional	0	0
7	Albuminometers	10	17	Functional	0	0
8	Glucometer	10	0	Functional	0	0
9	Thermometer	10	5	Functional	5	50
10	Colorimeter	1	1	Functional	0	0
11	Hot air oven 14 x 14 x 14 (Electric)	1	1	Non Functional	1	100
12	Double Distillation apparatus Glass	1	1	Non Functional	1	100
13	Centrifuge, medium speed, electric	1	1	Functional	0	0
14	Glass ware like pipette, beakers, burettes, wire gauze with asbestos, centre hot plate, stove, syringes, burners, rubber tubing stands clamps, flash etc.	As required	Not available		0	100
15	PH meter	1	1	Functional	0	0

(iv) Department of Pathology and Microbiology

SL. No.	Name of the Equipment/Instrument	Required Quantity	Actual Quantity	Whether functional (or) not	Shortage	Shortfall (in percentage)
1	Hot air oven (50 °C) for special standing	1	0		1	100
2	Centrifuge machine electric Rotofix	2	1	Functional	1	50
3	Water bath, electric	4	4	Functional	0	0
4	Glass ware, stains, chemical reagents for histopathology etc.	As required	available	Chemical Reagent Non Functional		0
5	Incubator	2	2	Functional	0	0
6	Haemocytometer with R.B.C and W.B.C pipettes	25	12	Functional	13	52
7	Haemoglobinometer Sahli's types	25	1	Functional	24	96
8	Autoclave	2	1	Functional	1	50

SL. No.	Name of the Equipment/ Instrument	Required Quantity	Actual Quantity	Whether functional (or) not	Shortage	Shortfall (in percentage)
9	Anaerobic apparatus	2	1	Non Functional	2	100
10	Stopwatch sec	2	2	Functional	0	0
11	pH meter	1	1	Functional	0	0
12	Microscopes with oil immersion	25	11	10 Functional 1 Non-Functional	15	60
13	High power Centrifuge for serological/Hematological work	1	0		1	100
14	E.S.R Westergreen / Wintrobe	2 set each	1	Functional	1	50
15	Colony counter	1	1	Non-Functional	1	100
16	Material for preparation of media	As required	0			100
17	Material for preparation of stain	-do-	0			100
18	Coplin Jars	2	4	Functional		0
19	Computer with accessories	1	1	Non-Functional	1	100
20	Machine for estimation for blood sugar and for other serological tests	1	1	Functional	0	0

(v) Department of Community Medicine

SL. No.	Name of the Equipment/Instrument	Required Quantity	Actual Quantity	Whether functional (or) not	Shortage	Shortfall (in percentage)
1	Barometer	1	1	Functional	0	0
2	Lactometer	1	2	1 Functional & 1 Non-Functional	0	0
3	Hydrometer	1	1	Functional	0	0
4	hydrometer wet and dry bulb	1	2	Non-functional	1	100
5	filter pasteum chamberland complete set	1	0		1	100
6	Museum					0
	Models	As Required	Available as per record			
	Chart & design					
	Material concerning					
7	Information on display	As Required	Available as per record			0
8	Slow sand filter model/Filter berk field	1	1	Functional	0	0

SL. No.	Name of the Equipment/Instrument	Required Quantity	Actual Quantity	Whether functional (or) not	Shortage	Shortfall (in percentage)
9	Smokeless Chullah model	1	0		1	100
10	Rapid sand Filter Model	1	1	Functional	0	0
11	Ideal Well Model	1	1	Functional	0	0
12	Refrigerator	1	1	Functional	0	0

(vi) Department of Forensic Medicine and Toxicology

SL. No.	Name of the Equipment/Instrument	Required Quantity	Actual Quantity	Whether functional (or) not	Shortage	Shortfall (in percentage)
1	Weighing machine dial type human	1	1	Functional	0	0
2	Equipment for measuring height	1	1	Functional	0	0
3	Vernier calipers	1	1	Functional	0	0
4	Weapons (Blunt, Sharp & Pointed)	20	40	Functional	0	0

(vii) Department of Homoeopathic Pharmacy

SL. No	Name of the Equipment/Instrument	Required Quantity	Actual Quantity	Whether functional (or) not	Shortage	Shortfall (in percentage)
1	Pill tiles	25	25	Totally Destroyed	25	100
2	Porcelain dishes	25	10	Functional	15	60
3	Crucibles with tongs	25	25	All destroyed	25	100
4	Pestles and mortars (Iron, Glass, Porcelain)	25	30	Functional	0	0
5	Water bath, metal/electric	25	25	16 Functional & 9 Non Functional	9	36
6	Microscope (Student type)	5	2	Functional	3	60
7	Glass apparatus for filtration with vacuum	2	0		2	100
8	Thin layer chromatography apparatus	1	0		1	100
9	pH meter	2	4	Functional	0	0
10	Stop watch	25	6	Functional	19	76
11	Hydrometer	5	7	Functional	0	0
12	Alcoholometer	5	1	Functional	4	80
13	Lactometer	5	6	Functional	0	0
14	Electric potentiiser (for P.G. Course)	2	1	Non Functional	2	100
15	Electric Triturator (for P.G. Course)	2	0		2	100
16	Water Still (Distilled Water Plant)	1	1	Functional	0	0

SL. No	Name of the Equipment/Instrument	Required Quantity	Actual Quantity	Whether functional (or) not	Shortage	Shortfall (in percentage)
17	Percolater	5	3	Functional	2	40
18	Macerator	5	0		5	100
19	Botanical slides	As required	0		0	100
20	Colorimeter (for P.G. Course)	1	0		1	100
21	Spectro Scope (for P.G. Course)	1	0		1	100
22	Dissecting Microscope	2	0		2	100
23	Distillation Apparatus (Glass)	1 set	0		1	100
24	Pyknometer (Specific Gravity Bottle)	2	0		2	100
25	Electronic Balance	1	0		1	100
26	Hot Air Oven	1	0		1	100
27	Chemical Balance	10	3	Functional	7	70
28	Physical Balance	1	1	Functional	0	0
29	Measuring glasses, all sizes	As required	9	Functional	0	0
30	Miscellaneous-chemicals, drugs, glass phials, glass rods, Funnels, Filter paper etc.	As required	available	Functional	0	0

**Statement showing shortfall in the availability of equipment (percentage-wise)
Department wise**

Name of the Department	Shortfall (in per cent)			
	0-25	26-50	51-75	76-100
Department of Anatomy	6	0	0	0
Department of Physiology	12	3	3	8
Department of Biochemistry	10	1	0	4
Department of Pathology and Microbiology	7	3	2	8
Department of Community Medicine	9	0	0	3
Department of Forensic Medicine and Toxicology	4	0	0	0
Department of Homoeopathic Pharmacy	8	2	3	17
Total	56	9	8	40

**Statement showing shortfall in the availability of equipment (percentage-wise) for both
Homoeo College & Hospital**

Name of the Unit	0-25%	26-50%	51-75%	76-100%
Dr. Gururaju Govt. Homoeo Hospital, Gudivada	8	5	1	4
Dr. Gururaju Government Homoeo College, Gudivada	56	9	8	40

Availability of equipment (percentage-wise) for both Ayurveda College & Hospital*(in per cent)*

Name of the Unit	0-25	26-50	51-75	76-100
Ayurveda				
Dr AL Government Ayurveda Hospital, Vijayawada	246	13	6	49
Dr. NRS Govt. Ayurveda College, Vijayawada	69	5	10	13

Appendix 10.7**(Reference to Paragraph 10.5.2(a) Page No. 213)****Statement showing availability of infrastructure facilities
in Dr N.R.S Ayurveda College, Vijayawada**

Sl. No	Constructed area	As per CCIM Norms	Area (in sq. m)	Remarks
(i)	Total constructed area of the College building	4,000	2,421	
(ii)	Area of Administrative Section	300	169	
(iii)	Area of Lecture halls (No. of lecture halls and area of each hall)	800	300	
(iv)	Area of Seminar or conference or Examination Hall (including sitting capacity)	300	224	
(v)	Area of Central Library with seating capacity 61-100	200	225	
(vi)	Area of all Teaching Departments	2,400	1,303	
(vii)	(a) Samhita and Siddhanta Department (including Departmental library cum tutorial room)	100	50	
	(b) Rachana Sharir Department with dissection hall	250	144	
	(c) Kriya Sharir Department plus Kriya Sharir (Physiology) laboratory with optional facility for bio-chemistry testing	150	120	
	(d) Dravyaguna Department cum Dravyaguna museum and pharmacognosy and pharmacology labs	250	200	
	(e) Rasa Shastra evam Bhaishajya Kalpana Department plus Rasa shastra lab and museum, drug testing lab pharmacy	150	200	
	(f) Roganidan evam Vikriti Vigyan Department with Vikriti Vigyan Laboratory	150	75	
	(g) Swasthavritta and Yoga Department plus Yoga Hall in the College	150	75	
	(h) Agada Tantra evam Yoga Department plus museum	100	50	
	(i) Kayachikitsa Department	150	84	
	(j) Panchakarma Department	75	52	
	(k) Shalya Department plus museum cum tutorial room and Experimental Surgery (Yoga Laboratory)	150	75	
	(l) Shalakya Department plus museum cum tutorial room	150	76	
	(m) Prasuti evam Stri Roga Department plus museum cum tutorial room and	100	52	
	(n) Kaumarbhritya (Balaroga) Department plus museum cum tutorial room	75	50	
	Teaching Pharmacy and Quality testing lab	200	100	
(viii)	Separate Common Rooms for Boys and Girls with adequate sitting arrangement and locker	100	50	
(ix)	Canteen Facility in the college premises	100	50	
	Maintenance of Web based Computerised Central Registration Systems			

Sl. No	Constructed area	As per CCIM Norms	Area (in sq. m)	Remarks
	The college authorities should maintain a web based computerised Central Registration Systems regarding IP/OP Departments records (relating to attached hospital), case papers of OP Department and IP Department patients, laboratory and radiological investigation reports, medicines dispensing register, diet register for IP Departments patients, duty roster of hospital staff, Birth& Death certificates <i>etc.</i>		Not maintained	

Appendix-10.8

(Reference to Paragraph 10.5.2.(a)(vi) Page No. 214)

Statement showing funds received and expenditure incurred towards establishment of Mini Pharmacy in Dr NRS Ayurveda college, Vijayawada

Sl. No.	Date on which the amount received by the College	Amount Received (in ₹)	Expenditure (in ₹)	Unspent amount (in ₹)	Purpose
1	04-03-2016	14,13,574	11,15,051	2,98,523	Procurement of essential equipment
2	22-06-2017	3,14,808	3,14,808	---	Procurement of Raw drugs
3	30-05-2017	21,00,000	4,00,250	16,99,750	Recurring expenditure at ₹1.75 lakh per month (for 12 months)
4	30-08-2018	18,11,876	4,09,908	14,01,968	Procurement of raw drugs, raw material and payment of salaries for recruited staff of Mini pharmacy
Total		56,40,258	22,40,017	34,00,241	

Appendix 10.9

(Reference to Paragraph 10.5.2(c) Page No. 216)

(A) Statement showing availability of equipment in Dr A L Government Ayurveda Hospital, Vijayawada)

(i) Rogvigyan Laboratory

Sl.No.	Equipment and Instruments	Required Qty as per CCIM 2016 Regulations	Actual Quantity	Functional or Not	Shortfall
1	Binocular microscope	25	1	functional	24
2	Microscope with oil immersion	25	1	functional	24
3	Monocular microscope with oil emersion	25	2	functional	23
4	X-ray view box	1	1	functional	0
5	Sahli's Square tube	50	2	functional	48
6	Hb Pipette	50	1	functional	49
7	WBC Pipette	50	5	functional	45
8	Dropper	50	0		50

Sl.No.	Equipment and Instruments	Required Qty as per CCIM 2016 Regulations	Actual Quantity	Functional or Not	Shortfall
9	Red cell pipette	50	5	functional	45
10	Improved Neubauer chamber	50	2	functional	48
11	Incubator	2	1		1
12	Wintrobe's tube	50	0		50
13	Pasteur's pipette	50	0		50
14	Centrifuge Graduated Machine	2	2	functional	0
15	Westergrens pipette	50	0		50
16	Westergrens's stand	50	2	functional	48
17	Urinometer	50	0		50
18	Autoclave	1	1	functional	0
19	Ultraviolet lamp	1	1	functional	0
20	Cell counter (haemoautoanalyser)	1	1	functional	0
21	BP Apparatus	50	1	functional	49
22	Stethoscope	50	0		50
23	Thermometer	50	1	functional	49
24	Tongue depressor	50	1	functional	49
25	Stop watch	50	0		50
26	Physical balance	1	1	functional	0
27	Hot air oven	1	1	functional	0
28	Bunsen burner	50	1	functional	49
29	Refrigerator	1	1	functional	0
30	Sterile vessels/bottle to collect samples	Assorted	Assorted		0
26	Physical balance	1	1	functional	0
31	Torch	Assorted	Assorted	functional	0
32	Knee hammer	Assorted	1	functional	0
33	Measuring Tape	Assorted	1	functional	0
34	ENT examination set	Assorted	0		0
35	Reflectors(Mirrors)	Assorted	Assorted		0
36	Weighing machine	1	1	functional	0
37	Tuning Forks	Assorted	Assorted		0
38	Nasal speculum	Assorted	Assorted		0
39	Laryngoscope	Assorted	1	functional	0
40	Catheters	Assorted	Assorted		0
41	Probes	Assorted	Assorted		0
42	HBs Ag kit	Assorted	Assorted		0
43	HIV kit - Tridot (method by T Mitra)	Assorted	Assorted		0
44	CT and BT kit	Assorted	Assorted		0
45	Renal profile, LET kit, Lipid profile, Blood Sugar kit	Assorted	Assorted		0
46	Sterile disposable lancer/needle	Assorted	Assorted		0
47	Glass rod	Assorted	Assorted		0

Sl.No.	Equipment and Instruments	Required Qty as per CCIM 2016 Regulations	Actual Quantity	Functional or Not	Shortfall
48	Syringe needle destroyer	Assorted	1	functional	0
49	Cover slip	Assorted	Assorted		0
50	Cleaned slides	Assorted	3	functional	0
51	Litmus paper	Assorted	Assorted		0
52	pH indicator paper strips	Assorted	Assorted		0
53	Test tube	Assorted	50	functional	0
54	Separating funnels of various sizes	Assorted	Assorted		0
55	Glass Jars with lid of different sizes	Assorted	2	functional	0
56	Capillary Tubes	Assorted	Assorted		0
57	Rubber sheet	Assorted	Assorted		0
58	Magnifying lens	Assorted	Assorted		0
59	Water bath	Assorted	1	functional	0
60	Multi Stix	Assorted	Assorted		0

(ii) Labour Room

Sl.No.	Name of the items	Number required	Available	Functionality	Shortfall
1	Shadowless Lamp	1	1	Functional	0
2	Suction Machine (Neonatal)	1	0		1
3	Oxygen Cylinder and Mask	1	1	Functional	0
4	Foetal Toco Cardiograph	1	1	Functional	0
5	Radiant Warmer	1	0		1
6	Photo therapy Unit	1	1	Functional	0
7	Weighing Machine (Paediatric)	1	1	Functional	0
8	Patient trolley	2	1	Functional	1
9	Anesthesia trolley	1	1	Functional	0
10	Infantometer	1	1	Functional	0
11	Vacuum extractor	1	0		1
12	Foetal Doppler	1	1	Non functional	1
13	Low cavity forceps	2	2	Functional	0
14	Steriliser	2	2	Functional	0
15	Mackintosh rubber sheet	Assorted			0
16	Instruments for labour and Episiotomy (Scissors, forceps, needle holders <i>etc.</i>)	Assorted		Functional	0
17	Baby tray	2			2
18	Nebuliser	1	1	Functional	0
19	Foetoscope	5	5	Functional	0
20	Auto Clave	1	1	Functional	0
21	Drums	Assorted		Functional	0
22	Instrumental Trolley	Assorted		Functional	0
23	OT tables and head Up and head Low facility	1	1	Non functional	1

Sl.No.	Name of the items	Number required	Available	Functionality	Shortfall
24	Pulse Oximeter	1	1	Functional	0
25	Resuscitation kit	1	1	Functional	0
26	Boyle's apparatus	1	0		1
27	Electrocautery	1	0		1
28	MTP Suction Machine	1	0		1
29	Anesthesia Kit	1	0		1
30	Blunt and Sharp Curettes	10	4	Functional	6
31	Dilators set (Hegar's, Hawkins)	5	1	Functional	4
32	Sims's Speculum	5	5	Functional	0
33	Cusco's Speculum	5	5	Functional	0
34	Anterior Vaginal Wall retractor	5	4	Functional	1
35	Uterine sound	5	5	Functional	0
36	Volsellum	5	4	Functional	1
37	MTP Suction Currate	5	0		5
38	Retractors abdominal (Doyle's etc.)	5	2	Functional	3
39	Sponge holding forceps	5	5	Functional	0
40	Green armytage forceps	5	1	Functional	4
41	Uterus holding forceps	5	1	Functional	4
42	Kocher's forceps	5	1	Functional	4
43	Artery forceps (Long, short, Mosquito)Each	5	6	Functional	0
44	Scissors- different sizes	5	5	Functional	0
45	Forceps obstetrics	5	5	Functional	0
46	Endotrachial tubes	5	1	Functional	4
47	Cord Cutting appliances	5	0		5
48	I.U.C.D. removing hook	5	0		5
49	Bladder Sound	5	0		5
50	B.P. apparatus	2	2	Functional	0
51	HIV kit for emergency patients	Assorted		Functional	0
52	Plain and Hole towels	Assorted		Functional	0
53	Towel Clips	Assorted		Functional	0
54	Catguts and Thread	Assorted	0		0
55	Needles	Assorted		Functional	0
56	Needle holders	Assorted		Functional	0
51	HIV kit for emergency patients	Assorted		Functional	0
52	Plain and Hole towels	Assorted		Functional	0
53	Towel Clips	Assorted		Functional	0
54	Catguts and Thread	Assorted	0		0
55	Needles	Assorted		Functional	0
56	Needle holders	Assorted		Functional	0

(iii) Operation Theatres- Shalya

Sl. No.	Equipment and Instruments	Required Quantity	Actual Quantity	Either Functional (or) not	Shortfall
1	Spot light (Shadow less ceiling fitted)	1	1	Functional	0
2	Needle holding Forceps (big-medium-small)	Assorted	Assorted	Functional	0
3	Dressing drums of Assorted size	Assorted	Assorted	Functional	0
4	Drum stand	Assorted	Assorted	Functional	0
5	IV Stand	2	2	Functional	0
6	Cheatles Forceps	4	3	Functional	1
7	Mosquito forceps	4	4	Functional	0
8	Scissors straight (Tailor)	4	4	Functional	0
9	Scissors curved of different sizes	5	5	Functional	0
10	Stitch removal scissors	5	5	Functional	0
11	Dissection forceps	4	4	Functional	0
12	Sinus Forceps	4	4	Functional	0
13	Probes - Assorted size	5	5	Functional	0
14	Pointed scissors	4	2	Functional	2
15	Abdominal Retractors	5	4	Functional	1
16	Tissue Forceps	5	5	Functional	0
17	Bob Kock's Forceps	5	5	Functional	0
18	Kocher's Forceps	5	5	Functional	0
19	Urethral Dilators	5	0		5
20	Metal Catheters	5	2	Functional	3
21	Sponge holding forceps	4	4	Functional	0
22	Right Angle cholecystectomy Forceps	4	0		4
23	Stone holding forceps	4	0		4
24	Allies Forceps small	4	4	Functional	0
25	Allies Forceps Big	4	4	Functional	0
26	Artery Forceps small	4	4	Functional	0
27	Artery Forceps big	4	4	Functional	0
28	Artery Forceps Medium	4	4	Functional	0
29	Sigmoidoscope Rigid/flexible	1	1	Functional	0
30	Barron Pile's Gun	2	2	Functional	0
31	Laryngoscope Paediatric/Adult	1	0		1
32	Boyles Apparatus	1	1	Functional	0
33	Multi-parameter Monitor	1	1	Functional	0
34	Ambu Bag	2	0		2
35	Suction machine Electrical or Manual	1	1	Non Functional	0
36	Skin grafting knife with handle	Assorted	0		0
37	Surgical blades of different size	Assorted	Assorted	Functional	0
38	Self-Retaining Retractor	Assorted	0		0

Sl. No.	Equipment and Instruments	Required Quantity	Actual Quantity	Either Functional (or) not	Shortfall
39	Bone cutter	2	1	Functional	1
40	Gigli Saw	2	0		2
41	Scoop	Assorted	0		0
42	Periosteum elevator	2	2	Functional	0
43	Maggles Forceps	Assorted	0		0
44	High Pressure Autoclave	1	1	Functional	0
45	Nitrous Oxide Cylinder	1	1	Functional	0
46	Hydrolic Operation Table	1	1	Functional	0
47	Boyle's Apparatus	1	1	Functional	0
48	Instrument Trolley	Assorted	Assorted	Functional	0
49	Endotracheal Tube	Assorted	0		0
50	Proctoscope with or without illumination	2	2	Functional	0
51	Gabrial Syringe	1	1	Functional	0
52	Stretcher with trolley	2	1	Functional	1
53	Suction Machine	Assorted	Assorted	Functional	0
54	Emergency power back up facility	Assorted	0		0
55	Emergency light	4	0		4
56	Fire Extinguisher	2	1	Functional	1
57	BP Apparatus	Assorted	Assorted	Functional	0
58	Fumigator	1	1	Functional	0
59	Refrigerator	1	0		1
60	X-ray View Box (double)	2	1	Functional	1
61	Revolving Stool	Assorted	Assorted	Functional	0
62	Vertical BP Instrument	1	1	Functional	0
63	Rubber catheters of Assorted size	Assorted	Assorted	Functional	0
64	Corrugated rubber drain	Assorted	Assorted	Functional	0
65	Suturing Needle (straight/curved) of Assorted size	Assorted	Assorted	Functional	0
66	Surgical Thread	Assorted	Assorted	Functional	0
67	BP Handle of different size	Assorted	Assorted	Functional	0
68	Needle holder	Assorted	Assorted	Functional	0

(iv) Operation Theatres- Shalakyia

Sl. No.	Equipment and Instruments	Required Quantity	Actual Quantity	Either Functional (or) not	Shortfall
69	Ophthalmic Operation table with Head rest	1	1	Functional	0
70	Sterilising box/case with matts	Assorted	Assorted	Functional	0
71	Lens insertion Forceps	Assorted	Assorted	Functional	0
72	Keratome	Assorted	0		0
73	Desmarres lid retractors	Assorted	Assorted	Functional	0
74	Cat-paw lacrimal retractor	Assorted	0		0
75	Mueller lacrimal sac retractor	Assorted	0		0

Sl. No.	Equipment and Instruments	Required Quantity	Actual Quantity	Either Functional (or) not	Shortfall
76	Dastoor iris retractor	Assorted	0		0
77	Meyrhofer Chalazioncurrete	Assorted	0		0
78	Sinsky lens manipulating hook	Assorted	0		0
79	IOL Manipulator	Assorted	0		0
80	Foreign body spud	Assorted	0		0
81	Lewis lens loop (vectis)	Assorted	0		0
82	Cystotome and spoon	Assorted	0		0
83	Mule Evisceration spoon	Assorted	0		0
84	Iris repository (double-ended)	Assorted	0		0
85	Jameson muscle hook	Assorted	0		0
86	Wills cautery with copper ball-point	Assorted	0		0
87	Langs lacrimal sac dissector	Assorted	0		0
88	Kelly Glaucoma punch	Assorted	0		0
89	Elevator (double ended)	Assorted	Assorted	Functional	0
90	Nasal speculum adult/child	Assorted	Assorted	Functional	0
91	Wilder punctum Dilator	Assorted	Assorted	Functional	0
92	Bowman lacrimal probes	Assorted	0		0
93	Hartman mosquito forceps	Assorted	Assorted	Functional	0
94	Colibri forceps 1*2 teeth	Assorted	Assorted	Functional	0
95	Mc. person corneal forceps with tying platform	Assorted	0		0
96	Dressing forceps, serrated	Assorted	Assorted	Functional	0
97	Moorfield conjunctival forceps	Assorted	0		0
98	Fixation forceps	Assorted	0		0
99	Beer cilea (epilation) forceps	Assorted	0		0
100	Arruga capsular forceps	Assorted	0		0
101	Snellen Entropion clamp	Assorted	0		0
102	Chalazion clamps	Assorted	Assorted	Functional	0
103	Vannas straight scissors	Assorted	Assorted	Functional	0
104	Barraquer needle holder	Assorted	Assorted	Functional	0
105	Air injection cannula	Assorted	0		0
106	Healon aspirating cannula	Assorted	0		0
107	AC washout cannula	Assorted	0		0
108	Lacrimal cannula	Assorted	0		0
109	Hydrodialysis cannula	Assorted	0		0
110	J-loop cannula (Right/Left With silicon tubing)	Assorted	0		0
111	Simcok direct I/A cannula with silicon tubing	Assorted	0		0
112	Irrigating aspirating handle	Assorted	Assorted	Functional	0
113	Lens dialer	Assorted	0		0
114	Superior Rectus forceps	Assorted	Assorted	Functional	0
115	Eye wash glasses (for Tarpana Karma)	Assorted	0		0
116	Swimming Goggles (for Tarpana Karma)	Assorted	0		0

(v) Operation Theatres- ENT

Sl.No.	Equipment and Instruments	Required Quantity	Actual Quantity	Either Functional (or) not	Shortfall
117	Aural Syringe	Assorted	Assorted	Functional	0
118	Jobson's Aural Probe	Assorted	Assorted	Functional	0
119	Eustachian Catheter	Assorted	Assorted	Functional	0
120	Mastoid Retractor	Assorted	0		0
121	Mastoid Gouge	Assorted	0		0
122	Mallet	Assorted	0		0
123	Nasal Foreign Body hook	Assorted	Assorted	Functional	0
124	Nasal packing forceps	Assorted	0		0
125	Nasal Snare	Assorted	Assorted	Functional	0
126	Bayonet Shaped gouge	Assorted	0		0
127	Walsham forceps	Assorted	Assorted	Functional	0
128	Laryngeal forceps	Assorted	Assorted	Functional	0
129	Tongue plate with throat suction	Assorted	Assorted	Functional	0
130	Tonsil holding forceps	Assorted	Assorted	Functional	0
131	Tonsillar suction	Assorted	0		0
132	Adenoid curette with cage	Assorted	0		0
133	Peritonsillarabcess draining forceps	Assorted	0		0
134	Fuller's Tracheostomy Tube	Assorted	0		0
135	Cheatel's Forceps	Assorted	0		0
136	Other consumable articles like gloves, syringes, bandages, sutras, etc.	Assorted	Assorted		0

Out-Patient Department**(vi) OPD- Kayachikitsa**

Sl. No.	Article required as per norms of CCIM	Required Quantity	Actual Quantity	Either Functional/Not	Shortfall
137	X-Ray View Box	1	1	Functional	0
138	BP Apparatus	2	2	Functional	0
139	Stethoscope	4	2	Functional	2
140	Torch	2	2	Functional	0
141	Examination Table	1	1	Functional	0
142	Thermometer	4	1	Functional	3
143	Tongue depressor	5	3	Functional	2
144	Weight and height measuring stand	1	0		1
145	Measuring tape	1	1	Functional	0
146	Knee Hammer	Assorted	0		0
147	Gloves	Assorted	Assorted	Functional	0

(vii) OPD- Shalakya

S. No.	Article required as per norms of CCIM	Required Quantity	Actual Quantity	Either Functional/Not	Shortfall
148	Tuning forks	Assorted	Assorted	Functional	0
149	Ophthalmoscope/ fundoscope	2	1	Functional	1
150	Auroscope	2	2	Functional	0
151	Examination Table	1	1	Functional	0
152	X-Ray Viewing Box	1	1	Functional	0
153	BP Apparatus	2	2	Functional	0
154	Stethoscope	4	2	Functional	2
155	Thermometer	4	1	Functional	3
156	ENT kit	Assorted	Assorted	Functional	0
157	Torch	2	2	Functional	0
158	Bull's lamp	1	1	Functional	0

(viii) OPD- Prasuti and Stri Roga

S. No.	Article required as per norms of CCIM	Required Quantity	Actual Quantity	Either Functional/Not	Shortfall
159	Weighing machine	1	1	Functional	0
160	Sims's speculum	2	2	Functional	0
161	Thermometer	4	4	Functional	0
162	Cusco's speculum	2	2	Functional	0
163	Examination Table	1	1	Functional	0
164	Lamp stand	1	1	Functional	0
165	Torch	2	2	Functional	0
166	X-Ray Viewing Box	1	1	Functional	0
167	BP Apparatus	2	2	Functional	0
168	Stethoscope	4	4	Functional	0
169	Measuring tape	2	2	Functional	0

(ix) OPD- Bal Roga

S. No.	Article required as per norms of CCIM	Required Quantity	Actual Quantity	Either Functional/Not	Shortfall
170	Scale	1	1	Functional	0
171	Weighing machine	1	1	Functional	0
172	Torch	2	2	Functional	0
173	X-Ray View Box	1	1	Functional	0
174	Thermometer	4	1	Functional	3
175	BP Apparatus with Paediatric cuff	2	0		2
176	Stethoscope	Assorted	Assorted		0
177	Examination Table	Assorted	Assorted		0

(x) OPD- Panchakarma

Sl. No.	Article required as per norms of CCIM	Required Quantity	Actual Quantity	Either Functional/Not	Shortfall
178	X-Ray View Box	1	1	Functional	0
179	BP Apparatus	2	2	Functional	0
180	Stethoscope	4	4	Functional	0
181	Torch	2	2	Functional	0
182	Examination Table	1	1	Functional	0
183	Thermometer	4	2	Functional	2
184	Tongue depressor	5	4	Functional	1
185	Weight and height measuring stand	1	1	Only Weighing machine function	0
186	Measuring tape	1	1	Functional	0
187	Knee Hammer	2	2	Functional	0
188	Gloves	Assorted	Assorted	Functional	0

(xi) OPD- Yoga Section (Swasth Rakhshan)

Sl. No.	Article required as per norms of CCIM	Required Quantity	Actual Quantity	Either Functional/Not	Shortfall
189	Facilities available (Equipment, Instrument, Furniture <i>etc.</i>)	Assorted		Non- functional	

(xii) OPD- Emergency

S. No.	Article required as per norms of CCIM	Required Quantity	Actual Quantity	Either Functional/Not	Shortfall
190	Facilities available (Equipment, Instrument, Furniture <i>etc.</i>)	Assorted		Non- functional	

(B) Statement showing availability of equipment in Dr NRS Government Ayurveda College, Vijayawada**(i) Physiology laboratory**

Sl. No.	Equipment and Instruments	Required Qty as per CCIM 2016 Regulations, Capacity	Actual availability	Shortfall	Shortfall (in percentage)
1	Microscopes with oil immersion	50	34	16	32
2	Westergen's pipette for ESR	100	100	0	0
3	Haematocrit Tube	100	11	89	89
4	Sahli's Haemoglobinometer	100	30	70	70
5	Haemocytometer	100	30	70	70
6	Electrocardiograph	1	1	0	0
7	Stop watches	100	5	95	95
8	Water Distillation still	1	1	0	0
9	Balances	1	0	1	100

Sl. No.	Equipment and Instruments	Required Qty as per CCIM 2016 Regulations, Capacity	Actual availability	Shortfall	Shortfall (in percentage)
10	Centrifuge with speed control	6	1	5	83
11	Colorimeter (photoelectric)	6	1	5	83
12	pH meter Electric	1	1	0	0
13	pH comparator with disc	1	0	1	100
14	Sphygmomanometer	50	4	46	92
15	Stethoscopes	100	4	96	96
16	Clinical Thermometer	100	8	92	92
17	Knee Hammer	100	5	95	95
18	Tuning forks	100	4	96	96
19	Steriliser	5	1	4	80
20	Refrigerator	1	.	0	0
21	Newton's colour wheel in a batch	1	1	0	0
22	Cover slips, glassware, Micro slides	Assorted	Sufficient	0	0

(ii) Details of equipment and instruments required for dissection hall

Sl. No.	Instruments and Equipment	Sixty-one to Hundred intake capacity	Actual availability	Shortfall	Shortfall (in percentage)
1	Tank with a capacity to preserve 2-4 bodies.	Assorted	4	0	0
2	Machines for bones and brain sectioning	Assorted		0	0
3	Dissection Sets	25	4	21	84
4	Dissecting Table				
a)	Full size with steel top or marble top stainless	6	4	2	33
b)	Half size with steel top or marble top stainless	10	4	6	60
5	X-ray viewing box or panels	3	1	2	67
6	Bone cutter of the number $\frac{3}{4}$, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$ - fine pointed Chisel bone dissector	Assorted	2	0	0
7	Glass jars of different sizes	Assorted	Sufficient	0	0
8	Preservative Chemicals	Assorted	Sufficient	0	0

(iii) Details of equipment and instruments required for Rasashastra and Bhaishajya kalpana laboratory

Sl. No.	Equipment and Instruments	Sixty-one to Hundred intake capacity	Actual availability	Shortfall	Shortfall (in percentage)
1	Khalva Yantra-				
a)	Small	20	5	15	75
b)	Medium	20	7	13	65
c)	Porcelain	20	7	13	65

Sl. No.	Equipment and Instruments	Sixty-one to Hundred intake capacity	Actual availability	Shortfall	Shortfall (in percentage)
d)	Taptakhalvyantra	4	1	3	75
2	Pounding Apparatus (Ulukhala Yantra)	20	12	8	40
3	Putas (Different kind)	10	10	0	0
4	Moosha (Crucibles)	50	40	10	20
5	Koshti with Blower	4	2	2	50
6	Yantras				
a)	Dola Yantra	1	1	0	0
b)	Valuka Yantra	1	1	0	0
c)	Pithara Yantra	1	1	0	0
d)	Bhudhara Yantra <i>etc.</i>	1	1	0	0
7	Distillation Apparatus and Arka Yantra	6	2	4	667
8	Kupipakva Bhatti	1	2	0	0
9	Wet Grinder	1	1	0	0
10	Mixi	1	1	0	0
11	Juice Extractor	1	1	0	0
12	Refrigerator	1	1	0	0
13	Almiras and Racks for storage	Assorted	Available	0	0
14	Balance (Different Capacities)				
a)	Physical	1	1	0	0
b)	Chemical	1	1	0	0
c)	Electronic Balance	1	1	0	0
15	Heating Device-				
a)	Gas Stove	Assorted	Available	0	0
b)	Hot plate	Assorted	Available	0	0
c)	Chulla (Charcoal)	Assorted	Available	0	0
16	Big Vessels and Containers-				
a)	Brass	Assorted	Available	0	0
b)	Copper	Assorted	Available	0	0
c)	Steel <i>etc.</i>	Assorted	Available	0	0
d)	Earthen Vessels-Pots	Assorted	Available	0	0
17	Miscellaneous				
17	Jars (Porcelain) Fermentation Purpose	Assorted	10	0	0
18	Enamel Trays	Assorted	4	0	0
19	Spirit Lamp	Assorted	Available	0	0
20	Pressure Cooker	Assorted	1	0	0
21	Measuring Equipments Different Size (Glass)	Assorted	alum 2 plastic 1	0	0
22	Pyrometer	Assorted	1	0	0
23	Thermometer	Assorted	Available	0	0
24	Vessels				

Sl. No.	Equipment and Instruments	Sixty-one to Hundred intake capacity	Actual availability	Shortfall	Shortfall (in percentage)
a)	Frying Pan	Assorted	3	0	0
b)	Steel Vessel	Assorted	10	0	0
c)	Spatula	Assorted	2	0	0
d)	Ladles and Spoons	Assorted	Available	0	0
e)	Knife	Assorted	Available	0	0
f)	Plates	Assorted	Available	0	0
g)	Samdamsa Yantra(Tongs)	Assorted	Available	0	0
25	Sieves (Assorted Nos. and Size)	Assorted	3	0	0

(iv) Details of equipment and instruments required for pharmacognosy laboratory [dravyaguna]

Sl. No.	Equipment and Instruments	Sixty-one to Hundred intake capacity	Actual availability	Shortfall	Shortfall (in percentage)
1	Field magnifier	1	6	0	0
2	Compound microscope	1	30	0	0
3	Dissecting Microscope	1	18	0	0
4	Microscope	25	9 only 2 functioning	16	64
5	Electronic balance	2	1(Non fun)	1	50
6	Slides box with cover slips	Assorted	Available	0	0
7	Blotting/filter papers	Assorted	90	0	0
8	Dissection Box	Assorted	13	0	0
9	Enamel Trays	Assorted	15	0	0
10	Reagents				
a.	Chloroform	Assorted	Available	0	0
b.	Alcohol	Assorted		0	0
c.	HCL	Assorted		0	0
d.	Sulphuric acid	Assorted	Available	0	0
e.	Sodium, potassium hydroxide	Assorted	Available	0	0
f.	Benedict solution	Assorted	Available	0	0
g.	Sodium nitrate	Assorted	Available	0	0
h.	Potassium nitrate	Assorted	Available	0	0
i.	Citric acid	Assorted	Available	0	0
j.	Iodine	Assorted	Available	0	0
k.	Ethyl Alcohol	Assorted	Available	0	0
l.	Potassium Iodide	Assorted	Available	0	0
m.	Xylol/pure xylene (slide preparation)	Assorted	Available	0	0

Appendix 10.10

(Reference to Paragraph 10.7.1 Page No. 218)

Department wise Cadre Strength in AYUSH as of September 2022

Sl. No	Name of the Post	Posts		
		Sanctioned	In Position	Vacant
1	Commissioner	1	1	0
2	Additional Director (Homoeo)	1	0	1
3	Principal (Ayurveda)	1	1	0
4	Principal (Homoeo)	3	1	2
5	Professor (Ayur.) PG	1	0	1
6	Inspector, Board of Indian Medicine	1	0	1
7	Chief Medical Officer (Ayurveda)	2	2	0
8	Chief Medical Officer (Homoeo)	1	1	0
9	Chief Medical Officer (Unani)	1	1	0
10	Resident Medical Officer (Homoeo)	1	0	1
11	Professor (Ayur.) UG	10	4	6
12	Professor (Homoeo.) UG	39	12	27
13	Associate Professor (Reader) (Ayurveda)	11	9	2
14	Associate Professor (Homoeo)	45	11	34
15	Assistant Professor (Lecturer) (Ayurveda)	15	6	9
16	Assistant Professor (Homoeo)	45	0	45
17	Regional Deputy Director (Unani)	1	1	0
18	Regional Deputy Director (Ayurveda)	2	2	0
19	Regional Deputy Director (Homoeo)	1	1	0
20	Superintendent of the Hospital (Ayur)	1	1	0
21	Superintendent of the Hospital (Homoeo.)	3	2	1
22	Senior Medical Officer (Homoeo)	17	17	0
23	Senior Medical Officer (Ayur.)	20	19	1
24	Senior Medical Officer (Ayur.) LR	1	1	0
25	Senior Medical Officer (Unani)	6	5	1
26	Senior Medical Officer (Unani) LR	2	1	1
27	Medical Officer (Ayurveda)	318	199	119
28	Medical Officer (Homoeo)	187	88	99
29	Medical Officer (Unani)	71	27	44
30	Medical Officer (Ayurveda) LR	1	1	0
31	Medical Officer (Unani) LR	1	1	0
32	P.G. Scholar (In service -Ayurveda)	7	7	0
33	P.G. Scholar (In service -Homoeo)	5	2	3
34	P.G. Scholar (In service -Unani)	9	0	9
35	Inspecting Medical Officer (Ayurveda)	1	1	0
36	Accounts Officer	1	1	0
37	Lay Secretary and Treasurer Grade.II	6	4	2
38	Drug Inspector (Unani)	1	1	0
39	Drug Inspector (Homoeo)	1	1	0
40	Drug Inspector (Ayurveda)	2	2	0
41	Head Nurse / Senior Sister	2	0	2
42	Office Superintendent	17	12	5
43	Senior Assistant	38	34	4
44	Junior Assistant	31	26	5
45	Clerk cum Typist	2	1	1
46	Staff Nurse	32	7	25
47	Librarian	4	0	4
48	Pharmacist Grade-II	2	2	0
49	Compounder (Ayurveda)	226	91	135
50	Compounder (Homoeo)	189	76	113

Sl. No	Name of the Post	Posts		
		Sanctioned	In Position	Vacant
51	Compounder (Unani)	69	34	35
52	Auxiliary Nurse Mid-Wife	82	17	65
53	Principal (Unani) GIA	1	0	1
54	Professor (Unani) GIA	13	0	13
55	Associate Professor (Unani) GIA	14	0	14
56	Assistant Professor (Unani) GIA	19	7	12
57	Junior Assistant Unani (Grant-in-Aid)	1	0	1
58	Clerk cum Typist Unani (Grant-in-Aid)	1	0	1
59	Store Keeper Unani (Grant-in-Aid)	1	0	1
60	Record Assistant Unani (GIA)	2	1	1
61	Roneo Operator	1	0	1
62	Museum Curator	2	1	1
63	Daya	16	0	16
64	Cycle Orderly	1	0	1
65	Telephone Operator	1	0	1
66	Dafedar	1	0	1
67	Ayah	3	0	3
68	Dispensary Servant	9	2	7
69	Night Watchman	2	0	2
70	X-Ray Attendant	2	0	2
71	Maitee	8	0	8
72	Herb Collector	4	1	3
73	Thoty	5	0	5
74	Store Keeper	2	1	1
75	Jarrah / Dresser	2	1	1
76	Radiographer	3	0	3
77	Multipurpose Health Assistant	1	0	1
78	Dark Room Assistant	3	0	3
79	Maternity Assistant	62	7	55
80	Lab Attendant	5	0	5
81	Register Writer	4	0	4
82	Driver (Light Vehicle)	12	2	10
83	House Keeper	3	2	1
84	Record Assistant	1	0	1
85	Massagist	2	0	2
86	Watchman	33	11	22
87	Cook / Assistant Cook	17	3	14
88	Cleaner	2	0	2
89	Dhobi	3	1	2
90	Lab Boy	2	2	0
91	Scavenger	16	8	8
92	Sweeper cum Scavenger	403	195	208
93	Sweeper	56	33	23
94	Ward Boy	4	3	1
95	Office Subordinate / Attender	141	71	70
96	Sweeper-cum-Watchman	1	0	1
97	L.D. Steno	7	0	7
98	Typist	15	4	11
99	Nursing Orderly	269	107	162
100	Jamedar	1	1	0
101	U D Accountant	1	0	1
102	Lab Technician	15	0	15
Total		2,730	1,198	1,532

Appendix-10.11

(Reference to Paragraph 10.9.2.1 Page Nos. 226 & 227)

Details of bed occupancy in Ayurveda Hospital and Homoeo Hospital

Sl. No.	Hospitals name	No of students	Min no of beds in IPD	Avg. no of patients in IPD per day	Bed occupancy in a calendar year (365 days)
Dr. A.L. Government Ayurveda Hospital, Vijayawada					
1	UG students SI No. 7(2) of Indian Medicine Central Council (UG) Regulation, 2016	75	75	40 per cent	10,950
2	PG students SI No. 6(13) of Indian Medicine Central Council (UG) Regulation, 2016	25	100	50 per cent	18,250
				Total Bed occupancy w.r.t. norms	29,200
Dr. Gururaju Govt. Homoeo Hospital, Gudivada					
1	UG students SI No. 7(2) of CCH Regulation, 2013	50	20	30 per cent	2,190
2	PG students SI No. 9(v) of CCH (PG) Regulations 1989	23	23	30 per cent	2,555
				Total Bed occupancy w.r.t. norms	4,745

Glossary

Glossary

Abbreviation	In Full
ABER	Annual Blood Examination Rate
AB-PMJAY	Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana
ACF	Active Case Finding
AERB	Atomic Energy Regulatory Board
AH	Area Hospitals
ALS	Advanced Life Support
AML	Additional Medicines List
ANC	Antenatal Checkup
ANCDR	Annual New Case Detection Rate
ANM	Auxiliary Nurse and Midwife
APAPMCE	Andhra Pradesh Allopathic Private Medical Care Establishments
APFC	AP Financial Code
API	Annual Parasite Index
APMAPB	Andhra Pradesh Medicinal and Aromatic Plants Board
APMSIDC	Andhra Pradesh Medical Services and Infrastructure Development Corporation
APPCB	Andhra Pradesh Pollution Control Board
APVVP	Andhra Pradesh Vaidya Vidhana Parishad
ARI	Acute Respiratory Infection
ART	Anti-Retroviral Treatment
ASL	Additional Surgical List
ASU&H	Ayurveda, Siddha and Unani & Homoeopathy
AYUSH	Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy
BHMS	Bachelor of Homoeopathic Medicine and Surgery
BLS	Basic Life Support
BMW	Biomedical Waste
BPAP	Bi-level Positive Airway Pressure
BSU	Blood Storage Unit
BWH	Birth Waiting Homes
CBC	Complete Blood Count
CBMWTF	Common Bio-Medical Waste Treatment Facilities
CCIM	Central Council of Indian Medicine
CCU	Cardiac Care Units
CDARs	Child Death Audit Reports
CDS	Central Drug Stores
CEA	Clinical Establishment Act
CFA	Cerebrospinal Fluid Analysis
CFMS	Comprehensive Fund Management System
CFW	Commissioner of Family Welfare

Abbreviation	In Full
CH&FW	Commissioner, Health & Family Welfare
CHC	Community Health Centres
CMO	Casualty Medical Officers
CPAP	Continuous Positive Airway Pressure
CPHC	Comprehensive Primary Healthcare
CPS	Central Photographic Section
CPT	Cotrimoxazole Preventive Therapy
CRU	Computed Radiography Unit
CSS	Centrally Sponsored Scheme
CT	Computed Tomography
DCA	Drug Control Administration
DDMC	District Diet Management Committee
DEICs	District Early Intervention Centres
DEMC	District Equipment Management Committee
DEOs	Data Entry Operators
DH	District Hospitals
DIs	Drug Inspectors
DLAC	District Level Advisory Committee
DME	Director of Medical Education
DMHO	District Medical & Health Officer
DPHFW	Department of Public Health and Family Welfare
DPHL	District Public Health Laboratory
DRA	District Registering Authority
DRS	Drug Regulatory System
EAP	Externally Aided Project
ECG	Electrocardiogram
ECRP	Emergency Covid Response Plan
EDL	Essential Drug List
EE	Executive Engineer
EML	Essential Medicines List
ENT	Ear Nose and Throat
ERHSP	Emergency Response and Health Systems Preparedness
ESL	Essential Surgical List
ETP	Effluent Treatment Plants
FC	Finance Commission
FIFO	First In First Out
FLCF	First Living Child of the Family
FLW	Front Line Worker
FMR	Financial Management Report
FSS ACT	Food Safety and Standards Act

Abbreviation	In Full
FSSAI	Food Safety and Standards Authority of India
FTS	Full Time Supervisor
FYP	Five Year Plan
GCC	General Conditions of The Contract
GGH	Government General Hospital
GMC	Government Medical College
GoAP	Government of Andhra Pradesh
GoI	Government of India
GSDP	Gross State Domestic Product
HCC	Homoeopathy Central Council
HCF	Healthcare Facility
HCO	Healthcare Organisation
HCW	Healthcare Worker
HD	Haemo-Dialysis
HDC	Hospital Development Society
HDUs	High Dependency Units
HEO	Health Education Office
HITES	Haigreeva Infra Tech Project Ltd
HM&FW	Health, Medical & Family Welfare
HMIS	Health Management Information System
HPLC	High-performance liquid chromatography
HR	Human Resources
HRGs	High-Risk Groups
HRH	Human resource for Health
HSC	Health Sub Centres
HWCs	Health and Wellness Centres
ICTC	Integrated Counselling and Testing Centre
ICU	Intensive Care Unit
IDSP	Integrated Disease Surveillance Programme
IIPS	International Institute for Population Sciences
IMCC	Indian Medicine Central Council
IMEP	Immunisation and Management of Environment Protection
IMNCI	Integrated Management of Neonatal & Childhood Illness
IMR	Infant Mortality Rate
INCR	Indian Nursing Council Regulation
IPHS	Indian Public Health Standards
ISQ	International Society for Quality Assurance in Healthcare
ITDA	Integrated Tribal Development Agencies
JSSK	Janani Shishu Suraksha Karyakaram
JSY	Janani Suraksha Yojana

Abbreviation	In Full
KDOQI	Kidney Disease Outcome Quality Initiative
KPIMS	Key Performance Indicator Monitoring System
LCDC	Leprosy Case Detection Campaign
LFT	Liver Function Test
LHV	Lady Health Visitor
LSCS	Lower Segment Caesarean Section
MBBS	Bachelor of Medicine and Bachelor of Surgery
MC	Medical Colleges
MCEC	Medical College Equipment Committee
MCH	Maternal and Child Health
MCI	Medical Council of India
MCIA	Indian Medical Council Act
MCP	Mother and Child Protection
MEPC	Medical Equipment Procurement Policy
MFHA	Male and Female Health Assistants
MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
MHT	Mobile Health Teams
MLHPs	Mid-Level Health Providers
MMR	Maternal Mortality Ratio
MO	Medical Officer
MoHFW	Ministry of Health and Family Welfare
MPCE	Monthly Per capita Consumption Expenditure
MRI	Magnetic Resonance Imaging
MSRR	Minimum Standard Requirements Regulations
MSS	Matching State Share
MTP	Medical Termination of Pregnancy
NABARD	National Bank for Agriculture and Rural Development
NABH	National Accreditation Board for Hospitals
NAM	National AYUSH Mission
NAQS	National Quality Assurance Standards
NAS	National Ambulance Service
NBSU	New-born Stabilisation Unit
NCD	Non-Communicable Disease
NCRB	National Crime Records Bureau
NFHS	National Family Health Survey
NHA	National Health Authority
NHM	National Health Mission
NHPs	National Health Programmes
NITI	National Institution for Transforming India
NLEP	National Leprosy Eradication Programme

Abbreviation	In Full
NMC	National Medical Commission
NMCA	National Medical Commission Act
NMHP	National Mental Health Program
NNMR	Neonatal Mortality Rate
NOC	No Objection Certificate
NPCC	National Program Coordination Committee
NQAS	National Quality Assurance Standards
NRC	Nutrition Rehabilitation Centre
NRHM	National Rural Health Mission
NTCP	National Tobacco Control Program
NTEP	National Tuberculosis Elimination Programme
NTISCBC	National Trauma Injury Surveillance and Capacity Building Centre
NUHM	National Urban Health Mission
NVBDCP	National Vector Borne Disease control Programme
OCs	Oxygen Concentrators
OOPE	Out-of-Pocket Expenditure
OPD	Outpatient Department
OPEX	Operational Expenditure
OT	Operation Theatre
PCB	Pollution Control Board
PCPNDT	Pre-Conception and Pre Natal-Diagnostic Techniques
PFMS	Public Fund Management System
PHC	Primary Health Centres
PHN	Public Health Nurse
PIP	Project Implementation Plan
PMCE	Private Medical Care Establishments
PMJAY	Pradhan Mantri Jan Aarogya Yojana
PMMVY	Pradhan Mantri Matru Vandana Yojana
PMNDP	Pradhan Mantri National Dialysis Programme
PMO	Paramedical Officer
PMR	Physical Medicine and Rehabilitation
PMSSY	Pradhan Mantri Swasthya Suraksha Yojana
PNC	Postnatal Checkup
PPIUCD	Post-partum Intra Uterine Contraceptive Device
PPP	Public Private Partnership
PR	Prevalence Rate
PRD	Panchayath Raj Department
PRIs	Panchayati Raj Institutions
PW	Pregnant Women
PW&LM	Pregnant Women and Lactating Mothers

Abbreviation	In Full
QCL	Quality Control Lab
RBSK	Rashtriya Bal Swasthya Karyakram
RCH	Reproductive Child Health
RDS	Respiratory Distress Syndrome
RIDF	Rural Infrastructure Development Fund
RMNCH+A	Reproductive, Maternal, Neonatal, Child and Adolescent Health
RMO	Resident Medical Officer
ROMS	Real-Time Outcome Management System
RoP	Record of Proceedings
RTI	Reproductive Tract Infection
SAAP	State Annual Actions Plan
SAMS	State Ayush Mission Society
SBC	State Blood Cell
SDG	Sustainable Development Goal
SDH	Sub-division Hospital
SDP	State Development Plan
SHS	Suboptimal Health Status
SHWSs	Sub Health and Wellness Centres
SLA	State Level Authority
SLAC	State Level Advisory Committee
SNA	State Nodal Agency
SNAC	State Level Needs Assessment committee
SNCU	Special Newborn Care Unit
SPIP	State Project Implementation Plans
SPMU	State Project Monitoring Unit
STI	Sexually Transmitted Infections
STP	Sewage Treatment Plant
UC	Utilisation Certificate
UNSDG	United Nations Sustainable Development Goal
USG	Ultrasonography
VHSNC	Village Health Sanitation & Nutrition Committee
VRDLs	Virus Research and Diagnostic Laboratories
WHO	World Health Organisation

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